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THESIS

BOMB STRIKE EXPERIMENT FOR MINE CLEARANCE OPERATIONS

by

Gregory P. Ray

March 2006

Thesis Advisor:	Peter Chu
Second Reader:	Peter Fleischer

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BOMB STRIKE EXPERIMENT FOR MINE CLEARANCE OPERATIONS

Gregory P. Ray
Lieutenant, United States Navy Reserve
B.S., Texas A&M University, 2000

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March 2006**

Author: Gregory P. Ray

Approved by: Peter Chu
Thesis Advisor

Peter Fleischer
Second Reader

Mary L. Batteen
Chairman, Department of Oceanography

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ABSTRACT

The Bomb Strike Experiment for Mine Countermeasure Operations, currently sponsored through the Office of Naval Research mine impact burial prediction project, is part of a multi-year, comprehensive effort aimed at enhancing the Navy's fleet naval mine clearance capability and success. The investigation discussed in this paper examines the experimental and theoretical characteristics of a rigid body falling through the air, water, and sediment column at high speed. Several experiments were conducted to launch bomb-like rigid bodies with the density ratio similar to operational munitions, namely the MK-84 general purpose bomb, into a hydrodynamic test tank. Careful observations of the bomb-like rigid body's position and orientation were collected and analyzed to produce a series of three-dimensional coordinate time-space data tables and plots. The resulting data set reveals a strong correlation between shape type and trajectory and dispersion patterns for rigid bodies moving through the water column at high velocity. This data will be used for numerical verification of the initial three-dimensional model (STRIKE35) aimed at predicting the overall trajectory, maneuvering, burial depth and orientation of a falling high-velocity rigid body in the air-water-sediment column. The long-term goal of this project is to improve warhead lethality for use in quick, precise and accurate strikes on known enemy naval minefields in the littoral combat environment.

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I. INTRODUCTION

A. BACKGROUND

During the mid-1400's our world embarked on a journey of discovery as nations began reaching beyond their own borders to explore new lands and avenues of trade. Men like Columbus and Magellan led the hunt for new resources and markets, and sowed the beginning of the global economy we live in today. While many things have changed since those primitive beginnings, the ideas of international commerce and free trade between nations are as alive today as they were 600 years ago. Just as in the Age of Exploration, modern world trade is still primarily dependent on one factor - maritime transport.

Today, the vitality of the United States' economy relies on unencumbered trade and commerce over the world's ocean. According to the United Nations Conference on Trade and Development (UNCTAD), 2005 recorded yet another increase in the amount of goods traded globally by sea, raising the previous record to an all time high of 6.76 billion tons, an increase of 4.2 percent from the previous year (UNCTAD, 2005). At the top of these statistics stands the United States, which claims the title of the world's leading maritime trading nation, accounting for nearly 20 percent (measured in tons) of the annual world ocean-borne trade. A lynchpin of the American economy, this avenue of trade is responsible for 25 percent of the U.S. Gross Domestic Product (GDP), up from 11 percent in 1970, and experts agree that this figure will only continue to increase in coming years (Frittelli, 2004). The bulk of this trade is conducted by the 51,000+ vessels which ply the seas to service America's 360+ ports delivering approximately 90 percent of all cargo tonnage entering the country each year. (Maritime Transportation Security Act, 2002). Clearly the importance of free access to the world's seas cannot be overstated with regard to its importance to the national welfare of the United States.

While sea-borne trade is acknowledged by experts to be the life blood of American commerce, the aftermath of the devastating attacks of September 11, 2001, has caused a shift in perspective as new assessments are made of these assets and their vulnerability to the possibility of similar attacks. Terrorist organizations are no longer

viewed as unruly gangs of disgruntled militants, but rather highly-organized operatives working in conjunction around the world to accomplish a common objective. While much has been done in the last five years to thwart the functioning of terrorist training, planning and operational units, no one really knows when or where terror will strike next. One thing is for certain, top security agencies agree that maritime transport is a prime candidate for future attacks. Given the strategic importance of maritime trade and commerce, the possibility of a major port or shipping facility within U.S. border becoming the focus of terrorist actions cannot be underestimated. What's more, though the Maritime Transport Act of 2002 called for a major increase in port security measures nationwide, U.S. seaports are still highly vulnerable targets. Access to port facilities and shipping lanes are a critical link in the United States' economic chain and military mission, and the threat to these strategic venues from terrorist attach has never been greater (Frittelli, 2004).

B. THE NAVAL MINE THREAT

One of the most appealing weapons for use in paralyzing sea-borne trade and military operations is the naval mine. Naval mines today remain the perfect asymmetrical weapons, capable of disrupting assured access in areas of strategic importance to the United States and their Allies. Terrorists no doubt have examined the benefits of using naval mines, and in the hands of hostile forces, the relatively low-technology naval mine possesses a serious threats to global assured access of the world's oceans (Cornish, 2003)

The mine is an attractive weapon due to its availability, variety, cost-effectiveness, ease of deployment, and potential impact on naval operations (Department of the Navy, 2004). Possibly, the Committee for Mine Warfare Assessment expressed this best:

> Naval mines can be used strategically, channeling or denying passage through restricted waters and in and out of ports needed for sustenance by littoral nations. They can shape the naval battle space, the approaches to it, and routes of commerce, setting the conditions of a campaign. Used tactically, they can slow or stop movement to and through narrow straits and to landing zones on beaches, and in so doing can also make a slowed or stopped force more vulnerable. Yet despite the many instances in which

> mines were important in past conflicts, the U.S. Navy historically has underrated mine warfare as an element of naval warfare. (Naval Mine Warfare, 2001)

Every type of naval mine is available in the global marketplace, and most are affordable to almost anyone wishing to obtain one. Described by some as "A Poor Man's Naval Force", the most basic naval mine can be procured for just a few hundred dollars, deployed from virtually any air or water craft, and lie in wait until its target happens upon it location. It is not surprising therefore that mines have been the weapon of choice for nations and organizations that do not have the resources to develop and finance a navy that can challenge the United States. Naval mines are the perfect asymmetrical weapons, serving to level the playing field, offering an effective, low-cost counter to high-tech Navy's such at the U.S (Mitchell, 1998). To illustrate this point, Figure 1 depicts the damage inflicted on both men and platforms during recent armed encounters:

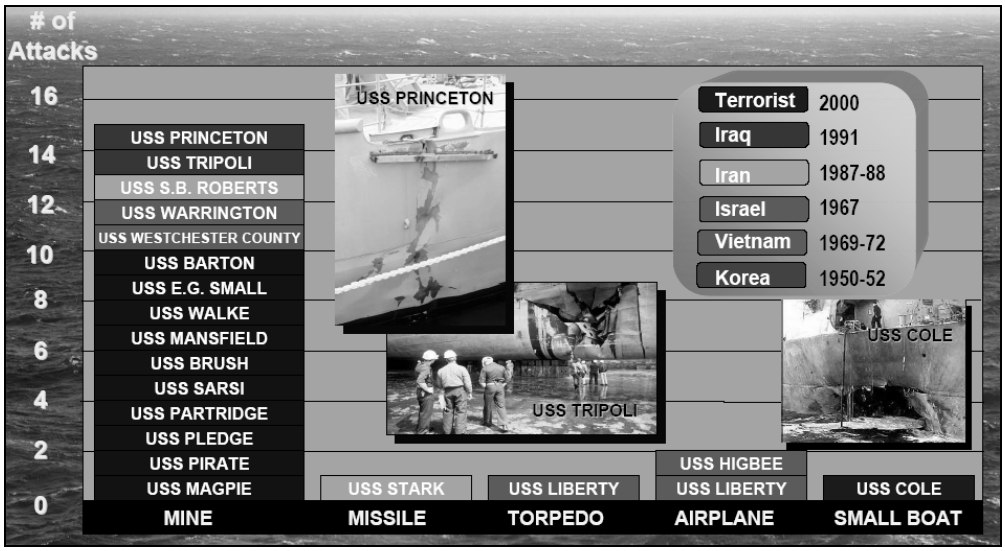

Figure 1. U.S. Ship Casualties by Weapon Type Since 1950 (From: Nash, 2005)

Cleary naval mines account for more casualties to U.S. ships than all other aggressor combined. To emphasize this even further, consider the damage sustained by the three most recent targets of mine strikes (Figure 2):

- 1988 - USS Samuel B. Roberts encountered a contact mine East of Bahrain which created a 6.5 m hole in the hull, busted the keel, dismounted the engines, and created a 50 m fireball in the air. The estimated cost of the mine was around $1,500 while the total cost for repair of the Roberts was around $135 million;

- 1991 - USS Princeton was struck by a Manta mine. The mine blast caused substantial damage including a cracked superstructure, severe deck buckling, and a damaged propeller shaft and rudder. The mine cost approximately $10,000 while repairs on the vessel totaled $24 million;
- 1991 - USS Tripoli encountered a LUGM-145, contact mine, lost a third of her fuel and cost $3.5M to repair;

Figure 2. Mine Threat (From: Cornish, 2003)

In addition to severe casualties that mine encounters have had on the U.S. fleet, what makes naval mining even more significant is that even the psychological threat of using mines can threaten assured access to global water way. Rear Admiral Stephen Baker once remarked, "If you make an announcement that there are mines in the water, you've succeeded in 75 percent of your mission" (Johnson, 2003). The major goal of naval mining is not focused on creating destruction or loss of life on the intended target, but rather to affect the timeline of movement for those vessels across the world's ocean. As stated, even the perceived threat of naval mines in a waterway will completely close those lanes of travel until mine hunting and sweeping operation can be completed days or weeks later. Whether a minefield is real or perceived it takes the same amount of time for Mine Countermeasure (MCM) forces to reopen the waterways. For this reason, the

potential mining of U.S. waters must now be part of homeland defense priorities. Should a terrorist organization ever be successful in conducting a covert mining or perceived mining operation in a U.S. harbor the psychological effects would be enormous, and the port would be rendered completely ineffective halting all commerce in and out until MCM operations were completed. Because the United States relies so heavily on its ports and shipping for its economic vitality this would create a ripple effect into the economy creating a backlog of shipments, slowing the progress of industry and causing consumer prices to increase as access to goods becomes more difficult.

C. ORGANIC MINE COUNTERMEASURE SYSTEMS

The goal of the navy regarding future MCM capability is to provide rapid, stand-off organic mine countermeasures capability to maintain assured access to the seas for both civil and military vessels. While historically MCM has been an afterthought on the warfare commander's battle plan, today more than ever military leaders are beginning to understand the implications of this threat, and are now taking a vested interest in developing a mine warfare force that is capable and responsive to 21st century threats.

Traditionally, meeting the MCM goal meant a long and tedious process, using a combination of mine hunting and sweeping techniques and equipment to locate, classify and neutralize naval mines. While effective, these operations are extremely time intensive and put personnel and equipment at severe risk. Today however, as depicted by Figure 3, much work is being done on the next generation of mine countermeasure technologies.

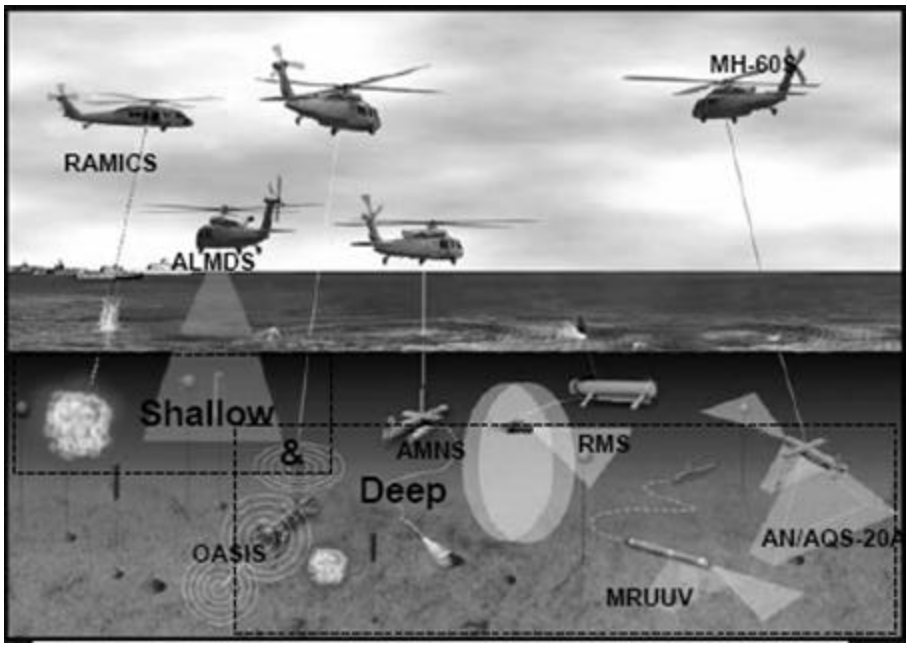

Figure 3. Future MCM Systems (From: Nash, 2005)

New platforms are such as the Airborne Mine Countermeasure aircraft (AMCM) and the JDAM Assault Breaching System (JABS), which will provide a stand-off MCM capability not yet seen in the warfare environment. Table 1 depicts current systems being developed for use in the organic mini countermeasure program:

MCM System	**Description**
AQS-20A Mine-hunting Sonar	Improved airborne mine hunting sonar with electro-optical identification capability for use on the AMCM SH-60S Helicopter
Airborne Mine Neutralization System (AMNS)	UUV deployed from an airborne platform to explosively neutralize sea mines previously located by mine hunting systems
Airborne Laser Mine Detection System (ALMDS),	Airborne LIDAR system used to detect, localize, and classify near-surface moored and floating mines
Rapid Airborne Mine Clearance System (RAMICS),	SH-60 mounted cannon fires 30 mm fin-stabilized discarding sabot rounds to detonate floating or moored mines detected by ALMDS
Organic Airborne and Surface Influence Sweep (OASIS) system	Self-contained, high speed, shallow water magnetic and acoustic influence sweeping device deployed from the helicopter to provide rapid mine clearance
Remote Mine-hunting System (RMS)	Long-duration, off board, unmanned vessel that can be employed from surface ships.
Mission Reconfigurable Unmanned Underwater Vehicle (MRUUV).	Modular UUV for submarine forces to provide assured access for submarine missions and intelligence preparation of the battle space for operational forces.
JDAM Assault Breaching System (JABS)	Joint Direct-Attack Munitions to disperse multiple explosives to destroy obstacles and mines on the beach and in the surf quickly.

Table 1. Overview of Future MCM Systems

In addition to these systems, the vision of organic mine countermeasure warfare ensures that mine warfare will no longer be the responsibility of only a small number of dedicated professionals. The plan calls for all components of the naval force structure to possess awareness and an operational knowledge of mine warfare. Though the threat from naval mines will probably never completely disappear, when the vision for an integrated organic MCM force is realized, the United States and their Allies will at least have the ability to decrease the effectiveness of these weapons and thus help prevent them from denying access to areas of strategic importance around the world.

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II. RESEARCH OBJECTIVE

A. SYNOPSIS

The Bomb Strike Experiment project is a multi-year, comprehensive effort aimed at enhancing the Navy's fleet naval mine clearance capability and success. The multi-faceted program includes the following components: (1) Study of high-velocity rigid bodies falling through the air-water-sediment column using scaled models of current operational munitions, (2) development of bomb-strike prediction model (STRIKE35), (3) verification of STRIKE35 with full-size bomb striking exercises and (4) ensemble model development. This work is the extension of the current Office of Naval Research (ONR) sponsored program on mine and obstacle breeching technology. The investigation discussed in this paper addresses a component of this program by examining the experimental and theoretical characteristics of a rigid body falling through the air, water, and sediment column at high speed. Several experiments were conducted to launch bomb-like rigid bodies with the density ratio similar to operational munitions, namely the MK-84 general purpose bomb, into a hydrodynamic test tank. During the experiments, careful observations of the bomb-like rigid body's position and orientation were collected and analyzed to produce a series of three-dimensional Cartesian coordinate time-space data tables and plots. This resulting data will be used for numerical verification of the initial three-dimensional model (STRIKE35) aimed at predicting the overall trajectory, maneuvering, burial depth and orientation of a falling high-velocity rigid body in the air-water-sediment column.

B. APPLICATION

The long-term goal of this project is to improve warhead lethality for use in quick, precise and accurate strikes on known enemy naval minefields in the littoral combat environment. The MK-84 general purpose bomb was chosen as the prototype for modeling due to its current employment in the JDAM Assault Breaching System (JABS) (Figure 4).

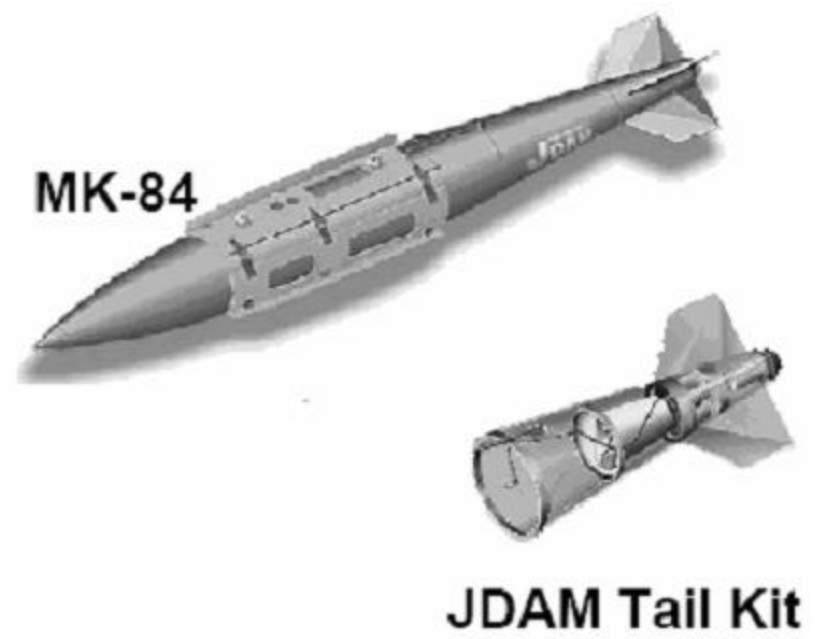

Figure 4. JDAM Assault Breaching System (JABS) (From: Almquist, 2005)

Currently, JABS, developed by the Office of Naval Research, utilizes unitary bombs, fuses, and JDAM tail kits, as an interim solution for breaching surface laid minefields in the beach zones. The natural first step in expanding the JABS system would include employing it for use in clearing anti-invasion and various types of mines in the surf zone and very shallow water zone. If JABS is to be utilized as a mine countermeasure system for deeper water, further study and characterization of the system must be completed. The data collected in this project will serve to further this purpose and help make the JABS system a far more versatile tool in the MCM arsenal.

III. HYDROBALLISTIC THEORY AND MODELING

A. INTRODUCTION

Recently, the scientific problem regarding the movement of a rigid body in the air-water-sediment column has drawn much attention to the area of naval research. This is primarily due to a heightened awareness of the sea mine threat to naval operations in our post-9/11 world. Quick, accurate and precise prediction of a fast-falling rigid body in the air-water-sediment column can greatly contribute to the overall effectiveness of utilizing bomb-strike operations for mine clearance in surf and very-shallow-water zones. Thus, the scientific significance and technical applications of such an investigation cannot be overstated.

The hydrodynamic characteristic of a rigid body provides for the utilization of up to six nonlinear equations, three momentum equations and three moment-of-momentum equations, for describing the general motion of the object. The scientific studies of the hydrodynamic characteristics of a rigid body in the air-water-sediment column involve nonlinear dynamics, body and multi-phase fluid interaction, body-sediment interaction, supercavitation and instability theory, while technical applications draw from a range of fields including aeronautics, navigation, and civil engineering.

B. TRIPLE COORDINATE SYSTEMS

Consider an axially symmetric cylinder with the centers of mass (**M**c) and volume (**G**c) on the main axis. Let (L, d, c) represent the cylinder's length, diameter, and the distance between the two points (**M**c, **G**c). The positive c -values refer to nose-down case, i.e., the point **M**c is lower than the point **G**c. Three coordinate systems are used to model the falling cylinder through the air, water, and sediment phases: E-, M-, and F-coordinate systems. All the systems are three-dimensional, orthogonal, and right-handed (Chu et al., 2003).

The E-coordinate is represented by FE(O, i, j, k) with the origin 'O', and three axes: x-, y- axes (horizontal) with the unit vectors (i, j) and z-axis (vertical) with the unit vector k (upward positive). The position of the cylinder is represented by the position of Mc,

$$X = xi + yj + zk, \tag{1}$$

which is translation of the cylinder. The translation velocity is given by

$$\frac{d\mathbf{X}}{dt} = \mathbf{V}, \quad \mathbf{V} = (u, v, w). \tag{2}$$

Let orientation of the cylinder's main-axis (pointing downward) is given by iM. The unit vectors of the M-coordinate system are given by (Figure 5)

$$\mathbf{j}_M = \mathbf{k} \times \mathbf{i}_M, \quad \mathbf{k}_M = \mathbf{i}_M \times \mathbf{j}_M. \tag{3}$$

Let the cylinder rotate around (i_M, j_M, k_M) with angles (j_1, j_2, j_3) (Figure 5). The angular velocity is calculated by

$$w_1 = \frac{dj_1}{dt}, \quad w_2 = \frac{dj_2}{dt}, \quad w_3 = \frac{dj_3}{dt}. \tag{4}$$

The F-coordinate is represented by $F_F(X, i_F, j_F, k_F)$ with the origin X, unit vectors (i_F, j_F, k_F), and coordinates (x_F, y_F, z_F). Let Vw be the fluid velocity. The water-to-cylinder velocity is represented by

$$V_r = V_w - V,$$

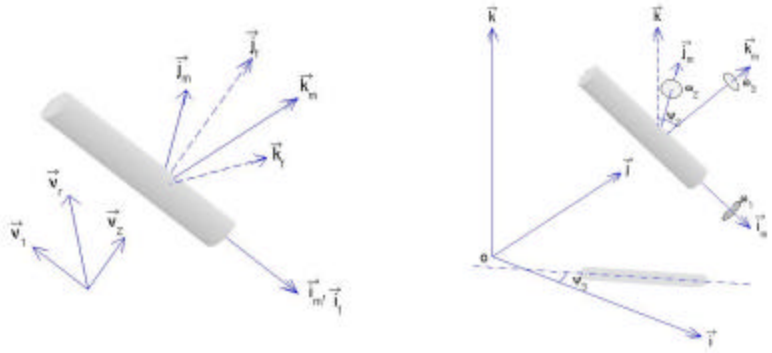

Figure 5. Three Coordinate Systems

which can be decomposed into two parts,

$$\mathbf{V}_r = \mathbf{V}_1 + \mathbf{V}_2, \quad \mathbf{V}_1 = (\mathbf{V}_r \cdot \mathbf{i}_F)\mathbf{i}_F, \quad \mathbf{V}_2 = \mathbf{V}_r - (\mathbf{V}_r \cdot \mathbf{i}_F)\mathbf{i}_F, \tag{5}$$

where V_1 is the component paralleling to the cylinder's main-axis (i.e., along $\mathbf{i}_M$), and V_2 is the component perpendicular to the cylinder's main-axial direction. The unit vectors for the F-coordinate are defined by (column vectors)

$$\mathbf{i}_F = \mathbf{i}_M, \qquad \mathbf{j}_F = \mathbf{V}_2/|\mathbf{V}_2|, \qquad \mathbf{k}_F = \mathbf{i}_F \times \mathbf{j}_F. \tag{6}$$

C. MOMENTUM BALANCE

The translation velocity of the rigid-body (V) is governed by the momentum equation in the E-coordinate system (Maxey and Riley, 1983)

$$\frac{d}{dt}\begin{bmatrix} u \\ v \\ w \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ g(r_w / r - 1) \end{bmatrix} + \frac{r_w}{r}\frac{D\mathbf{V}_w}{Dt} + \frac{1}{r\Pi}(\mathbf{F}_h + \mathbf{F}_V), \tag{7}$$

where g is the gravitational acceleration; $b = r_w g / r$, is the buoyancy force; r_w is the water density; ? is the cylinder volume; r is the rigid body density; $r\Pi$ = m, is the cylinder mass; V_w is the fluid velocity in the absence of the rigid-body at the center of volume to the body. F_h is the hydrodynamic force (including drag, lift, impact forces). The drag and lift forces are calculated using the drag and lift laws with the given water-to-cylinder velocity (V_r). In the F-coordinate, V_r is decomposed into along-cylinder (V_1) and across-cylinder (V_2) components. F_V is the force caused by bubble volume variation (bubble force).

D. MOMENT OF MOMENTUM EQUATION

It is convenient to write the moment of momentum equation

$$\mathbf{J} \cdot \frac{d?}{dt} = \mathbf{M}_w + \mathbf{M}_b + \mathbf{M}_h + \mathbf{M}_v, \tag{8}$$

in the M-coordinate system with the body's angular velocity components (w_1, w_2, w_3) defined by (4). Here, Mw is the torque due to the fluid acceleration $r_w / r\, D\mathbf{V}_w / Dt$. M_b is the torque due to buoyancy force $F_b = g(r_w / r - 1)$. M_h is the hydrodynamic (drag and lift) torques. M_v is the torque due to the Basset history force. In the M-coordinate system, the moment of gyration tensor for the axially symmetric cylinder is a diagonal matrix

$$\mathbf{J} = \begin{bmatrix} J_1 & 0 & 0 \\ 0 & J_2 & 0 \\ 0 & 0 & J_3 \end{bmatrix}, \tag{9}$$

where J1, J2, and J3 are the moments of inertia. The gravity force, passing the center of mass, does not induce the moment.

E. SUPERCAVITATION

As a high-speed rigid body penetrates into the air-water interface, an air cavity will be formed. The shape of cavity is approximately elliptical. A number of scientists have developed formulas to predict the cavity radius such as the Logvinovich (1969) formula

$$r_{cav} = r_{\max}\sqrt{1-\frac{\left(1-r_1^2/r_{\max}^2\right)}{\left(1-t/t_m\right)^{2/h}}}, \tag{10}$$

where rmax is the maximum cavity radius; tm is the time for the formation of the cavity midpoint; h (~0.85) is the correction factor; and r1 is the radius at location x_1; t is the time for the cavity formation at x_1,

$$t = \frac{x_M - x_1}{V_k}, \tag{11}$$

where V_k is the cavitator velocity. Recently, Dare et al. (2004) proposed a simpler formula from experimental studies

$$r_{cav} = \frac{d}{2}\sqrt{\frac{kx_M}{d}+1}, \quad k = 2, \tag{12}$$

where d is the nose diameter. The shock propagation and subsequent bubble formation may be significantly affected by the presence of an air cavity around the rigid-body. Supercavitation often occurs around the body. Cavitating flows are usually described by the cavitation number (s),

$$s = \frac{p - p_v}{\frac{1}{2}r_w V_w^2}, \tag{13}$$

where p is the hydrostatic pressure, p_v is the pressure in the cavity. For supercavitating flow the cavitator is located at the forward most location on the body, and the cavity downstream of the cavitator covers the body. The shape of the cavity is defined by the cavitation number. The aspect ratio (length L versus diameter dm) is the function of cavitation number

$$l = \frac{L}{d_m} = \frac{s + 0.008}{s\,(0.066 + 1.7s)}. \tag{14}$$

Several expressions can be used for the drag coefficient. Without considering the geometry of cavity, the cavitator drag coefficient is simply calculated by (Stinebring et al., 2001)

$$C_d = 0.82(1 + s). \tag{15}$$

When considering the geometry of cavity is considered, the cavitator drag coefficient is expressed by

$$C_d = \left(\frac{2r_{cav}}{d}\right)^2 (s - 0.132s^{8/7}). \tag{16}$$

F. BUBBLE DYNAMICS

Drag due to bubble volume variation is calculated by (Johnson and Hsieh, 1966)

$$\mathbf{F}_V = 2p\, r_b^2\, r_w\, (\mathbf{V}_w - \mathbf{V})\frac{dr_b}{dt}, \tag{17}$$

where r_b is the bubble radius. The Rayleigh-Plesset equation (Plesset, 1948)

$$r_b \frac{d^2 r_b}{dt^2} + \frac{3}{2}\left(\frac{dr_b}{dt}\right)^2 = \frac{1}{r_w}\left(p_v - p_g \frac{\Pi_{b0}}{\Pi_b} - p - \frac{2t}{r_b} - \frac{4m}{r_b}\frac{dr_b}{dt}\right), \tag{18}$$

where pg is the initial partial pressure of the non-condensable gas; Π_{b0} is the initial volume of the bubble; Π_b is the volume of the bubble; t is the surface tension; and m is the dynamic viscosity of water.

G. MODEL SCALING

Ensuring proper similitude between prototype and 1/12 model is key to successful physical modeling. For true scaling the prototype must be geometrically, dynamically and kinematically similar to the prototype. Of primary concern are effects of the inertial, gravitational, and viscous forces that act on the model as it travels through the water column. Unfortunately, when using water as both the test and prototype medium, it is impossible to satisfy the requirements for gravitational (Froude) and viscous (Reynolds) scaling simultaneously. The hydroballistic model must therefore be designed to scale one force ratio and minimize the other. (Waugh et al, 1973) In this case gravity is regarded as a second order force, and the emphasis is placed on the handling the interaction between the inertial and viscous forces.

Kinematic viscosity is related to the drag coefficient and the Reynolds number. The Reynolds number, R_e, is the ratio of the inertial to viscous forces.

$$R_e = \frac{rVd}{m} \tag{19}$$

where r is the density of the fluid, V is the velocity scale, d is the model diameter, and m is the kinematic viscosity of the fluid. To achieve similitude between the scale model and the prototype, R_e must be equal in both.

Figure 6 depicts the relationship between drag coefficient and the Reynolds number for a given set of flow parameters around a 5.1 cm circular cross-section (Gefken, 2005).

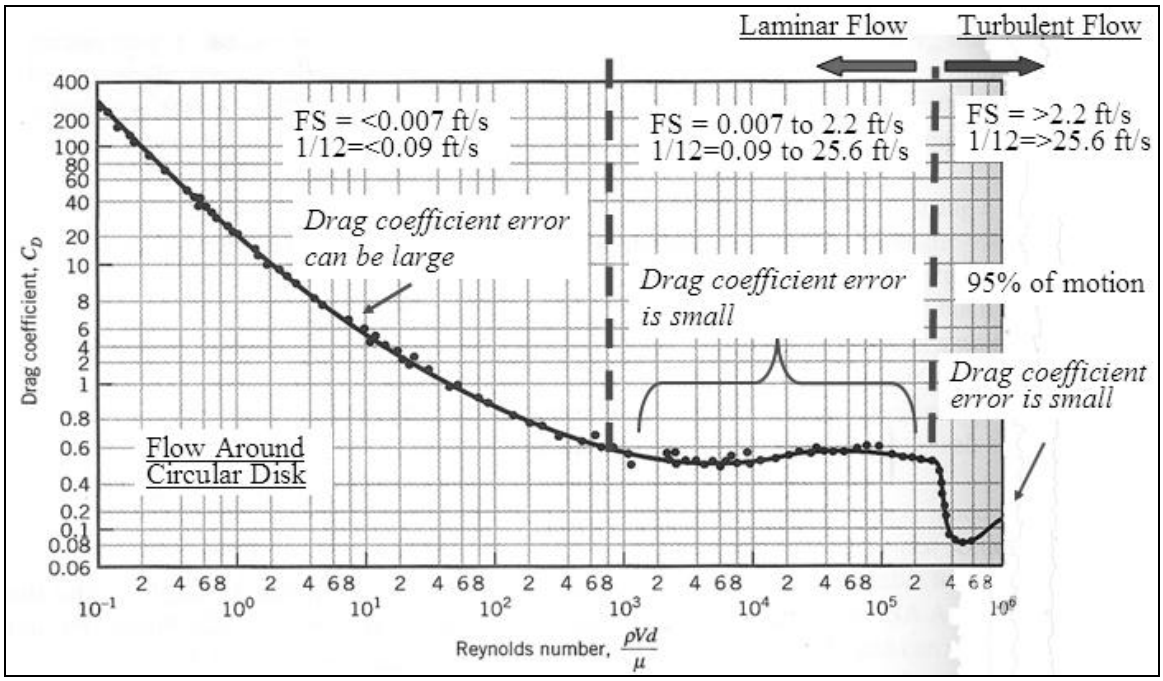

Figure 6. Drag Coefficient versus Reynolds Number (From: Gefken, 2005)

Of primary interest in Figure 6 is the region where the Reynolds numbers exceed $4x10^3$. This region is characterized by a turbulent flow regime. Because the drag coefficient tends to be very small in this area, this is where the model and prototype Reynolds numbers will most closely match and similitude will be at its greatest. The velocity threshold for remaining in the region of turbulent flow is approximately 7.8 m/s. Thus, for the model bombs to conform to the Reynolds scaling regime velocities must meet or exceed this minimum level. When the model velocity drops below this point the flow regime begins transitioning from turbulent to laminar flow and the similitude between the model and prototype begins to degrade.

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IV. BOMB STRIKE EXPERIMENT

A. PREPARATION

The overall premise of the bomb strike experiment consists of inserting various bomb-like test shapes into water, and recording their underwater trajectory over the course of the flight path. Data collection was facilitated by a pair of high-speed video cameras mounted below the water surface. Following the data collection phase of the project, all video trajectory data was converted into an array of Cartesian coordinate points which will serve as the initial data set for the development and validation of the bomb-strike prediction model (STRIKE35).

1. Hydrodynamic Test Shapes

A collection of four bomb-like polyester resin test shapes were used during the experiment phase of the project. These shapes consisted of a right-cylinder, right-cylinder with hemispheric nose cone (capsule), scale model of the MK-84 GP munitions (bomb) and a modified version of the model bomb which had no stabilizing fins (shell).

The construction of the test shapes consisted of a three part production process: prototype development, mold construction and test shape casting & finishing. This process was necessary to facilitate more efficient experimentation and to reduce the production cost of the experimental test shapes.

Prototype production began with the development of a 1/12 scale replica of the real-world operational MK-84 GP bomb. This initial prototype was machined from aluminum alloy stock based on known dimensional characteristics. To create the cylinder and capsule prototypes, a polyester resin casting was created by pouring liquid plastic into a 5 cm polyvinylchloride (PVC) mold. The shapes were allowed to cure, and then were machined to their final dimensions. As these two shapes were not intended to mimic any type of real-world munition, their dimensions were based solely on similarity to the 1/12 scale model bomb. The final prototype created was the shell shape. Construction of this design consisted of creating a polyester resin casting of the bomb

prototype. The shape was then machined and sanded to remove the fins, and produce the final prototype shape. Diagrams of the final prototypes with dimensions are depicted in Figure 7 and Table 2:

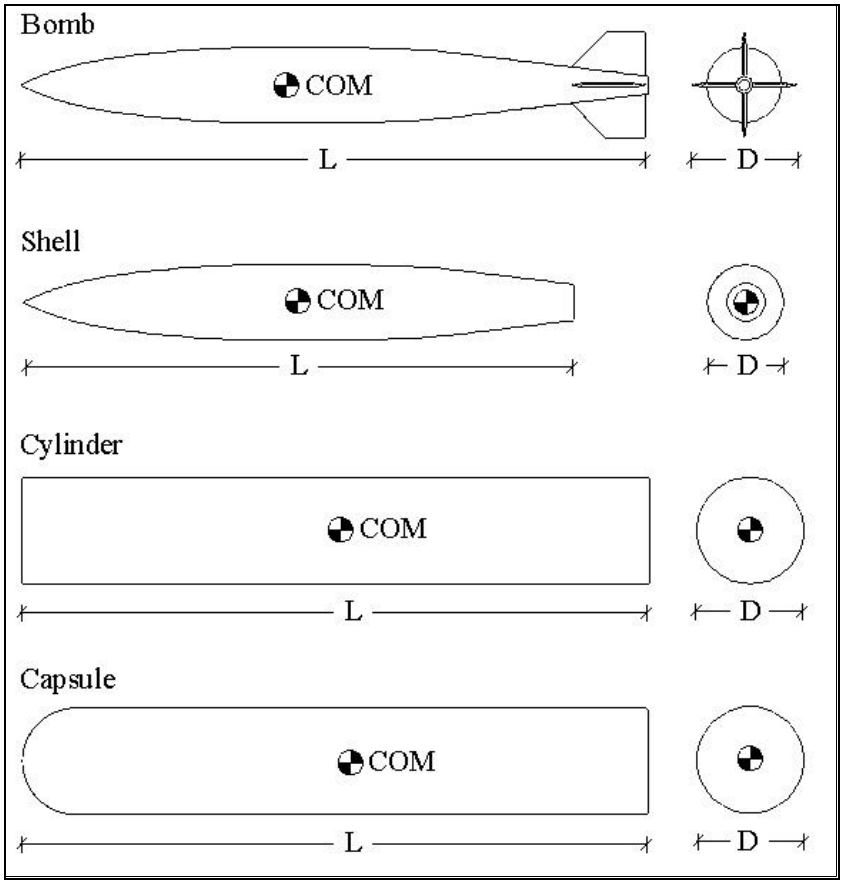

Figure 7. Model Prototype Diagram

	Length L - (cm)	**Diameter** D - (cm)	**Total Mass** (g)	**Center of Mass*** COM - (cm)	**Specific Gravity** (g/cm^3)
Full Scale Bomb	382.3	58	941.95kg	160.3248	2.3
1/12 Scale Model					
True Scale	31.85	4.83	545.2	13.3604	2.3
Actual Model	31.85	4.83	563.4	13.75	2.224
% Error	0	0	3.3	2.9	3.3
Other Shapes					
Shell	27.94	4.02	473	14.2	2.224
Cylinder	31.75	5.18	831	15.85	1.754
Capsule	31.75	5.18	808	16.10	1.754
*Center of mass measured from nose of model shape					

Table 2. Bomb and Model Characteristics

Once prototype construction was complete, work began on making casting molds of the prototypes from which the final experimental shapes could be produced. Mold production was identical for all four shapes. The mold making process consisted of making two separate mold halves for a given shape. To create the first half of the mold, a cardboard container was constructed to hold the shape and the molding materials. This container was sealed at all joints, and then filled 2/3 with sand. On top of the sand, a layer of modeling clay was packed and smoothed in the container. The prototype shape was then depressed half way into the clay along its long axis leaving the remaining half of the shape exposed (Figure 8). To facilitate simple removal from the final mold, the exposed portion of the shape, clay and interior of the container were coated with a silicone release agent. After all preparations were complete, the remainder of the box was filled with commercially available liquid urethane rubber molding compound and allowed to cure overnight. It is also worth noting that the particular type of urethane rubber used is of the sort which did not require vacuum degassing to remove bubbles. When the rubber was cured into its final state, the completed mold-half was removed from the container. To create the second half of the mold, the process was repeated, but instead of using sand and clay to support the prototype, the newly created mold half was utilized. After the entire mold was complete (Figure 9), holes were placed in the ends of the mold to facilitate resin insertion and the evacuation of air as the casting material entered the mold. This process was repeated for all remaining prototype test shapes.

Figure 8. Prototype in Mold Box Prior to Adding Mold Rubber Compound

Figure 9. Finished Rubber MK-84 Model Mold

The final step in the production of the testing shapes consisted of pouring and finishing the numerous uniform-density polyester resin castings created from the prototype molds. The castings were created from commercially available, two-part, ultra-low viscosity, rigid, urethane casting resin which readily accepts coloring and density additives and yielded virtually bubble-free castings without costly degassing procedures. As possibility of damage to the test facility and personnel was of paramount concern, the resin chosen possessed a shore hardness rating of 70D which means that the shape would maintain dimensional integrity throughout the flight path, but still pose little risk of damage to the facility were it to impact the wall, window or floor of the test tank at high velocity. To facilitate creation of an accurately scaled model, all portions of the resin mixture were carefully measured and weighed, and fine brass powder was added to the resin during mixing to achieve the proper density ratio. When all materials were prepared, the rubber mold was coated with silicone release agent, and closed using cloth straps. The resin mixture was then poured into the mold (Figure 10) and allowed to cure overnight.

Figure 10. Pouring the Resin Mixture into the Model Mold

When the casting was fully cured, the mold was carefully opened, and the final testing model removed from the mold. The models were allowed to cure an additional 48 hours prior to finishing. Finishing consisted of filling any imperfections with a slurry of polyester resin, followed by sanding and painting. All models were painted with flat black spray enamel, and a series of white fiducials were added to aid in analysis of the digital video data (Figures 11-14). This process was repeated for each category of prototype so that at the time of experimentation, there were six testing models of each test shape available.

Figure 11. 1/12 Scale Model MK-84 Bomb

Figure 12. Shell Test Model

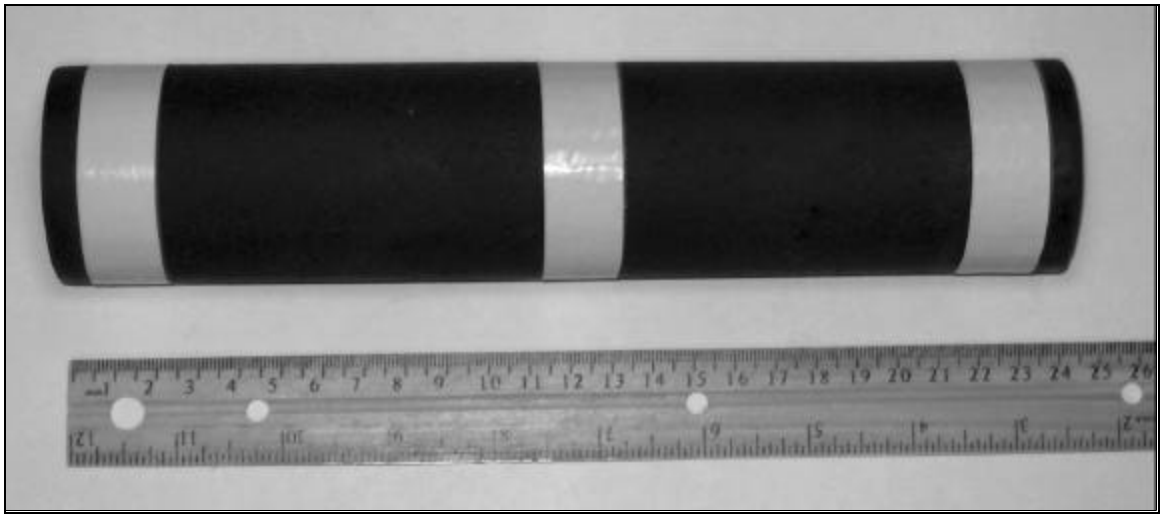

Figure 13. Cylinder Test Model

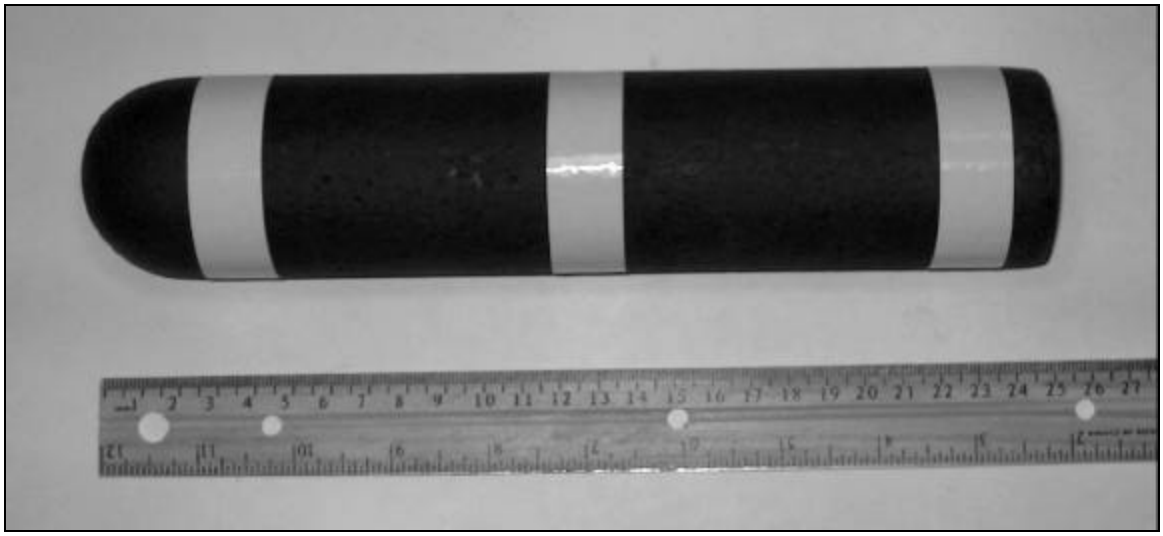

Figure 14. Capsule Test Model

2. Pneumatic Launching Device

To facilitate the high-velocity portion of the experiment, a pneumatic launching device was created to propel the test shapes into the water at a rapid entry speed. The launcher was primarily constructed of schedule 40 polyvinylchloride (PVC) piping. The device consisted of three primary components: air chamber, valve mechanism, breech-load firing barrel (Figure 15).

Figure 15. Pneumatic Launcher Mounted on Bridge

The air chamber was constructed of a single, five foot section of 6" PVC. The chamber was sealed on the end with a standard 15 cm end cap, and then connected to the valve mechanism via a series of PVC reducer bushings. A standard 5 cm PVC ball valve was fitted between the air chamber and firing barrel, and served to maintain the chamber in a pressurized state until triggered. When actuated, the valve instantaneously opened releasing the pressurized volume of air into the firing barrel. Because of the high pressures experienced by this valve, a hydraulic actuator was fitted to the device to provide the motive force necessary to open the valve. The final portion of the launcher consisted of a firing barrel. This barrel had a removable cap on the closed end to

facilitate efficient reloading of the test shapes. Small foam sabots with fine wire lanyards (Figure 16) which extended through a pinhole in the removable loading cap provided the means by which test shapes were held in the barrel until fired.

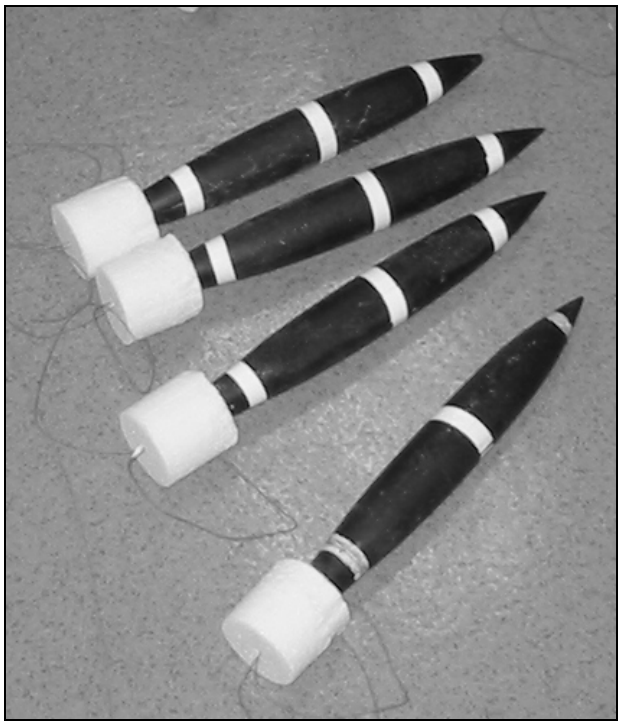

Figure 16. Models Fitted with Foam Sabots and Wire Lanyards

The launcher was mounted to a steel frame oriented vertically downward with the end of the barrel positioned orthogonal to the water surface at a height of 30 cm above the water. The entire apparatus was secured to the tank bridge by lag bolts and ratchet tie down straps (Figure 15). Additional equipment associated with launcher included a pressure indicator, emergency release valve, pneumatic fill and triggering mechanism and a 830 kPa air source.

3. Hydrodynamic Test Facility

The bomb strike experiment was conducted at the Monterey Bay Aquarium Research Institute (MBARI) Unmanned Underwater Vehicle Test Tank. This tank was used to simulate the near-shore environment frequently experienced in real-world mine countermeasure operations. The facility consists of a 9.14 m x 13.72 m x 9,14 m tank filled with standard sea water, and is contained inside a large building which provided

shelter from wind and elements. A sliding bridge spans the width of the tank, and was used as a mounting surface for the pneumatic launcher and lighting equipment. Eight viewing windows located approximately six feet below the water surround the tank, and provided a venue for unimpeded sub-surface data collection to a scaled depth of roughly 60 meters. The conditions of the tank were maintained via an ozone filtration system, and aside from the remnants of blue dye placed into the tank several weeks prior to the experiment, the tank was free from contaminates at the beginning of the experiment. It is of worth noting at this point, that while the dye did not affect the hydrodynamic characteristics of the test shapes, it did significantly impact the ability to properly illuminate the tank, and hence the quality of the video data was somewhat degraded. Figures 17-18 detail the characteristics of the facility:

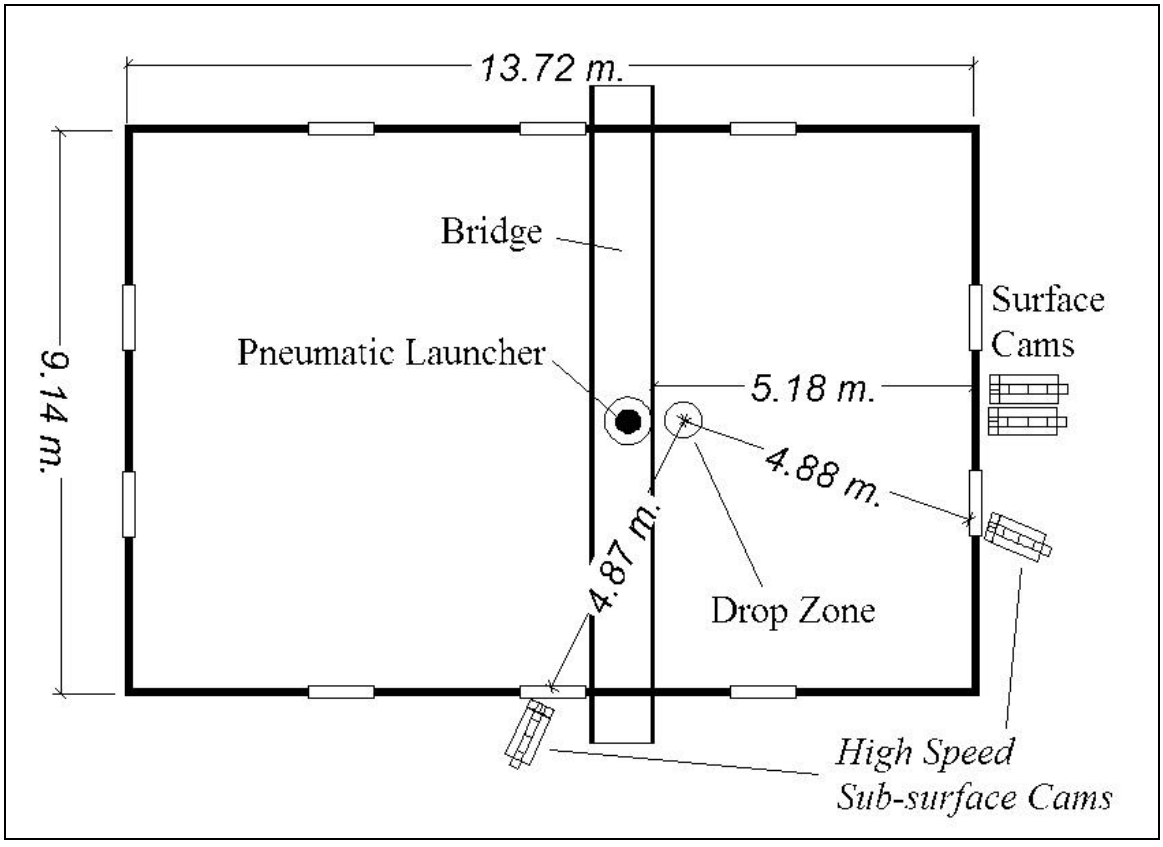

Figure 17. Test Facility Plan View

Figure 18. Test Tank - Above Surface (Left), Below Surface (Right)

In addition to the previously mentioned equipment and facilities, a large test shape recovery device was assembled and installed in the tank prior to testing. This apparatus consisted of a 9 m x 12 m net attached to a PVC grid-framework constructed of 2 cm piping. The entire apparatus was inserted horizontally across the water, and was used to recover shapes between testing runs using a series of weights and pulleys located in the corners of the tank to raise and lower the device. Lastly, two large blue tarps were placed in the tank against the walls centered in each camera's field of view. This provided a solid contrasting background which assisted in the analysis phase of the project in distinguishing the falling shapes from the environment around them.

4. Data Collection Equipment

All data was collected digitally using a network of high-speed and standard video equipment and computers. Surface level information collected included experiment data and the video log. This data was collected using a pair of standard commercially available digital video camera, mounted on tripods, and located at the end of the pool directly in front of the testing zone. Both cameras operated at a 30Hz frame rate. The data camera used a narrow view lens zoomed to focus on the area directly between the launcher and the water surface, and was toggled on and off between test runs. Data from this camera was later used to ascertain the initial velocity of the shapes as they entered the water. The second camera used a wide angle lens, and was employed to record a video log of the experiment. This device ran continuously throughout the experiment.

Below surface video imagery, used to determine the trajectory of the falling shapes, was collected using a pair of high-speed, Photron FASTCAM PCI digital cameras

(Figure 19). These cameras were mounted on tripods in two separate windows, at an angle of 70 degrees in relation to one another so as to provide two, near orthogonal, views of the drop zone. After mounting and calibration, each camera station was covered with black plastic to block out any light source beside that which came from the field of view. The cameras were time-synchronized, calibrated and connected by a centrally located laptop computer via high-speed data cables. During testing the cameras were operated using the Photron FASTCAM Viewer software at 512 x 480 pixel resolution at full frame and recording rates of 125 Hz. To facilitate a wider field of view, both cameras were fitted with wide angle lens. All data was recorded digitally on a standalone 200GB hard drive during the test phase. Additionally, to enhance the quality of the data, during testing the installed tank lighting system was turned to its maximum setting and a pair of 1000 watt high intensity photography lights were mounted and used above the surface.

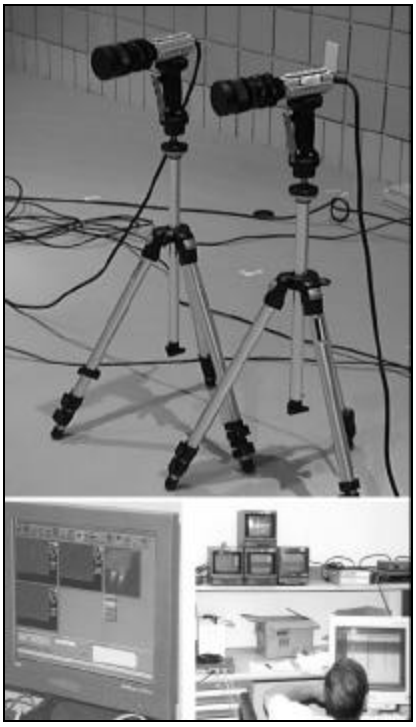

Figure 19. Camera and Analysis Hardware and Software

B. METHODOLOGY

The bomb-strike experiment consisted of a series of low velocity and high-velocity runs of the four testing shapes which were launched vertically into the water.

The entry of each shape into the water was recorded by the two above surface video cameras. This above-surface data was then digitally analyzed using two dimensional (2-D) motion analysis software to determine the initial velocity of all shapes. All below-surface data collection was facilitated by the two FASTCAM PCI high-speed cameras. The below-surface digital data was analyzed by three dimensional (3-D) motion analysis software to determine the trajectories of each shape. All data from runs which involved malfunctions was discarded.

1. Camera Calibration

Prior to the commencement of testing, calibration images were taken from each underwater camera view. This procedure provided an artificial frame of reference for use by the analysis software in computing the shape's trajectory in the data retrieval phase. To accomplish this task, a geo-referenced calibration target (Figures 20-21) consisting of a white, three-dimensional cross was lowered into the camera's field of view to a depth of 100 inches and filmed. The z-axis was determined by the vertical component of the cross, and the two horizontal components were used to acquire the x and y axis. Following acquisition of all calibration images, both cameras were secured to their final position and barricaded to prevent disturbance during the testing phase.

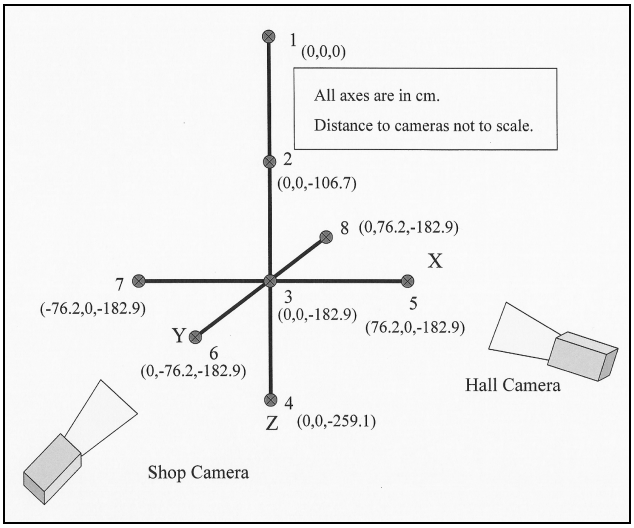

Figure 20. Calibration Cross Diagram

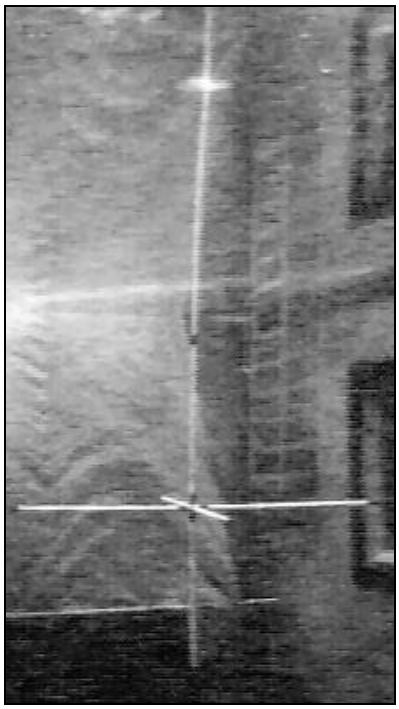

Figure 21. Underwater View of Calibration Cross

C. TESTING PROCEDURES

The overall project was conducted by two experimenters via handheld walkie-talkies. One experimenter remained on or near the moveable bridge and was responsible for loading the launcher, toggling the lights and above-surface cameras and performing the launch. The other experimenter was stationed with the high-speed cameras and computer, and served to coordinate the filming and retrieval of the below-surface data. For each individual drop, the experimenter below confirmed the readiness of the high-speed cameras and prepared the computer to save the appropriate film file. When this was confirmed, he signaled the man above, who performed the launch.

After a coordinated count conducted via the walkie-talkies, the man at the launch position fired the launcher as the man below began filming the test run. When the shape passed through the field of view of both cameras, the camera operator would cease filming, save the appropriately named file, and again signal the man above, who would then turn off the lighting and note the time and shape in the experimental record notebook. The cycle would then repeat itself until all shapes were fired. Recovery of the

shapes was a two person task and was facilitated using the PVC and netting apparatus as described above. Digital imagery data obtained in the experiment was then analyzed to generate water trajectory data and graphics.

V. DATA RETRIEVAL AND ANALYSIS

A. OVERVIEW

The data retrieval and analysis phase of the project was a multi-step process which employed various software applications and analysis techniques to produce the final data set. Figure 22 depicts the general steps in this process:

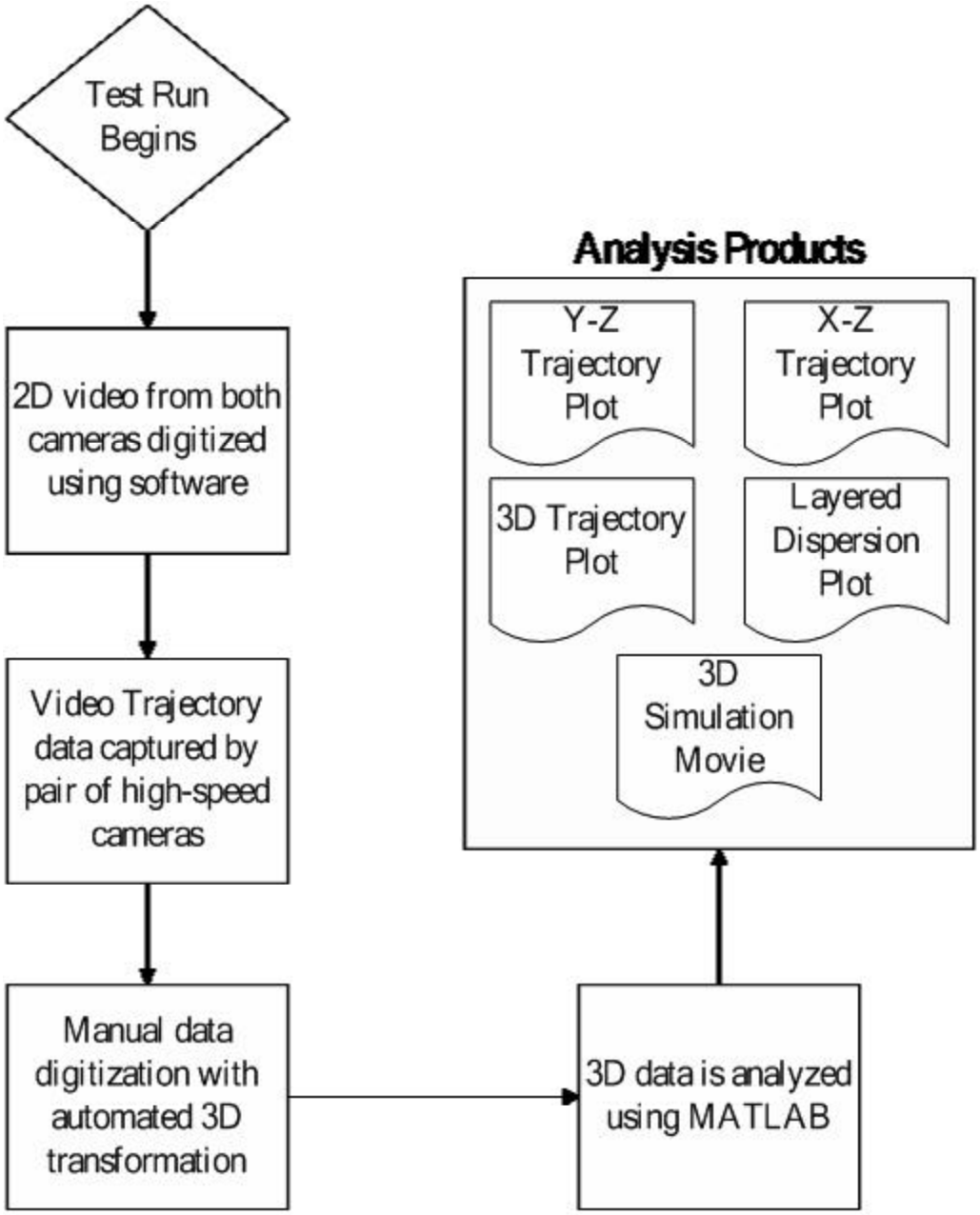

Figure 22. Data Retrieval and Analysis Diagram

B. DATA RETRIEVAL

The experimental phase yielded a total of 43 movie sets, each consisting of a pair trajectory movies produced from the two sub-surface high-speed cameras. Figures 23-24 depict the flight path of a model bomb as viewed from the two near-orthogonal high-speed cameras.

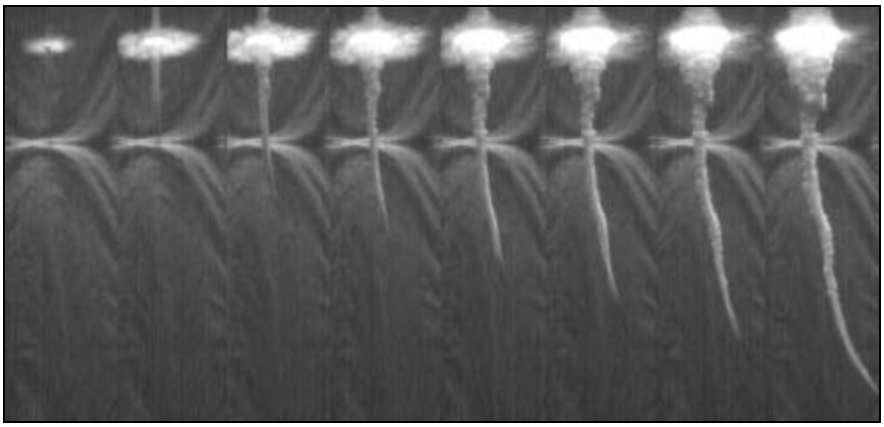

Figure 23. Camera #1 View of a Model Bomb Trajectory Movie

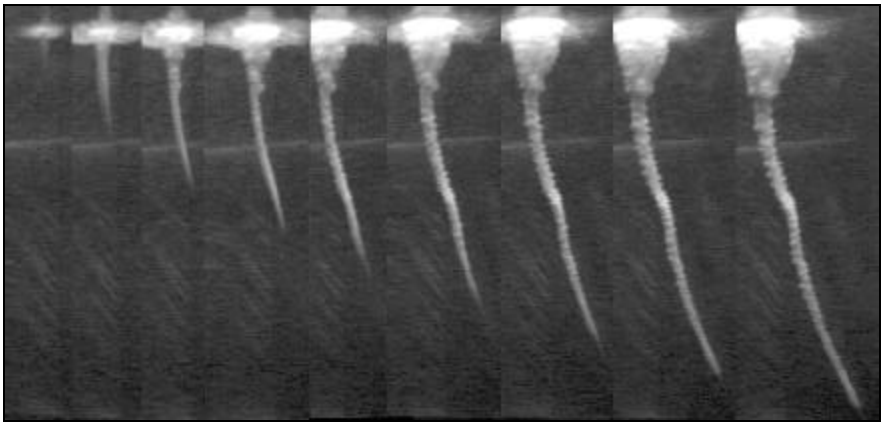

Figure 24. Camera #2 View of a Model Bomb Trajectory Movie

For each test run, each pair of two dimensional movies were combined into a single three dimensional array of x-y-z coordinate data. Commercially available 3-D motion analysis software was the primary tool utilized to perform this function. Initially, the software was calibrated (Figure 25) into the 3-D coordinate reference system utilizing the pairs of calibration images obtained in the initial phase of the experiment.

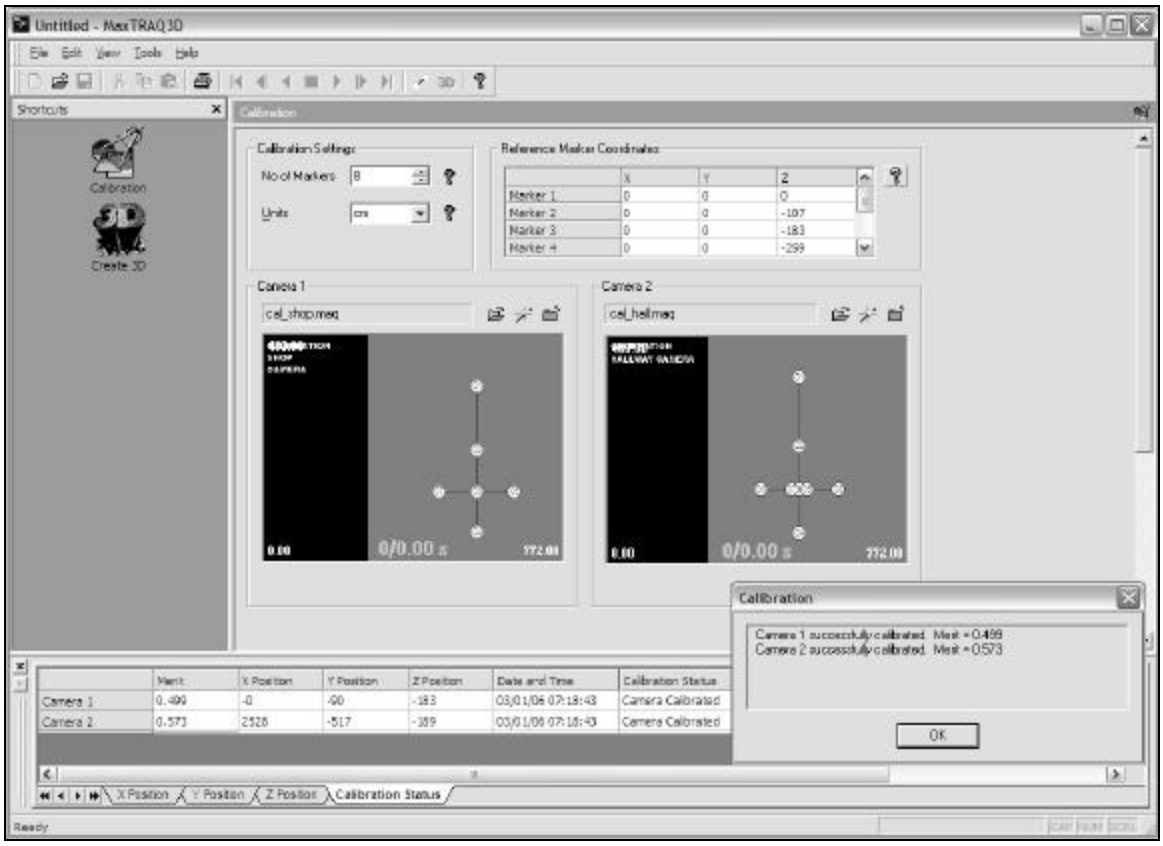

Figure 25. Software Screenshot – Camera Calibration

Following calibration, both camera views were time synced and analyzed to determine the actual position of the shape in the x-y-z coordinate field. Frame-by frame analysis (Figure 26) was performed with the software for each view by manually identifying and inputting a pair of marker points associated with the test shape's position. The markers were generally linked to the shape's leading and trailing edges; however in frames where an edge was not visible the position of the marker was estimated visually based on the previous and subsequent viewable frames.

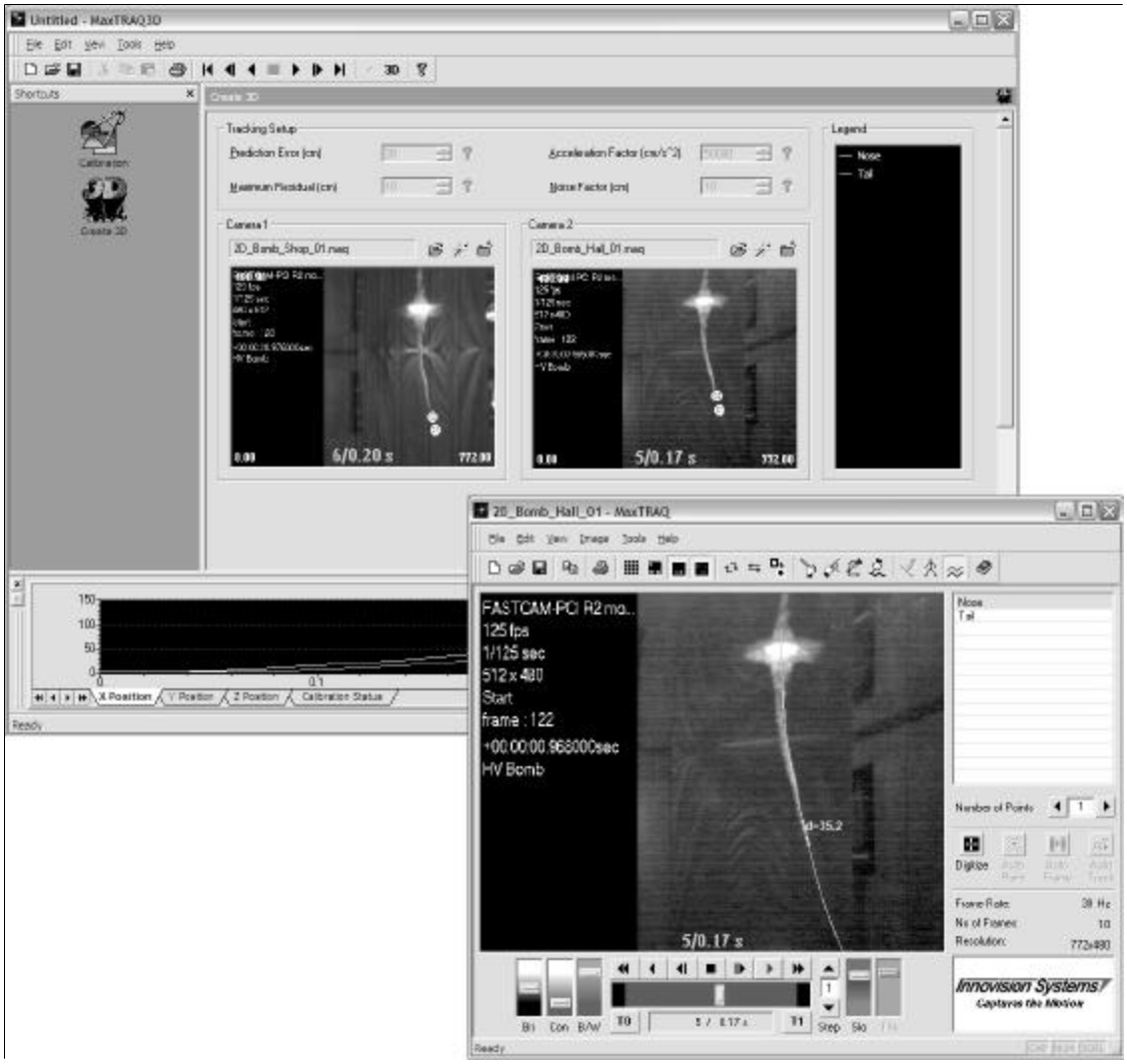

Figure 26. Software Screenshot – Digital Retrieval of Trajectory Data

Following the digitization of data for both views, the automated functions of the software were employed to compile the 2-D images into a calibrated array of 3-D positional data. This data was saved in an electronic database for use in the final motion analysis and modeling phase of the project.

C. DATA ANALYSIS

The three-dimensional coordinate array from each test run was analyzed using the MATLAB software suite. The primary focus of the MATLAB routine was to compute the midpoint between the nose and tail points on the model, and determine the elevation and azimuth of the shape at a given point in order to describe its maneuvering characteristics as it fell through the water column. The application was also employed to

generate all data plots. In total, for each test run the analysis routine produced three trajectory plots (x-z, y-z, x-y-z), three dispersion plots. Examples of these plots are shown below in Figure 27-28:

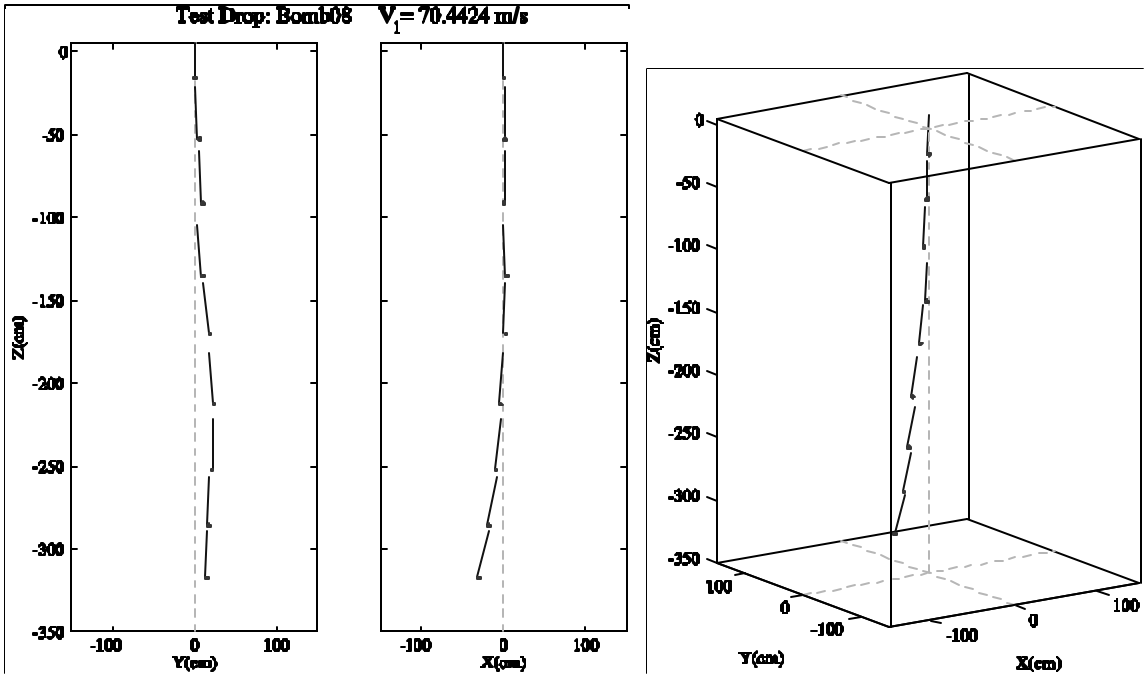

Figure 27. MATLAB Generated 2-D and 3-D Plots

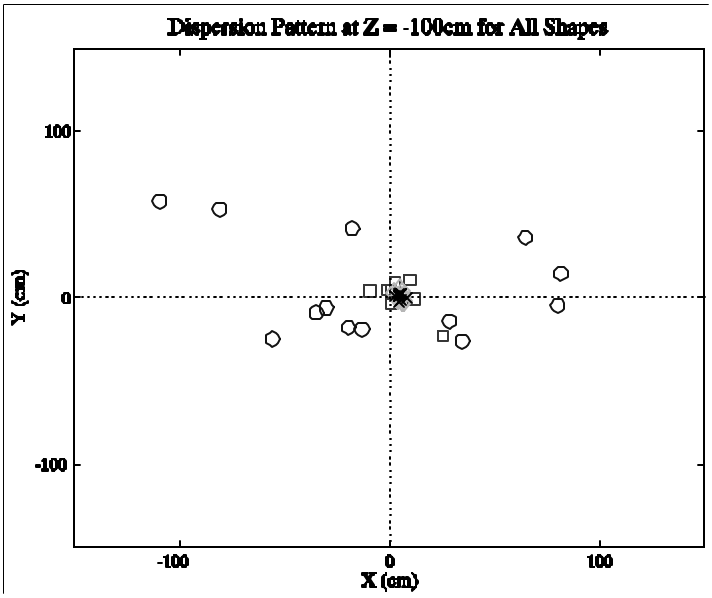

Figure 28. Screenshot of 250 cm Shape Dispersion Plot

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VI. RESULTS

A. TRAJECTORY PATTERNS

The primary purpose in conducting the Bomb Strike Experiment was to determine the water-phase trajectory pattern of bomb-like rigid bodies while falling through the water column at high velocities. To accomplish this task, combination of model MK-84 bombs and other hydrodynamic test shapes were launched into water at high rates of speed. Upon analysis of the video data collected from the 43 test runs, four generalized trajectory patterns were formulated to categorize the maneuvering characteristics of the model shapes. These generalized trajectory patterns are described in Table 3 and Figure 29. Appendix A contains the comprehensive results of all trajectory patterns.

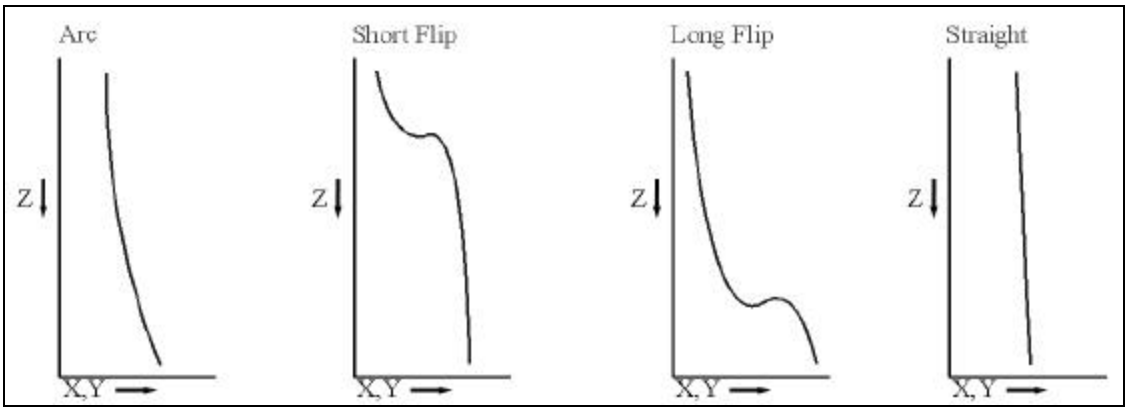

Figure 29. Generalized Trajectory Patterns

Trajectory Pattern	Description
Arc	Slow gradual curve along the vertical axis throughout the duration of the trajectory pattern
Short Flip	Quick, abrupt turn towards the water surface during initial 100cm of underwater flight followed by slow gradual decent to terminus of trajectory pattern usually characterized by tail-first or near-horizontal model orientation,
Long Flip	Gradual curve until final 1/3 of flight then characterized by rapid, abrupt turn towards the surface followed by slow gradual decent to terminus of trajectory pattern.
Straight	Generally straight or slanted flight path with very little curvature along the vertical axis throughout trajectory pattern.

Table 3. Generalized Trajectory Pattern Descriptions

B. DISPERSION PATTERNS

In addition to compiling the trajectory plots, the data was also analyzed to investigate the dispersion patterns of the shapes at various z-levels as they fell through the water column. The z-level chosen were 25cm, 100cm, and 250cm. These depths were chosen as scaled representations of the actual depths of real-world mine warfare littoral zone classifications. The 25cm depth represents the bottom of the real world surf zone, 100 cm depth represents the bottom of the Very Shallow Water Zone and the 250cm depth represents the middle of the Shallow Water Zone. The dispersion plots are a plan view depicting the shape distribution on the X-Y plane at a given z-level. The plot is divided into four quadrants to facilitate classification of each shape at that z-level. Figure 30 provides an example of the combined dispersion plot at 250 cm. Appendix B contains combined dispersion plots for all shapes, at each z-level.

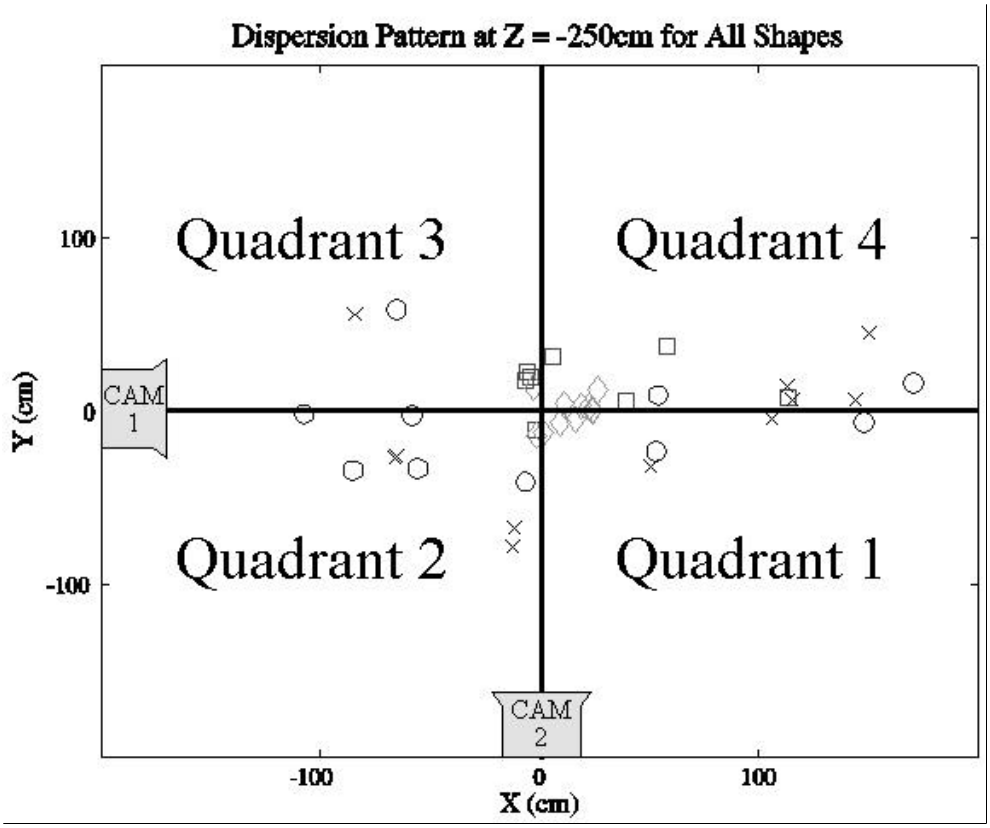

Figure 30. Example Dispersion Plot with Camera Placement and Quadrant Designation

C. RESULTS SUMMARY

Table 4 summarizes the trajectory patterns of all 43 test runs conducted during the Bomb Strike Experiment.

Run ID	Initial	Total	Dispersion	Trajectory
Bomb01	59.6398	0.064	1	Arc
Bomb02	42.5558	0.072	3	Straight
Bomb03	87.091	1.936	1	Erratic
Bomb04	69.4836	0.064	1	Arc
Bomb05	73.0189	0.064	1	Arc
Bomb06	66.9995	0.064	2	Arc
Bomb07	67.5673	0.064	2	Arc
Bomb08	70.4424	0.064	2	Arc
Shell01	29.156	1.928	2	Erratic
Shell02	48.5448	0.368	4	Short Flip
Shell03	49.7667	2.224	2	Short Flip
Shell04	84.0531	1.4	4	Short Flip
Shell05	109.4761	1.68	3	Short Flip
Shell06	65.32	1.72	3	Short Flip
Shell07	91.7885	1.84	1	Short Flip
Shell08	74.7778	1.12	3	Short Flip
Shell09	64.7494	1.68	3	Short Flip
Shell10	84.3337	1.92	1	Short Flip
Shell11	90.6474	1.56	3	Short Flip
Shell12	74.3143	1.44	1	Short Flip
Shell13	93.8647	3.16	3	Short Flip
Capsule01	56.1691	0.608	1	Long Flip
Capsule02	72.2632	0.608	3	Long Flip
Capsule03	77.8575	0.736	2	Long Flip
Capsule04	62.3611	0.568	1	Long Flip
Capsule05	87.418	0.264	4	Long Flip
Capsule06	64.5469	0.712	3	Long Flip
Capsule07	57.4379	0.48	1	Long Flip
Capsule08	83.1899	0.44	1	Long Flip
Capsule09	63.7256	0.768	1	Long Flip
Capsule10	69.1012	0.4	3	Long Flip
Capsule11	65.164	0.4	3	Long Flip
Cylinder01	28.157	0.368	1	Straight
Cylinder02	40.7162	0.376	0	Straight
Cylinder03	52.6362	0.336	1	Straight
Cylinder04	44.0899	0.448	0	Straight
Cylinder05	50.6464	0.296	4	Straight
Cylinder06	65.2215	0.256	4	Straight
Cylinder07	67.9315	0.256	4	Straight
Cylinder08	54.7307	0.68	0	Straight/Erratic
Cylinder09	53.4531	0.288	1	Straight
Cylinder10	58.2447	0.32	2	Arc
Cylinder11	56.9073	0.648	o	Long Flip

Table 4. Summary of Experimental Results

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VII. DISCUSSION

A. TRAJECTORY PATTERNS

The trajectory patterns of each model type were noticeably affected by the size and shape of the models themselves. The four shape types exhibited marked differences in their water phase trajectories. More than any other factor these differences appeared to be linked to three factors: shape of the nose cone, location of center of gravity and the presence or absence of stabilizing fins. To begin looking at the trajectory patterns it must be stated that by and large, the four generalized patterns were not shared among the various shapes, but rather, they were quite consistent within each shape type.

The simplest shape, the cylinder, was the most predictable and stable shape of all. Out of a total of eleven test runs, nine of the shapes exhibited an almost vertical trajectory pattern from the point of water entry to the terminus of the flight path. Like all other shapes, the cylinder was launched orthogonal to the water's surface with initial velocities ranging from 28 m/s to 67 m/s. The major determining factor in the shape's trajectory appeared to by the flat plate nose. As the shape entered the water, the uniform surface maintained constant pressure on the water preventing the development of underpressure or the whip phenomenon which caused other shapes to veer off course.

The next most complex shape in the series is the capsule shape. The capsule and cylinder are almost identical shapes in terms of density and mass, however the capsule replaces the cylinder's flat plate nose cone with a hemispherical nose cone and also has a slightly different center of gravity. In 100% of the test runs, this modification appears to have been the causative agent in the long-flip style trajectory classification. With everything else remaining the same, the differences in trajectory pattern between the cylinder and the capsule are linked to the hemispherical nose cone on the capsule. Also likely to have played a role in the more dynamic trajectory pattern of the capsule is the location of the center of gravity. The center of gravity is located further to the rear of the shape thus increasing the propensity for the shape to flip at lower velocities.

The last two shapes, the bomb and the shell, differed widely from the previous two examples, and also from each other. The bomb shape displayed the arc trajectory

pattern during 75% of the test runs. This pattern was characterized by a slow and gradual arc along the vertical axis. The stabilization effects of the tail fins kept the bomb stable throughout the flight path. Additionally, the tapered nose and tail minimized the cavitation bubble which allowed for a more steady trajectory pattern . Alternatively, the shell shape demonstrated a very erratic trajectory pattern. As the shell entered the water and the came in contact with the water surrounding the bubble plume, the drag created on the side of the shape caused it to make an abrupt turn towards the surface before descending tail first to terminus of the pattern. This attribute was likely attributed to the lack of tail fins in conjunction with the flipping tendency caused by the rearward oriented center of gravity.

Of special interest to the bomb shape was Bomb Test #3. During this particular test run the model experienced tail slap when entering the water, and as a result lost all tail fins. The ensuing flight path was extremely erratic, characterized by a tumbling action as it progressed through the water column. This shape was completely unpredictable and followed a flight path unlike the other shapes. The unexpected loss of the stabilizing fins demonstrated the amount of chaos that can occur when the model shape malfunctions.

Overall, it can be concluded that the variance in trajectory patterns was primarily a result of the various model shapes and their center of gravity. While the trajectory patterns changed dramatically from shape to shape, they remained fairly constant within a particular shape type.

B. LAYERED DISPERSION PATTERNS

The primary purpose of determining the dispersion pattern for each group of shapes was to provide a measured view of the amount of spreading that occurs as different shape types move downward through the water column. Since the experiment was conducted on $1/12^{th}$ scale, the z-levels chosen were able to represent various layers in the real-world littoral combat zone. These z-level represented various depths in the water column where forces might be conducting Mine Intervention Warfare (MIW) operations. Figure 31 depicts the munition types and layer depths for these zones.

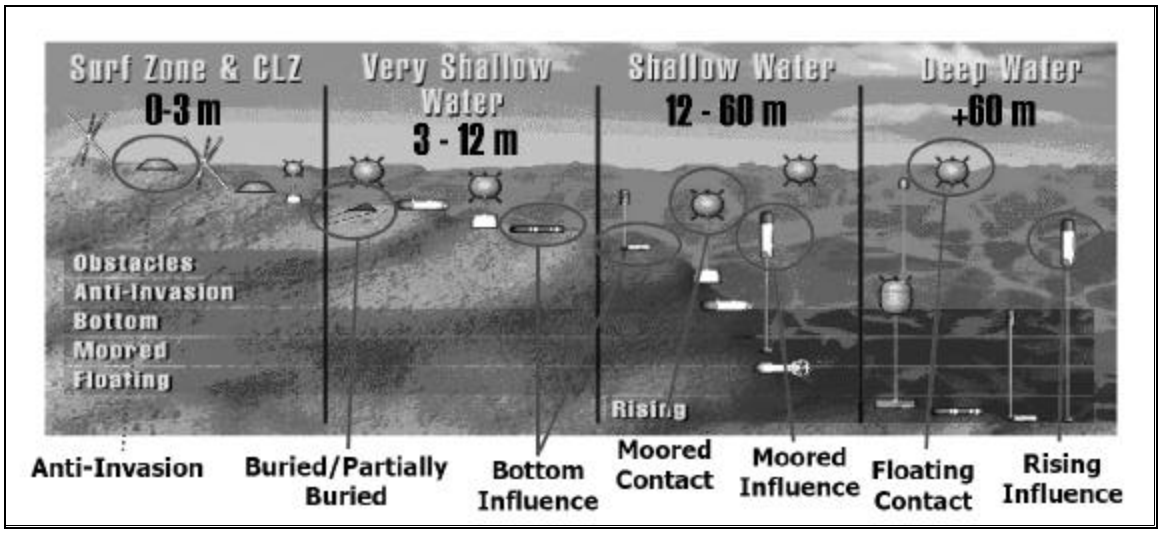

Figure 31. Littoral Combat Zones and Munitions (After: Nash, 2005)

The scaled levels chosen for the dispersion plots were z = 25cm, z=100cm and z=250cm serving as 1/12 scale representations of the 0-3m Surf Zone, 3-12m Very Shallow Water Zone and the 12-60m Shallow Water Zone respectively. It is within these zones where 99% of mine warfare operations are conducted.

The results from these plots are depicted in Appendix B, and show a significant variance in spreading from one shape type to another as the z-level becomes deeper. For the z=25 cm case, 86% of shapes fall within a 5cm radius of the origin of the drop. The six shapes falling outside of this 10% radius zone are all shell type shapes which have previously been shown to exhibit the most aggressive trajectory pattern. At z=100cm, the spreading increases further, however 68% of all shapes remain within the 10% boundary borders. In this case the all but one of the shells has exceeded this border, and a few bomb shapes are beginning to venture away from the origin. Finally, at the z=250cm level, the spreading of all shapes is at its fullest. Only 47% of all shapes remain within 25 cm of the origin. All bombs, shells and capsules are widely spread in the dispersion pattern. The only shape that remains consistently near to the origin is the cylinder. This shape never exceeds a distance from the origin greater than 10% of the overall z-level. It stays tightly packed near the center of the field of view for its entire flight path. This is most likely due to the simplicity of the shape which decreases the interaction with the water, and thus prohibiting it from veering off course.

C. SOURCES OF ERROR

Several known sources of error existed during the Bomb Strike Experiment which served to hinder the overall data gathering and analysis process. Using unfamiliar and untested techniques and equipment was a major challenge during this experiment. As a result, every portion of this endeavor, from the experiment to the analysis, required far greater time, effort and resources than originally anticipated, and was a contributing factor in the overall sources of error for the project.

The primary known error was found in the data collection phase of the project. Filming in an underwater environment introduces many inherent difficulties which can serve to degrade the quality of data. Add to this the complication of filming at high-speed and the problem of collecting useable data becomes even more difficult. One area of error associated with the underwater filming stems from the parallax and distortion caused by filming an object in one medium while the cameras are in another medium. This distortion was minimized, however, by using special lenses and correction software in conjunction with the calibration methods described previously.

The use of high-speed cameras also introduced shape position tracking difficulty. The increased frame rate associated with high-speed filming necessitated much brighter lighting in the test tank than was available during the experiment. While the water appeared bright and clear on low-speed film, it was much darker in the 125 Hz video image. This effect was compounded by the remnants of blue dye that were still in the water from a previous experiment weeks earlier. The low brightness made distinguishing the black bomb shape from the background more difficult. The darkness problem could not be counteracted, and hence, some frames of each drop were difficult to process.

The air cavity and bubble plume generated by the pneumatic launcher and the shape itself greatly also hindered the ability to view and digitize the trajectory data. As the air cannon is actuated a volume of air is pushed ahead of the model shape as it moves down and out of the firing barrel. This air creates a depression in the water surface causing distortion of the field of view. Additionally, a shape entering the water also generates its own air cavity. That air cavity affects both the initial motion of the shape in the water, and also the visibility of that shape as the bubble plume collapses around the

shape during flight. The air cavity effect on the motion was minimized by the high initial velocities. However, the bubbles from the cavity prohibited automatic tracking via software. In some frames, the test shape was completely obscured and had to be estimated based on the position of the shape in the surrounding frames.

The last known source of error stems from model production errors. First, unlike the actual prototype bomb shape, the 1/12 scale model bomb were created as uniform density shapes made from a polyester resin and brass mixture. As such, the shapes displayed geometrical similarity and the same average density as the real-world prototypes, however the shapes did not realistically detail the inner structure, electronics, or explosive distribution of their counterparts. Furthermore, during the resin curing process, the denser brass powder within the mixture may have "settled" somewhat in the molding process. Attempt to minimize this effect were taken by regularly rotating the molds during the hardening process, but settling inevitably occurred resulting in slightly-unsymmetrical mass distribution that affected the trajectory results. Overall the model bomb shapes were very similar to the prototypes, but these inherent errors did cause the center of gravity for the models to be slightly altered from the prototype to a measure of less than 3% error overall.

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VIII. CONCLUSIONS

The first phase of the Bomb Strike Experiment Project has successfully demonstrated and characterized the physical and theoretical hydroballistic characteristics of high-velocity bomb-like rigid bodies as they move through the air-water-sediment column. Through careful observation of the shape's position and orientation during the underwater trajectory phase, a large data set consisting of three-dimensional Cartesian coordinate trajectory arrays for various modeled bomb-like shapes was compiled. One of the most difficult challenges faced in this project was ensuring proper scaling of the models to the prototypes, and this was also completed with a high degree of success.

The most striking result from the Bomb Strike Experiment was found in the correlation of trajectory and dispersion patterns which were unique to each shape type. All shape type demonstrated a very consistent trajectory and dispersion characteristics which was unlike the patterns displayed in the other shapes. The cylinder shape was the most consistent shape, with 100% of all test runs displaying the straight path trajectory pattern and tight grouping at each z-level for the dispersion analysis. In contrast to this, stands the shell shape type which demonstrated repeated erratic behavior for each run. This pattern was displayed by all shell shapes, and was characterized by an abrupt turn towards the surface followed by a slow descent to the terminus of the flight. As a result of this trajectory pattern the shell shape displayed the widest s-reading at all z-level on the dispersion plots. The unique patterns within each shape type lead to the conclusion that trajectory and dispersion is primarily dependent on the physical characteristics of shapes entering the water. Each shape type displayed a pattern consistent for its geometry which provides a very positive outlook for the prospect of accurate predicting the trajectory and dispersions of shapes in numerical modeling.

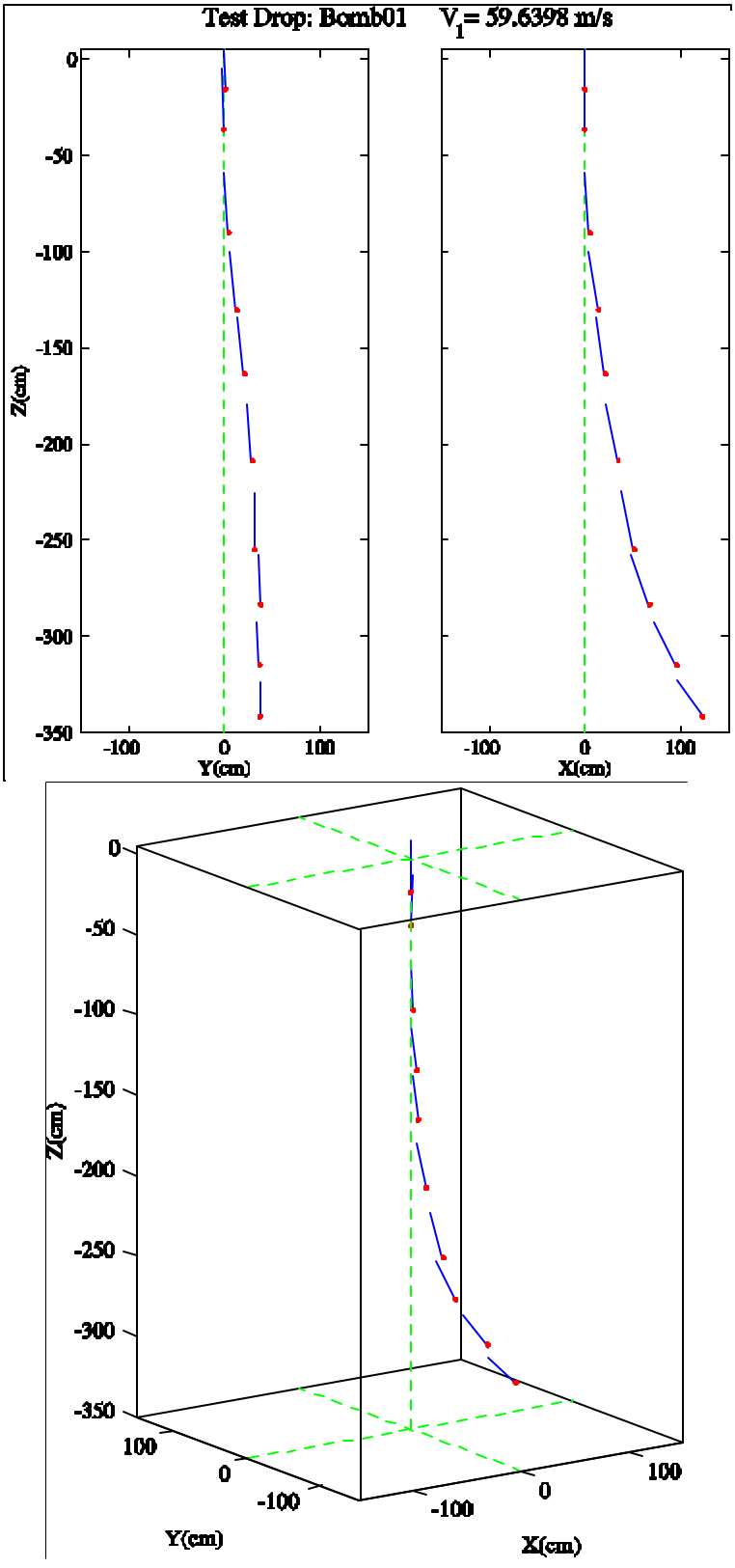
Future work in this multi-faceted project should include first and foremost the development and numerical verification of an initial three-dimensional model (STRIKE35) aimed at predicting the overall trajectory, maneuvering, burial depth and orientation of a falling high-velocity rigid body in the air-water-sediment column. Further investigations should include more in-depth study and verification of the modeled

data with testing of full size high velocity rigid-body hydroballistics. Eventually, following initially numerical modeling and verification efforts, an emphasis should be placed on integrating the STRIKE35 model into ensemble models which can be deployed and utilized by forces in an operational environment.

Overall, 43 bomb-like shapes were launched into the water, compiling over 120,000 frames of video data, which was eventually translated into almost 60,000 3-dimensional trajectory data points making this one of the most comprehensive data gathering effort thus far in naval mine warfare modeling. While much work is still necessary to transform this project into operational use, this experiment has set the course for the STRIKE35 modeling efforts for many years to come, and advances the goal of improving warhead lethality for use in quick, precise and accurate strikes on known enemy naval minefields in the littoral combat environment is now one step closer.

APPENDIX A. TRAJECTORY PLOTS

Appendix A contains all of the trajectory plots that were used to establish generalized trajectory patterns. The plots are labeled with the test run name and the initial velocity as the shape entered the water. All plots are represented in dimensional units based on the calibration reference frame established during the experiment. The 2-D plots are viewed from the camera's perspective while the 3-D transformation plot is viewed from an imaginary camera above the drop zone.


Test Drop: Bomb01 V1= 59.6398 m/s
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-100
-150
-200
-250
-300
-350
Z(cm)
-100
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100
Y(cm)
-100
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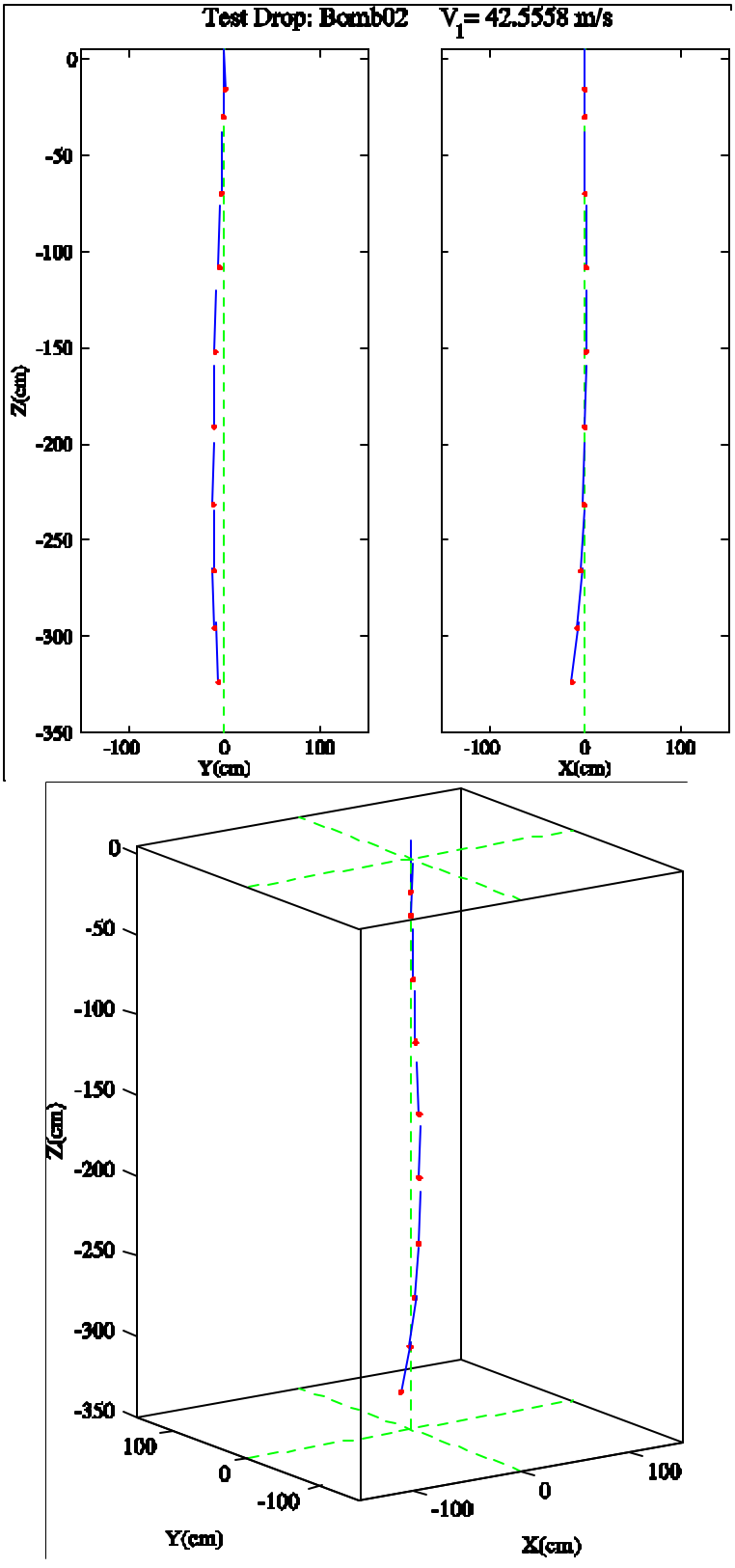
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)


Test Drop: Bomb02 V1= 42.5558 m/s
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Y(cm)
X(cm)
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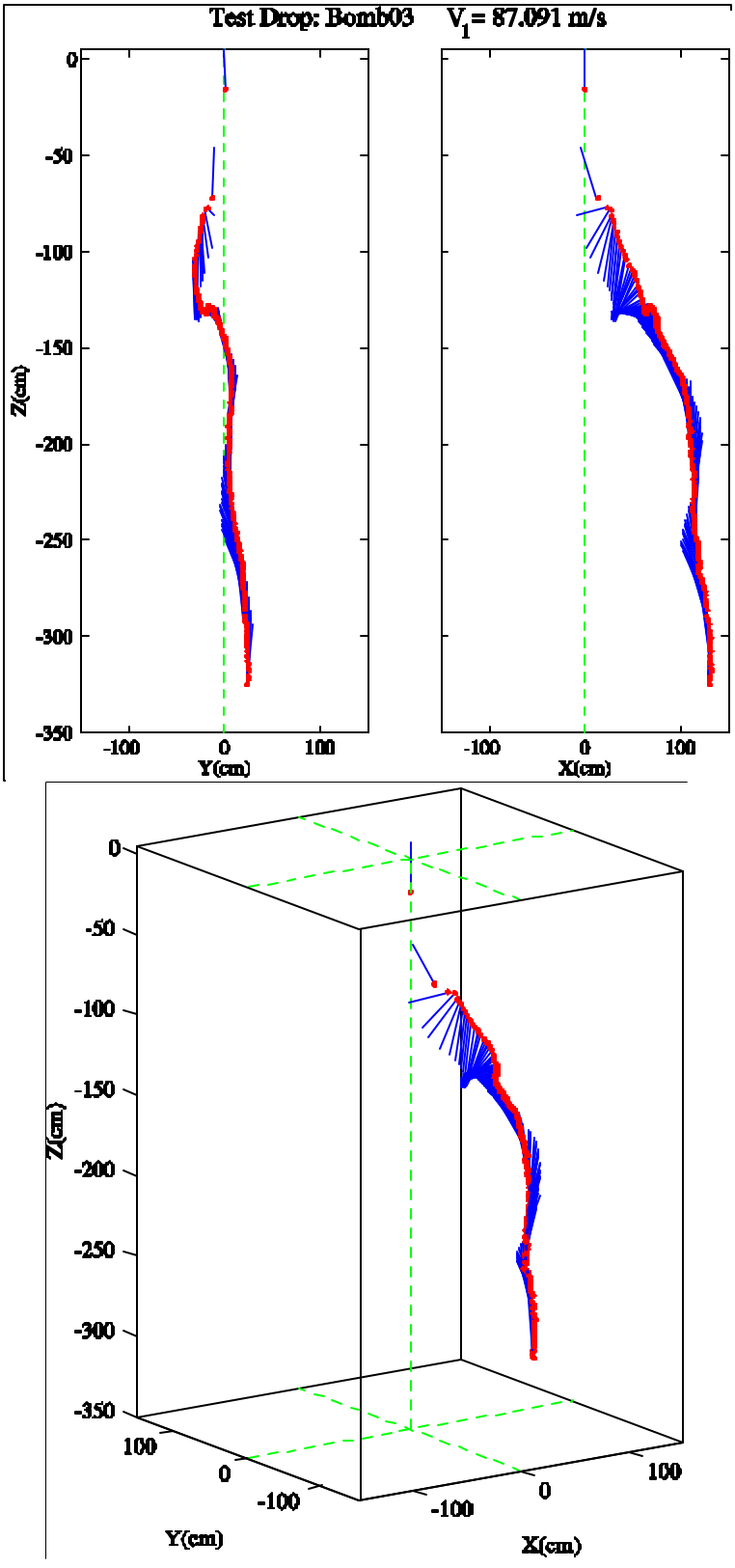
-100
-150
-200
-250
-300
-350
100


Test Drop: Bomb03 V1= 87.091 m/s
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-200
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-350
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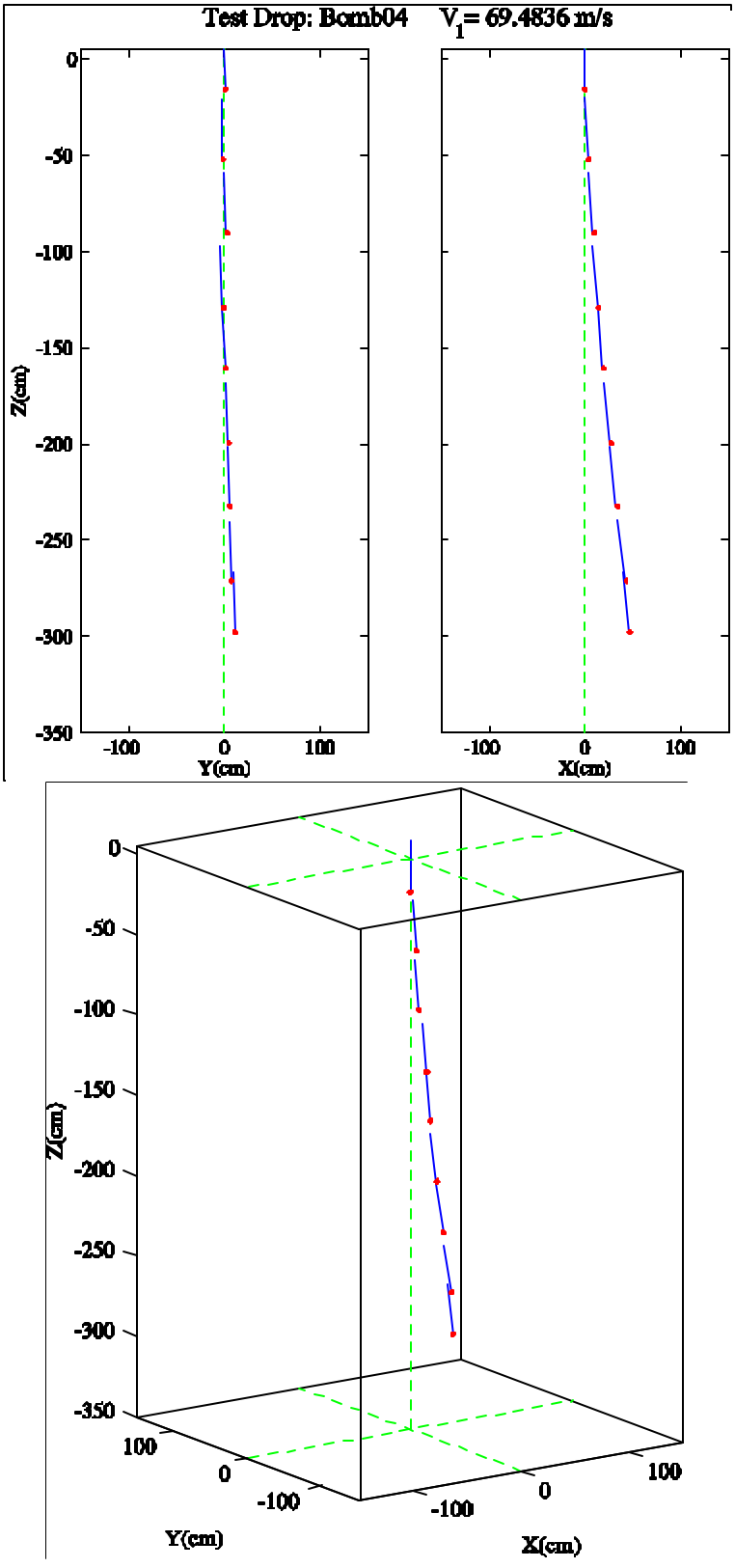
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)


Test Drop: Bomb04 V1= 69.4836 m/s
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-100
-150
-200
-250
-300
-350
Z(cm)
-100
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Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
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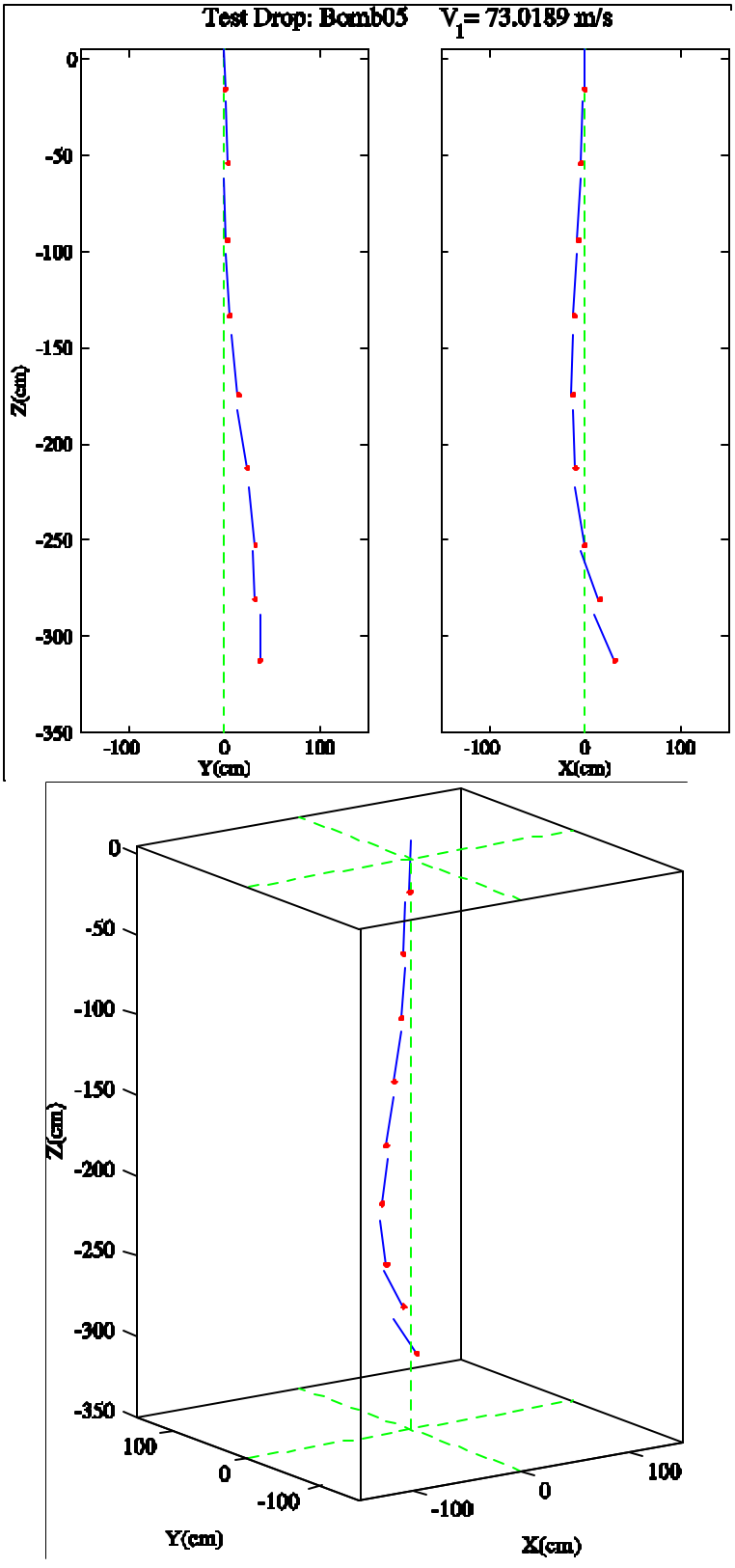
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)


Test Drop: Bomb05 V1= 73.0189 m/s
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-350
Z(cm)
-100
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Y(cm)
-100
0
100
X(cm)
0
-50
-100
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-350
Z(cm)
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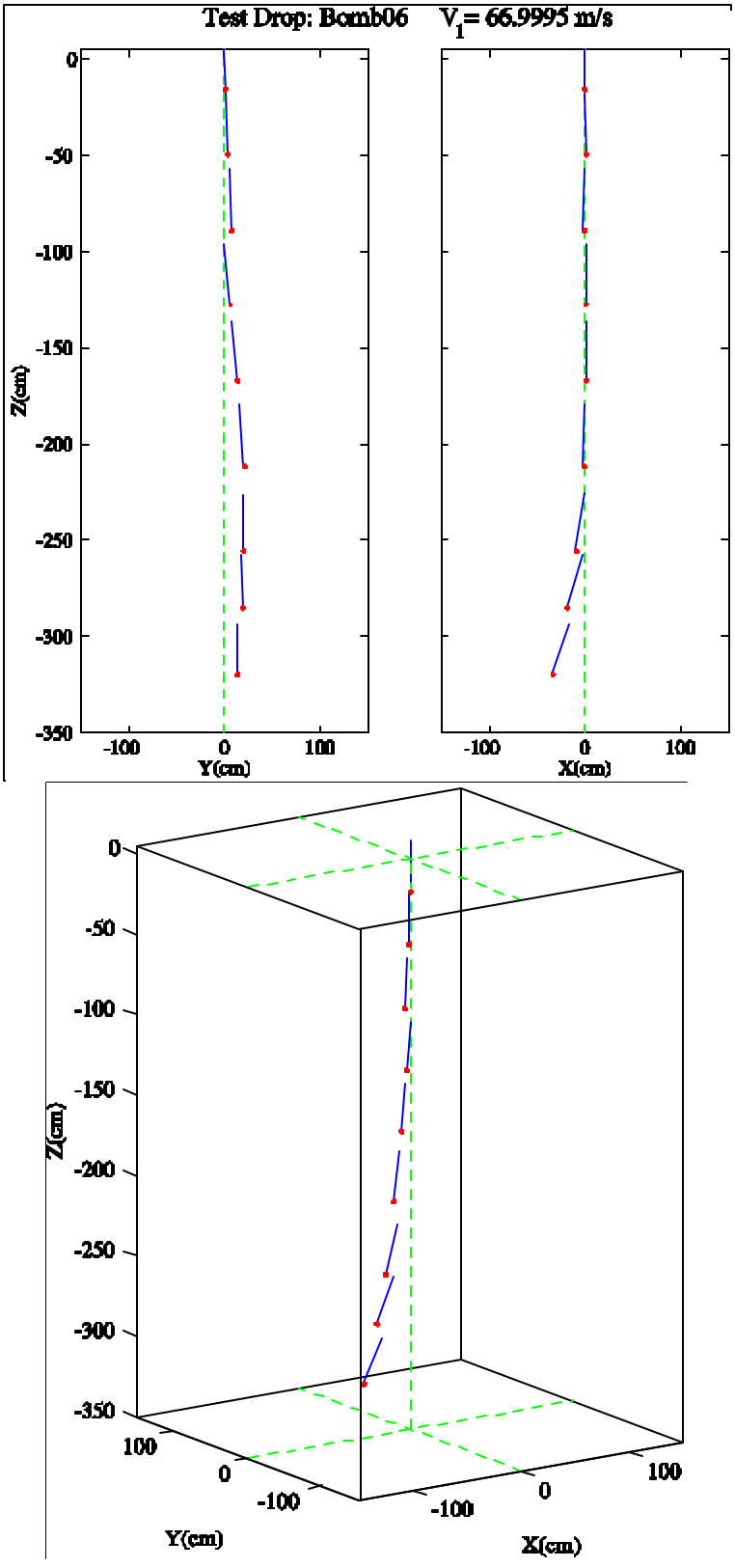
0
-100
Y(cm)
-100
0
100
X(cm)


Test Drop: Bomb06 V1= 66.9995 m/s
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-200
-250
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-350
Z(cm)
-100
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Y(cm)
-100
0
100
X(cm)
0
-50
-100
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Z(cm)
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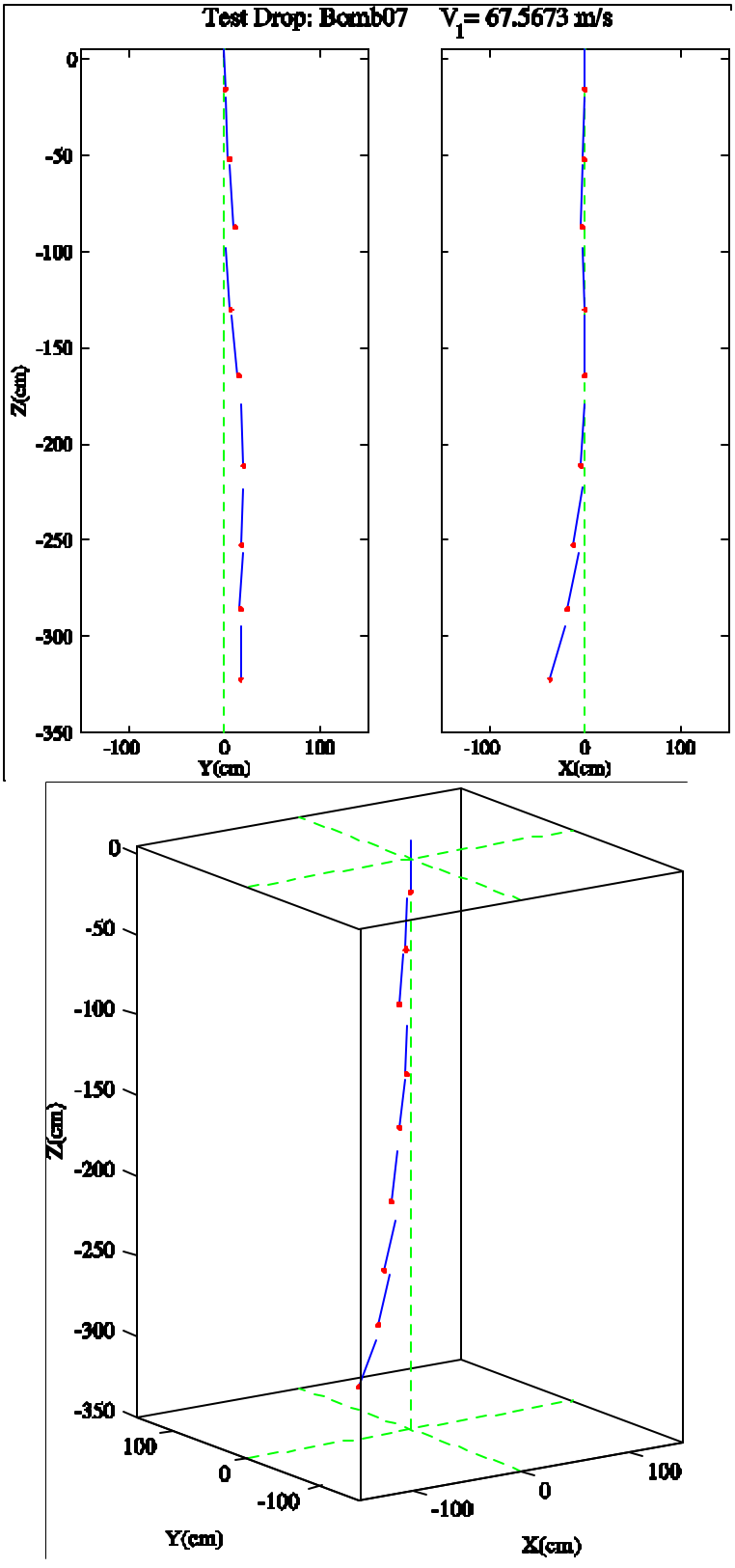
Y(cm)
-100
0
100
X(cm)


Test Drop: Bomb07 V1= 67.5673 m/s
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-350
Z(cm)
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Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
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Z(cm)
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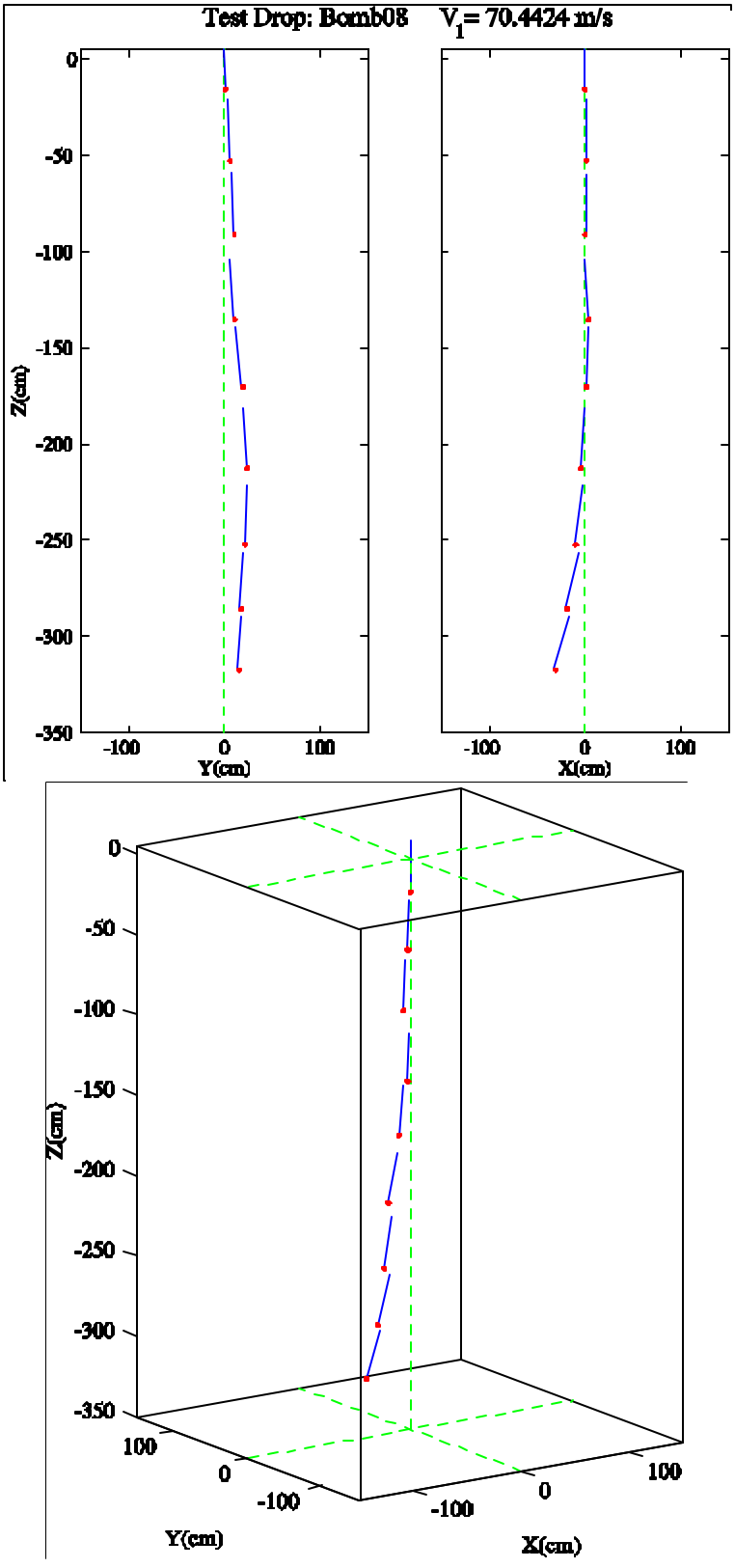
-100
Y(cm)
-100
0
100
X(cm)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Y(cm)
-100
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X(cm)
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-50
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Z(cm)
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Y(cm)
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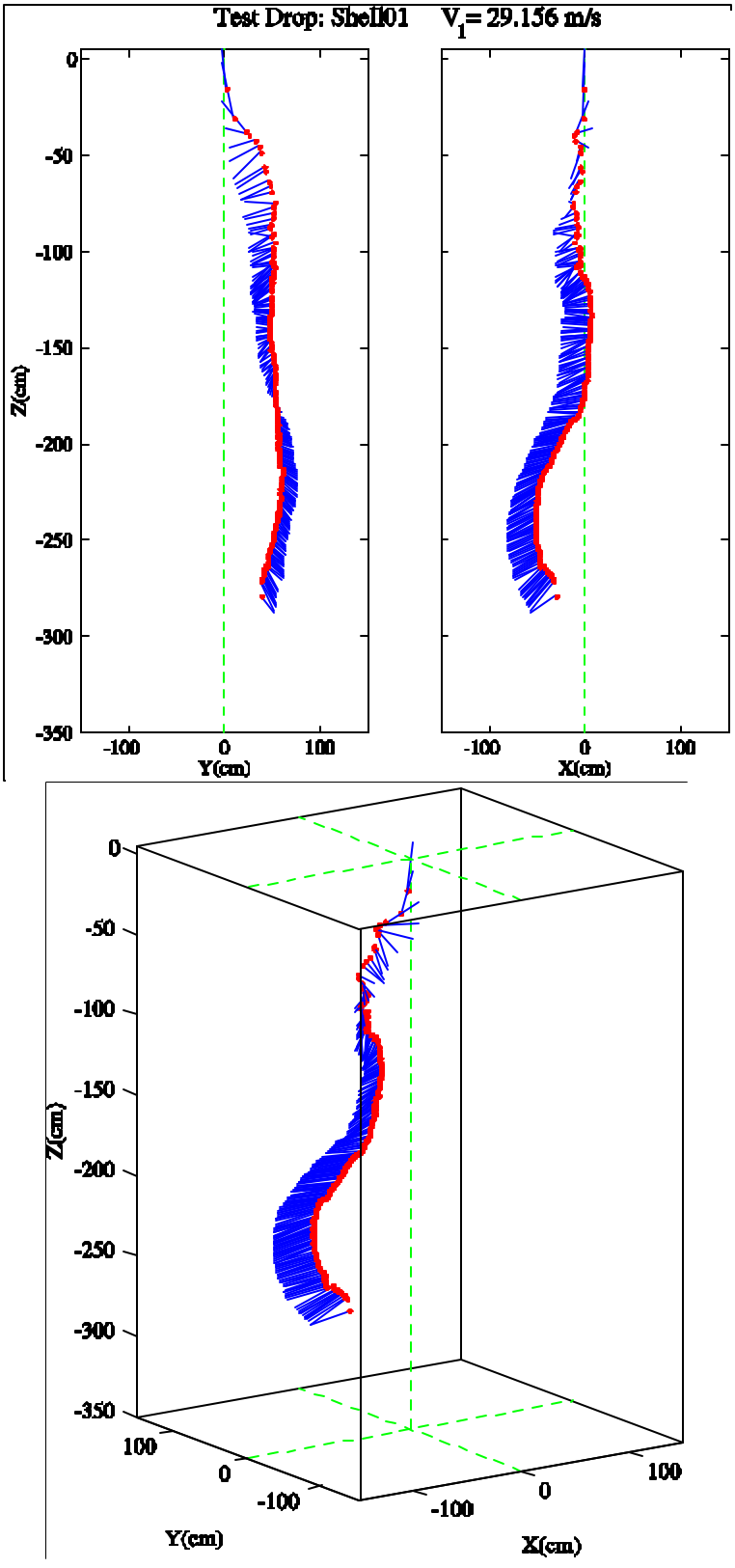
100
X(cm)


Test Drop: Shell01 V1= 29.156 m/s
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-200
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-350
Z(cm)
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Y(cm)
-100
0
100
X(cm)
0
-50
-100
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-300
-350
Z(cm)
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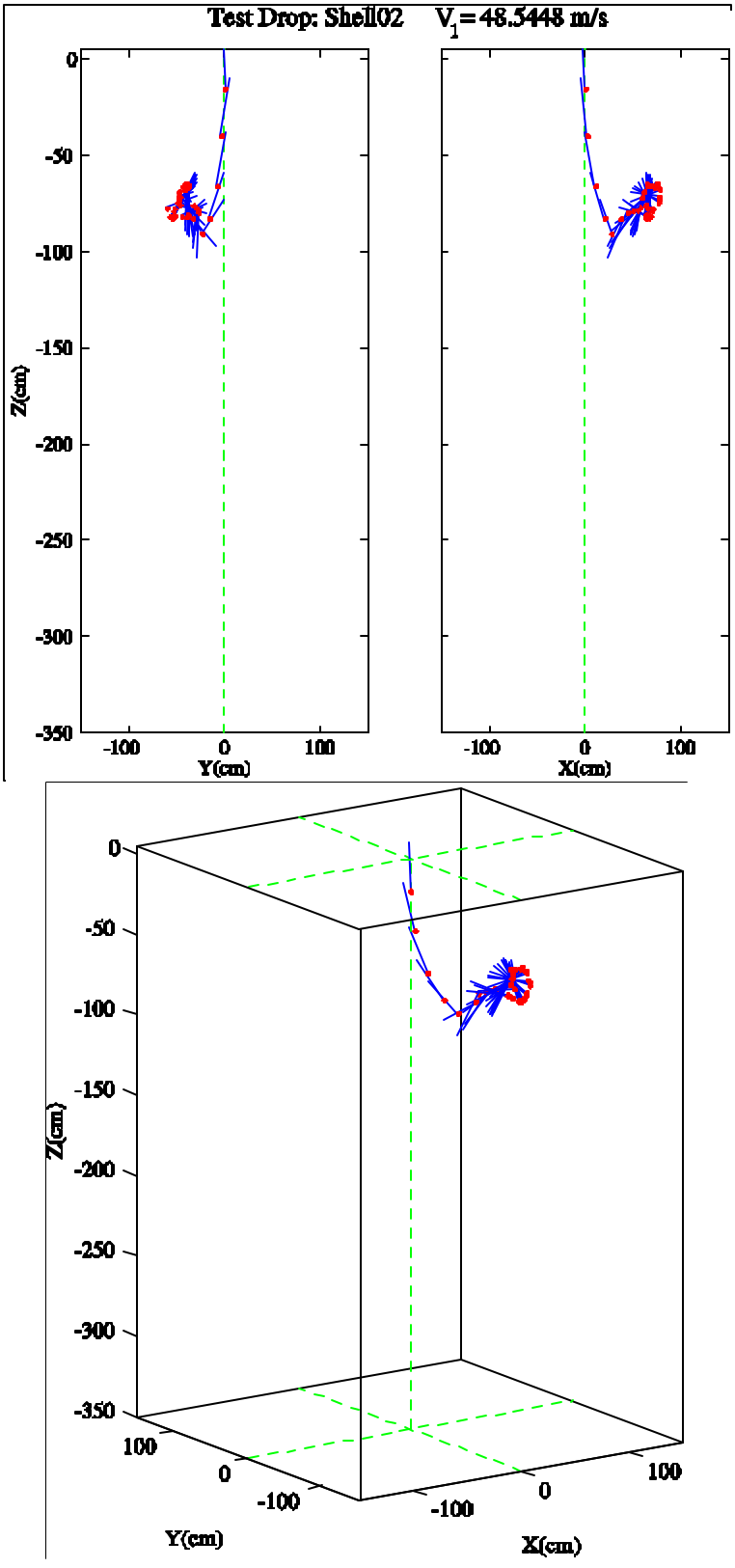
-100
Y(cm)
-100
0
100
X(cm)


Test Drop: Shell02 V1 = 48.5448 m/s
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-150
-200
-250
-300
-350
Z(cm)
-100
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Y(cm)
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X(cm)
0
-50
-100
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-350
Z(cm)
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-100
Y(cm)
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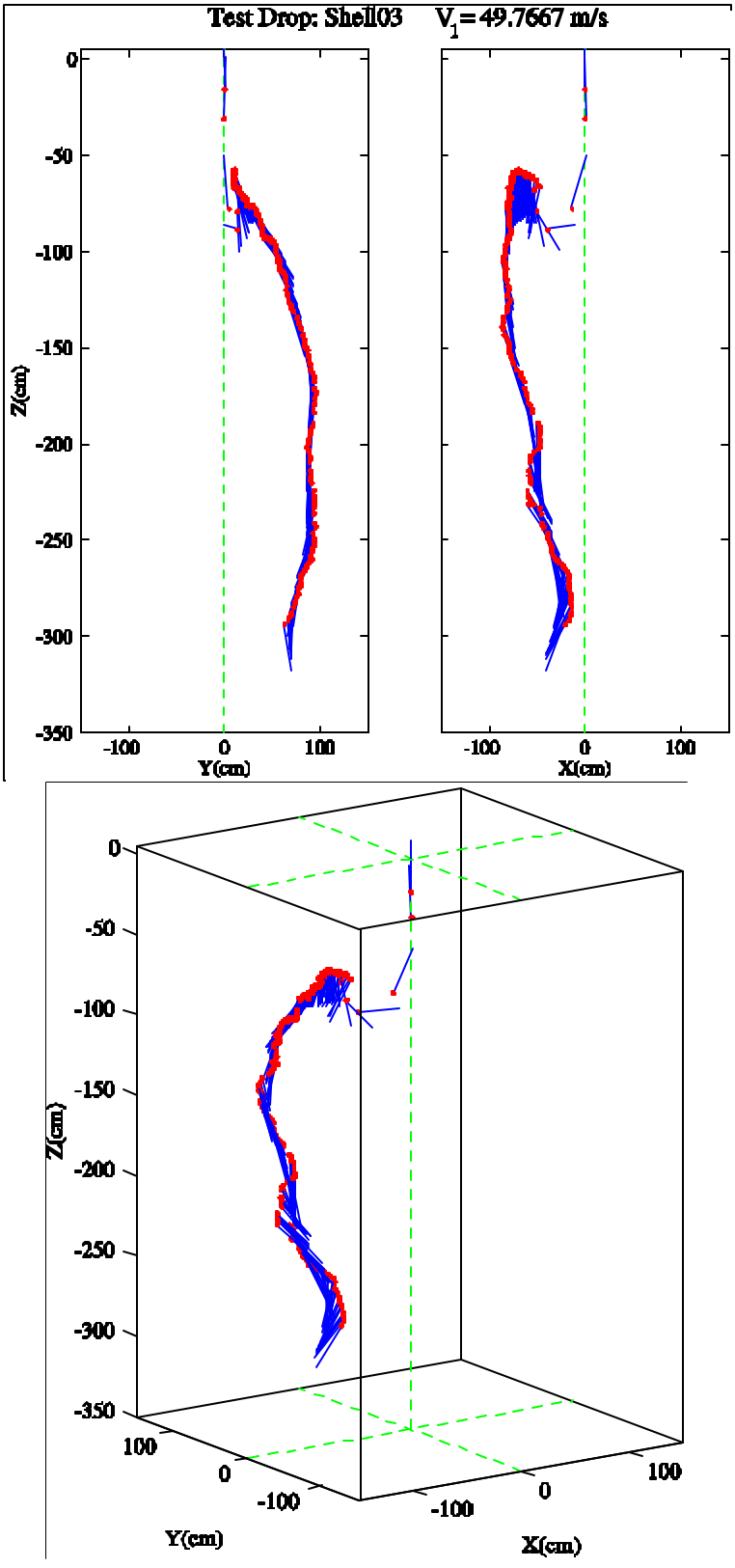
X(cm)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-350
Z(cm)
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Y(cm)
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0
100
X(cm)
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-50
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Y(cm)
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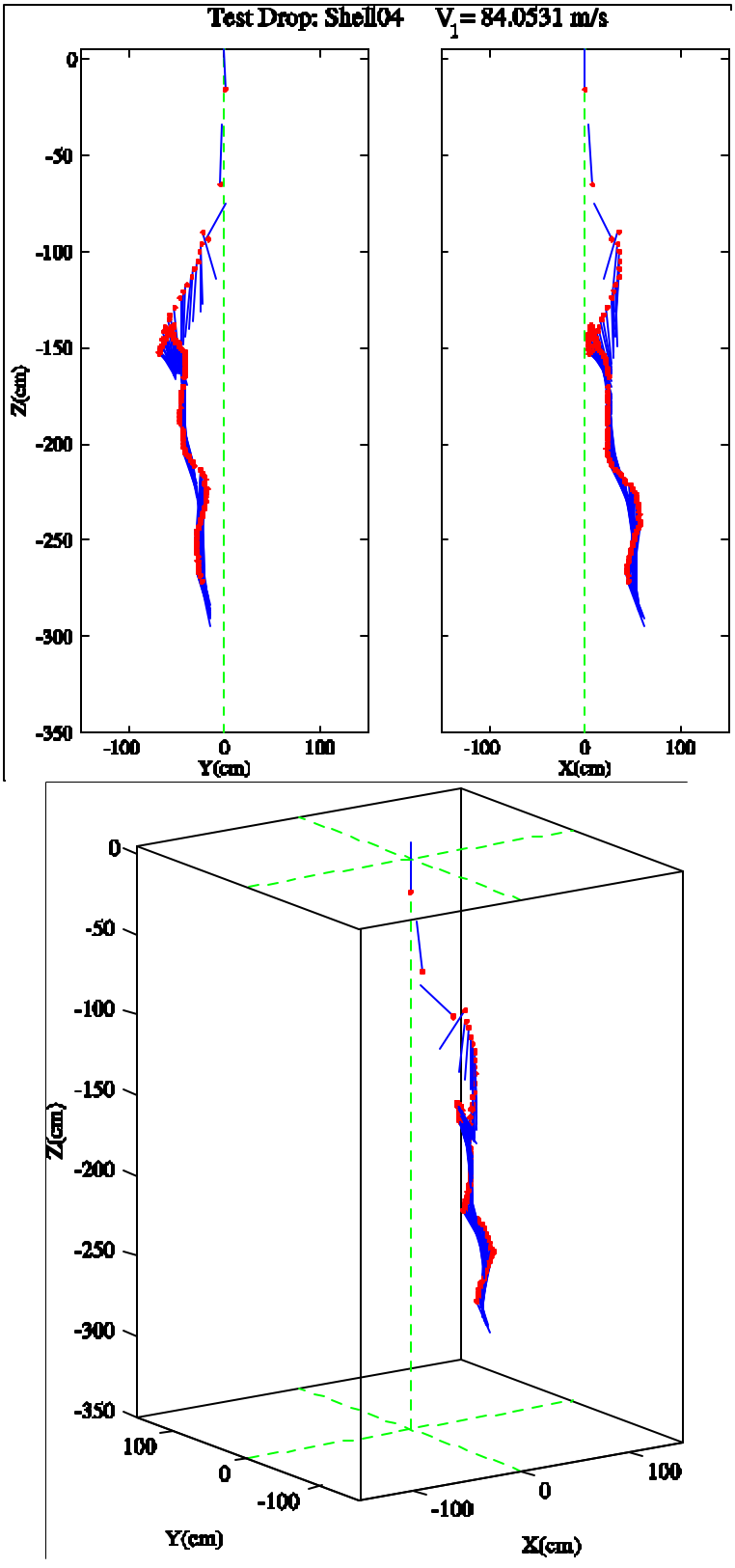
X(cm)


Test Drop: Shell04 V1 = 84.0531 m/s
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X(cm)
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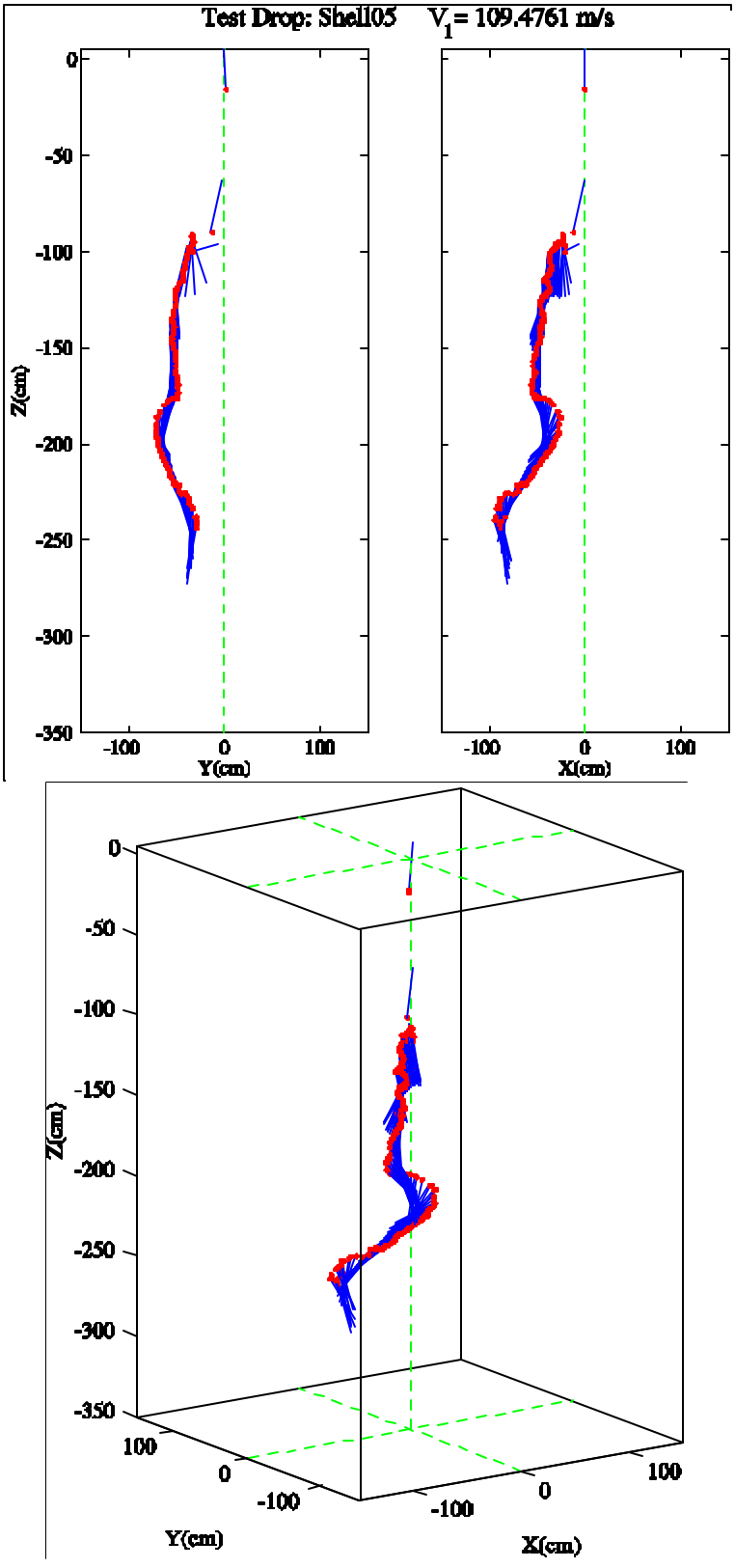
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-150
-200
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-300
-350
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X(cm)
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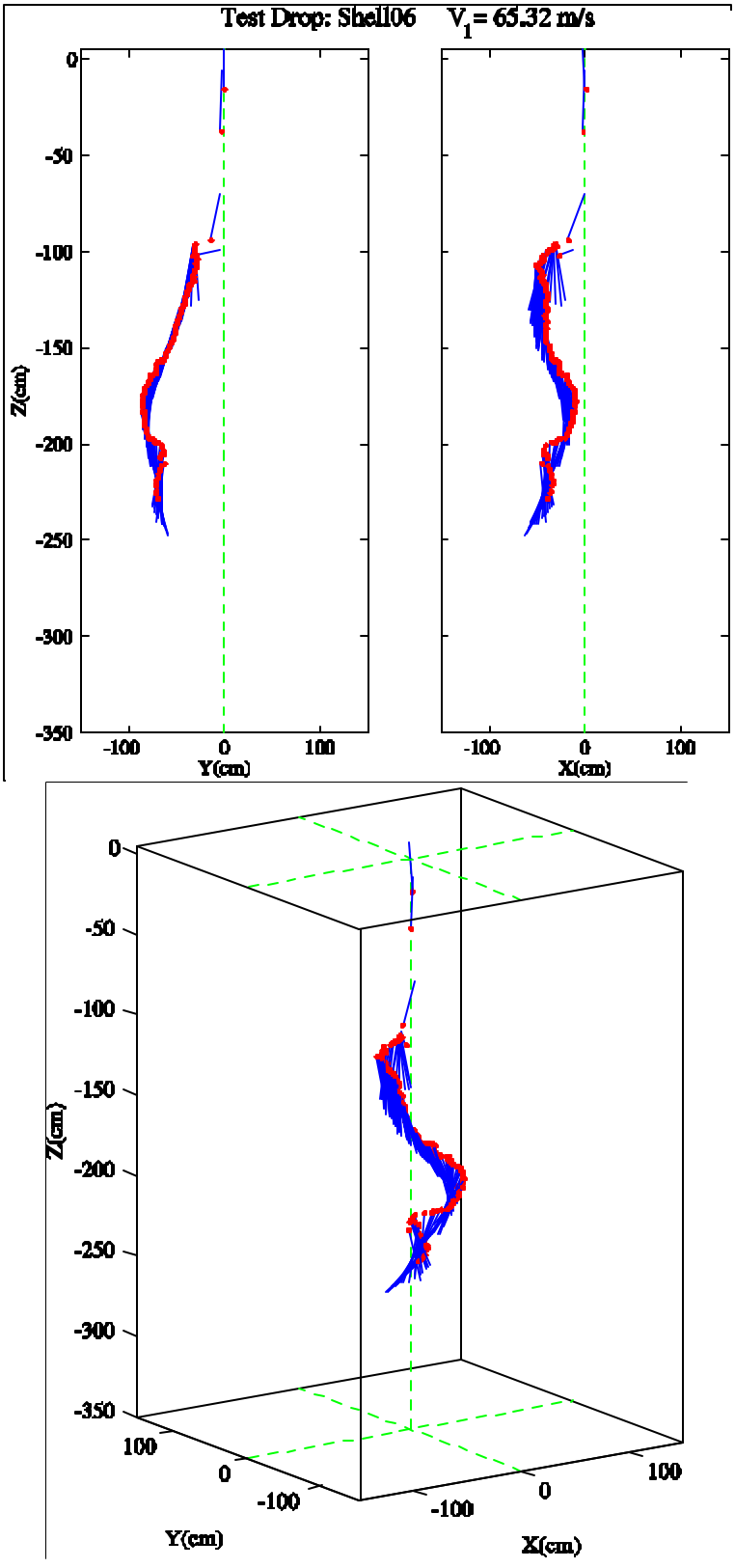
0
-100
Y(cm)
-100
0
100
X(cm)


Test Drop: Shell06 V1 = 65.32 m/s
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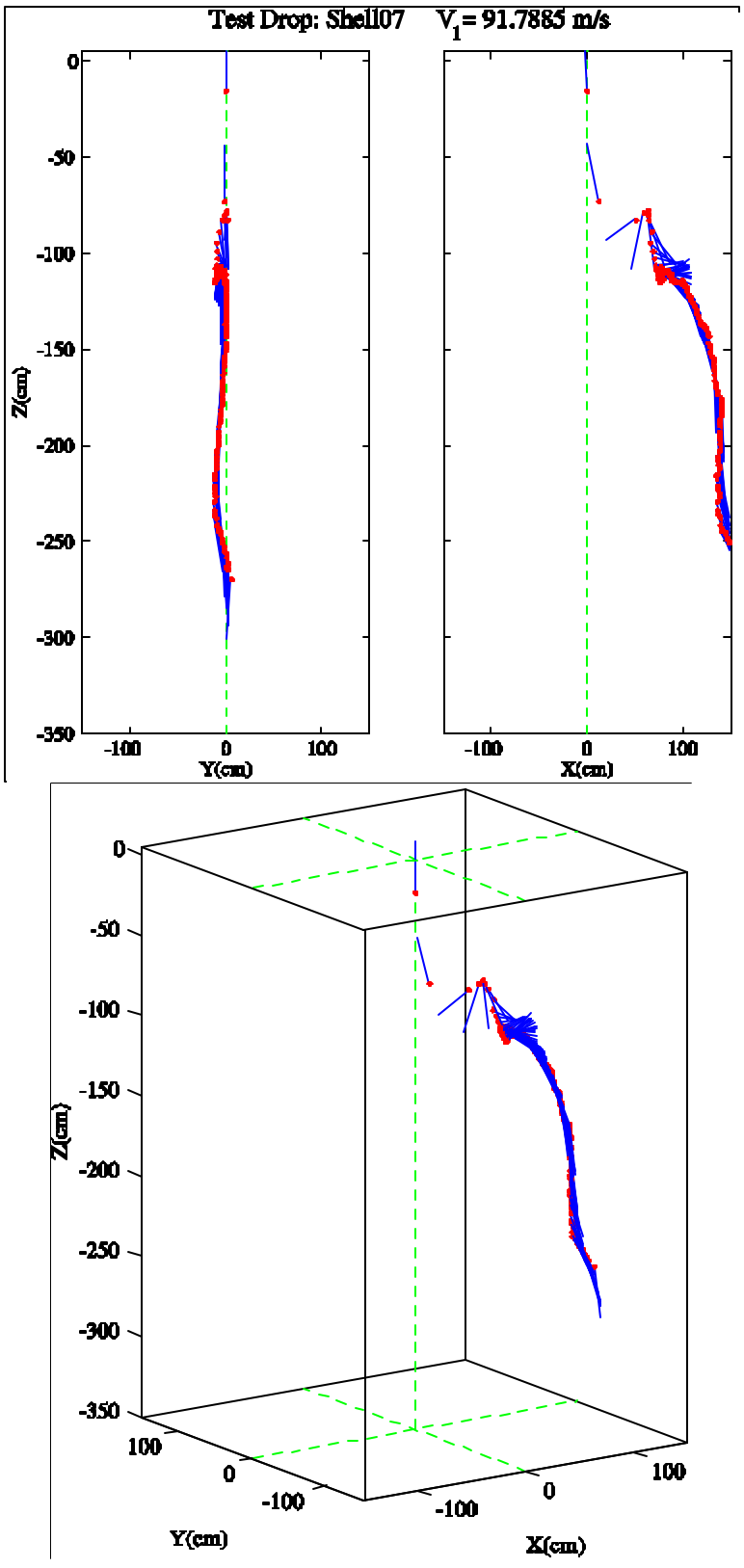
Y(cm)
X(cm)


Test Drop: Shell07 V1 = 91.7885 m/s
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Z(cm)
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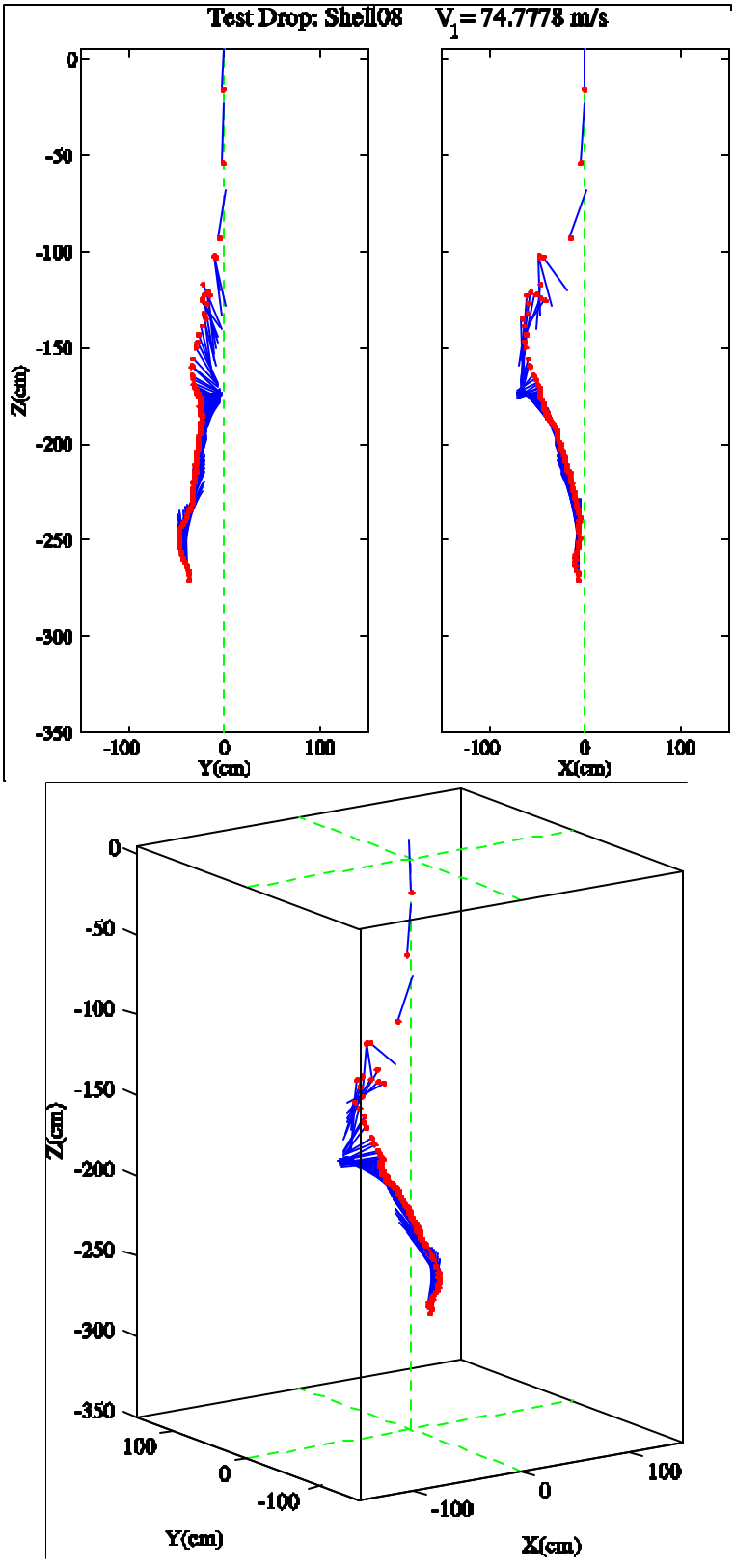
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X(cm)
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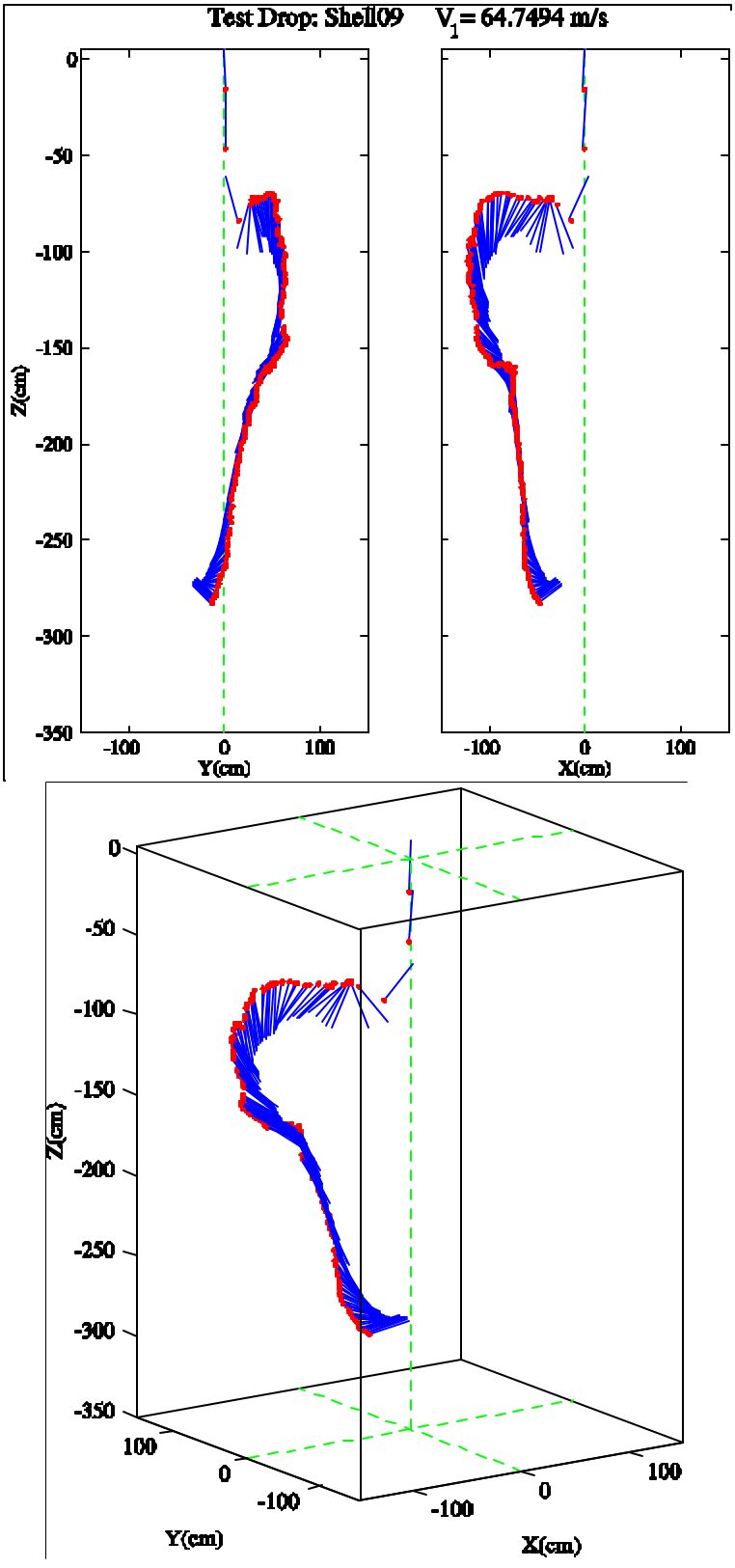
Test Drop: Shell09 V1 = 64.7494 m/s
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Y(cm)
X(cm)
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-100
-150
-200
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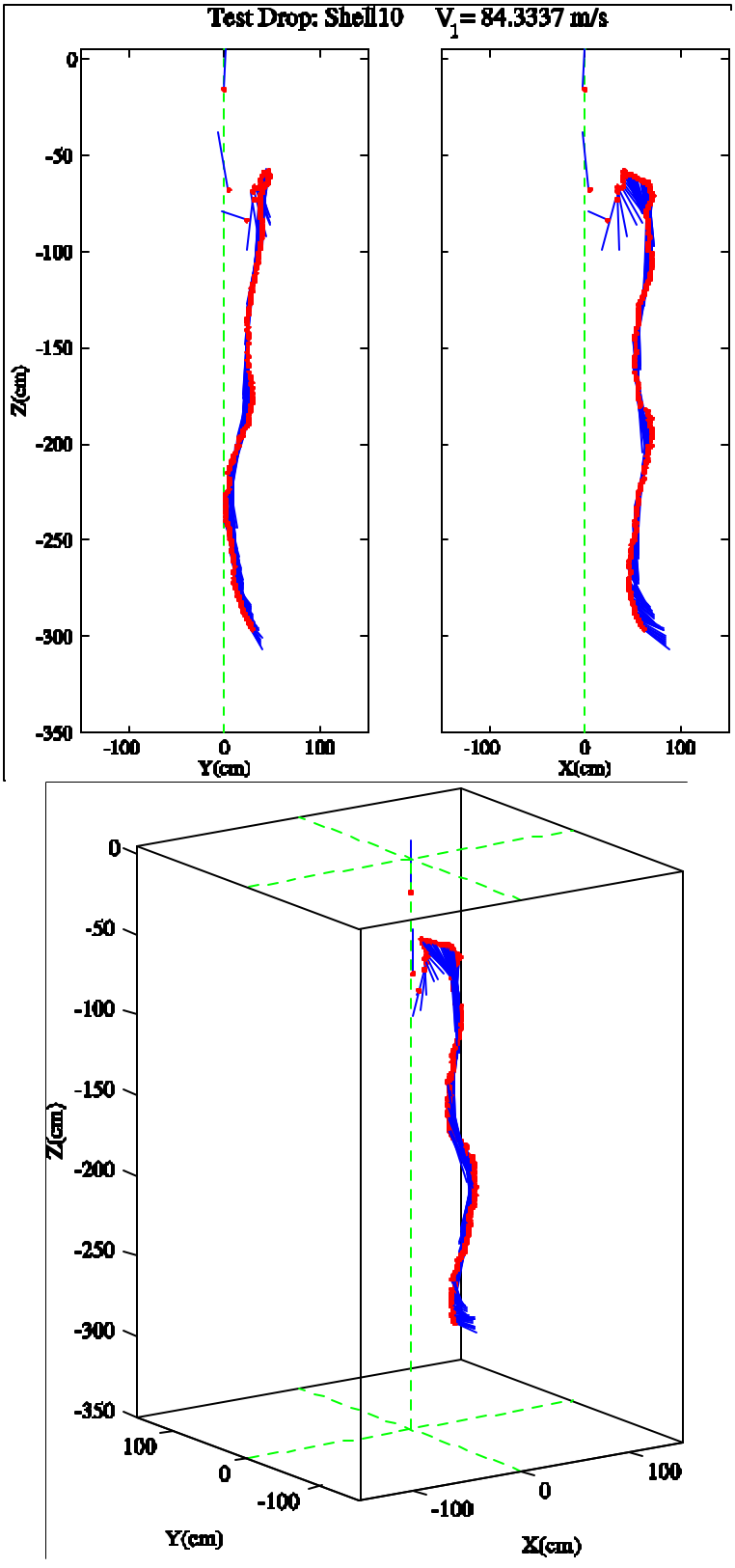
-350
100


Test Drop: Shell10 V1 = 84.3337 m/s
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Y(cm)
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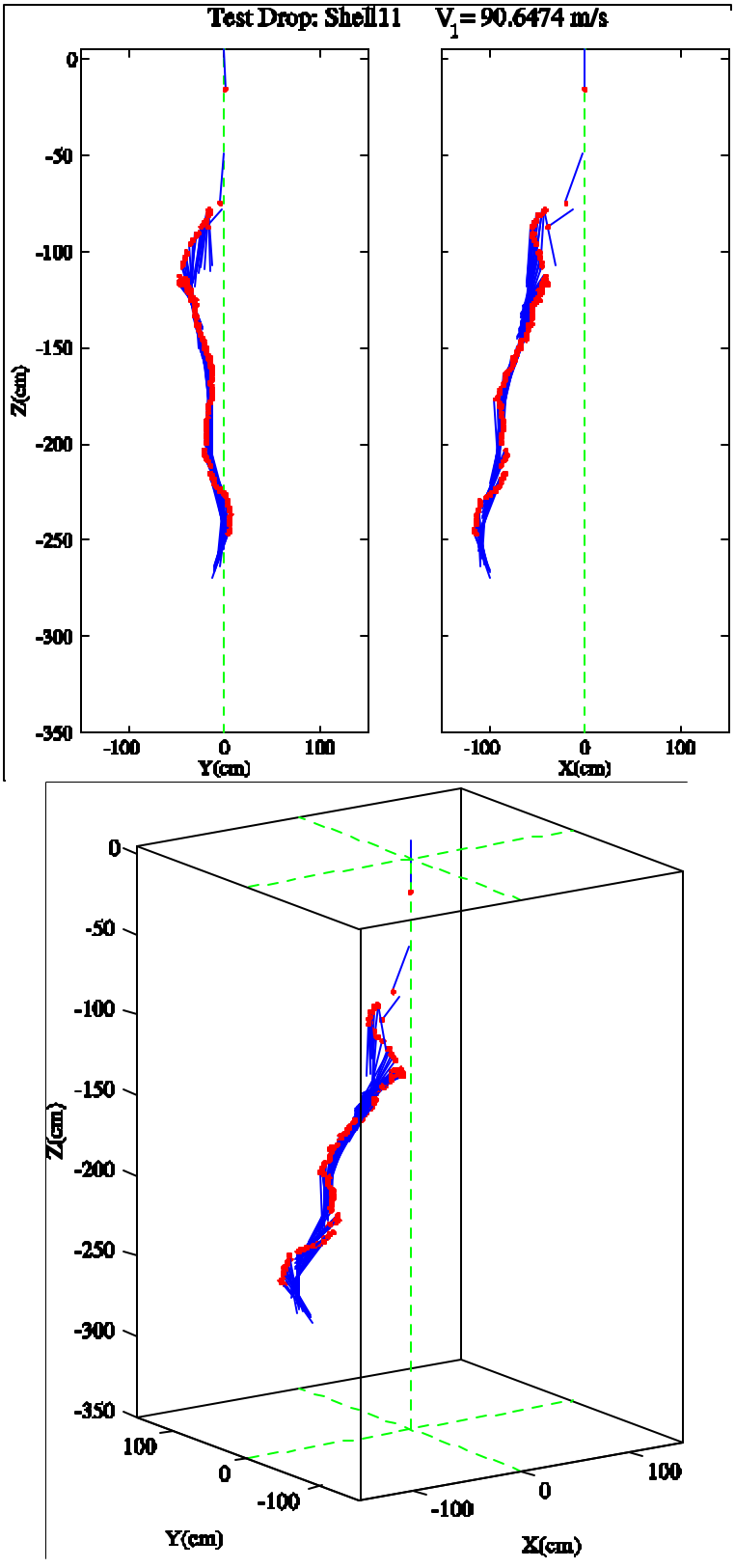
X(cm)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Y(cm)
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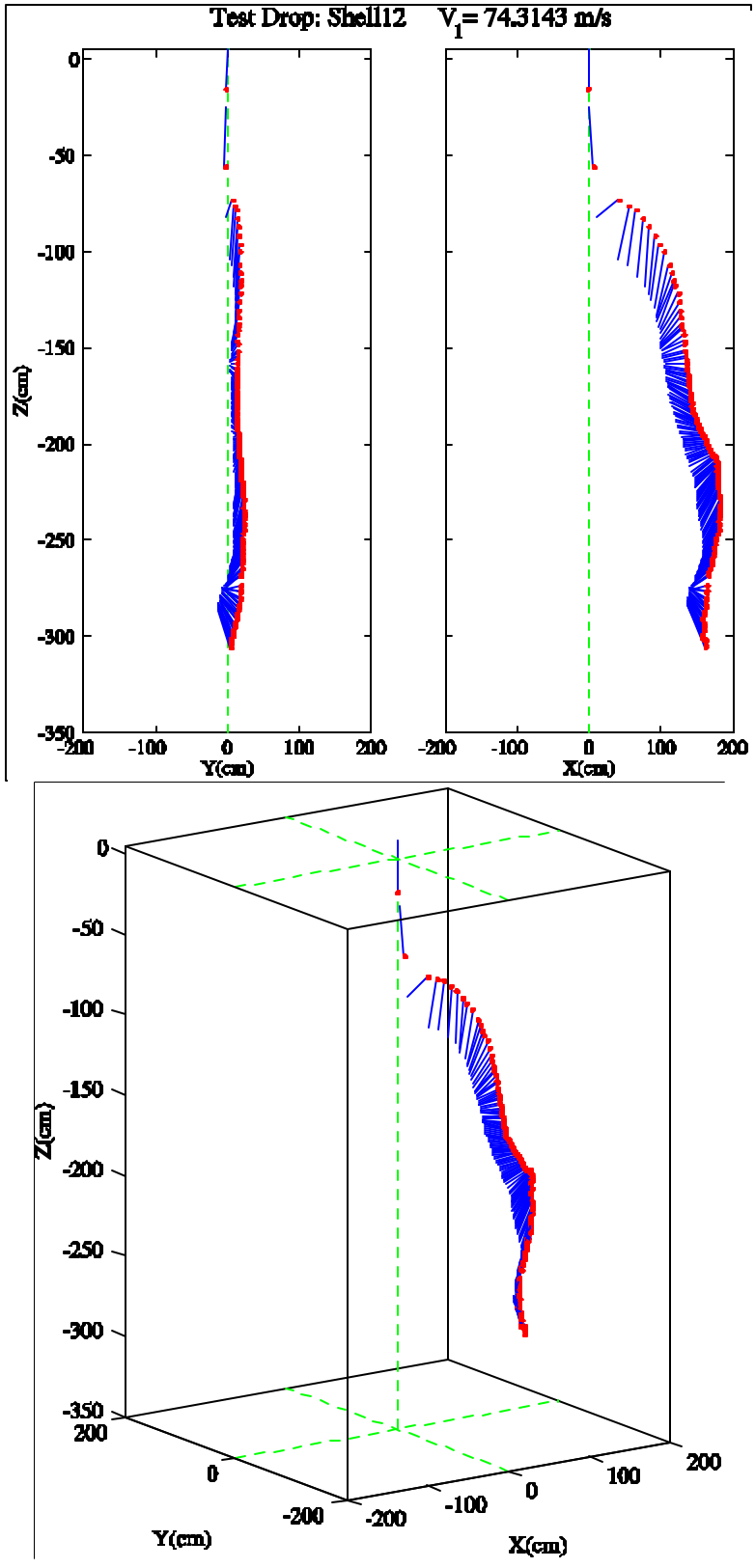
X(cm)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Y(cm)
X(cm)
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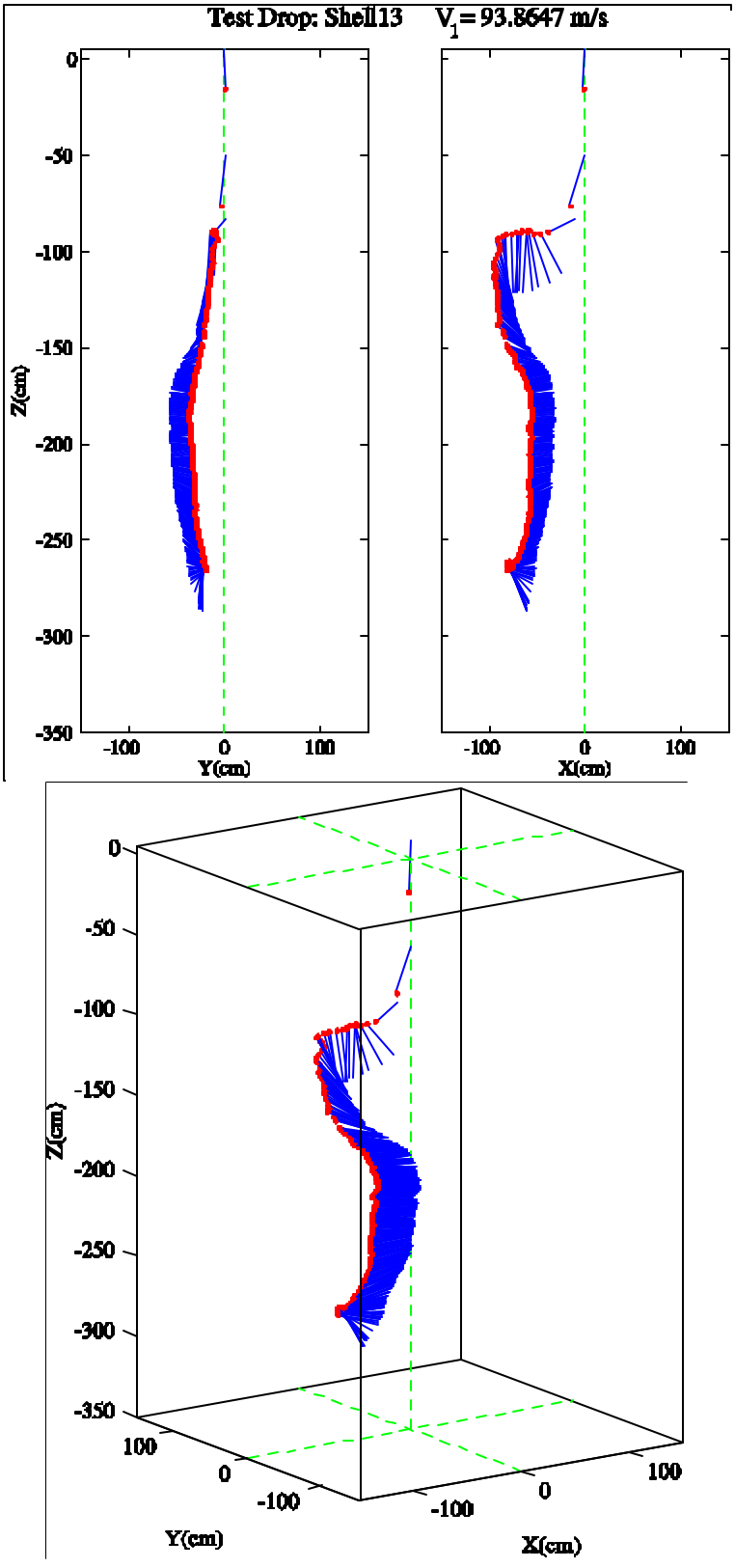
-100
0
100
200


Test Drop: Shell13 V1 = 93.8647 m/s
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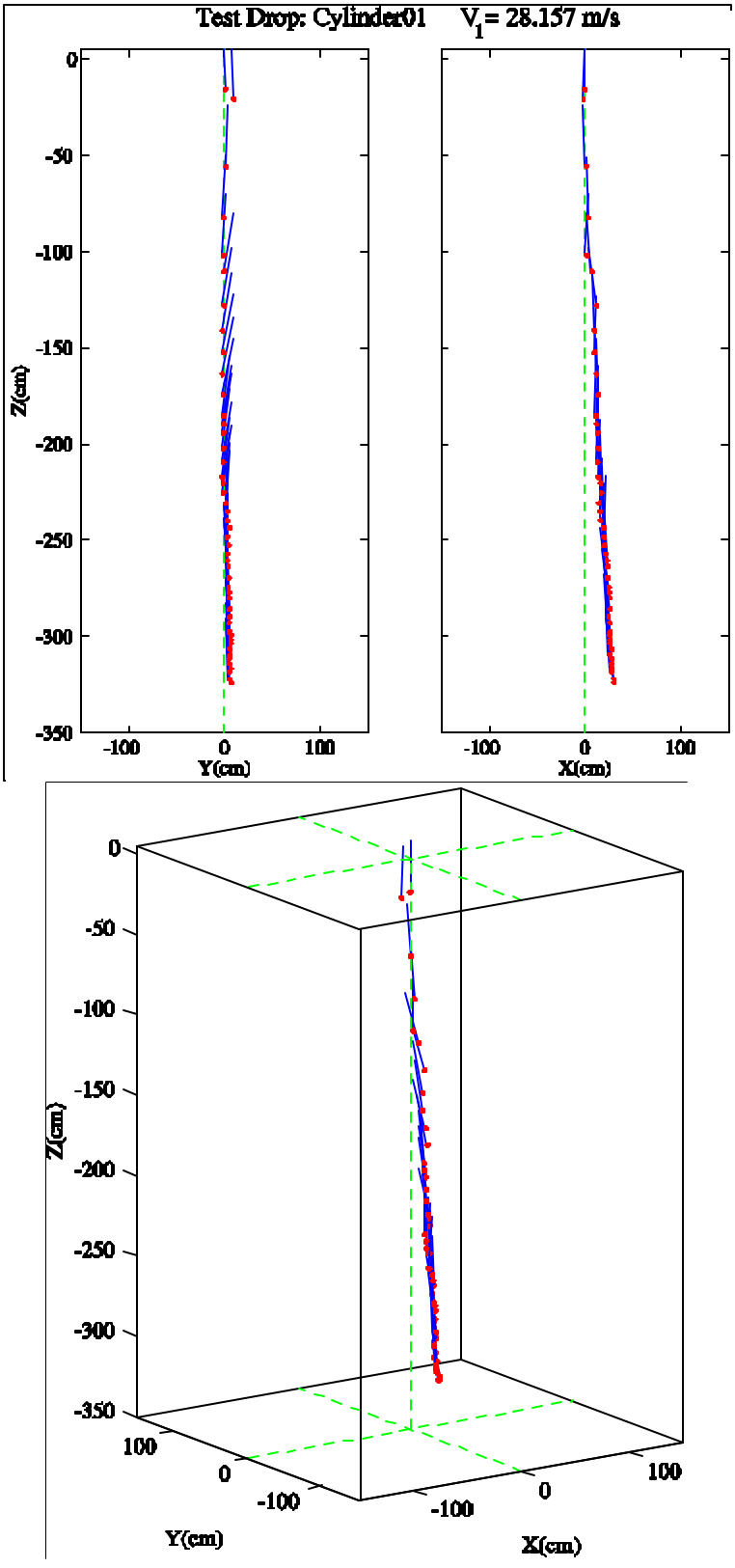
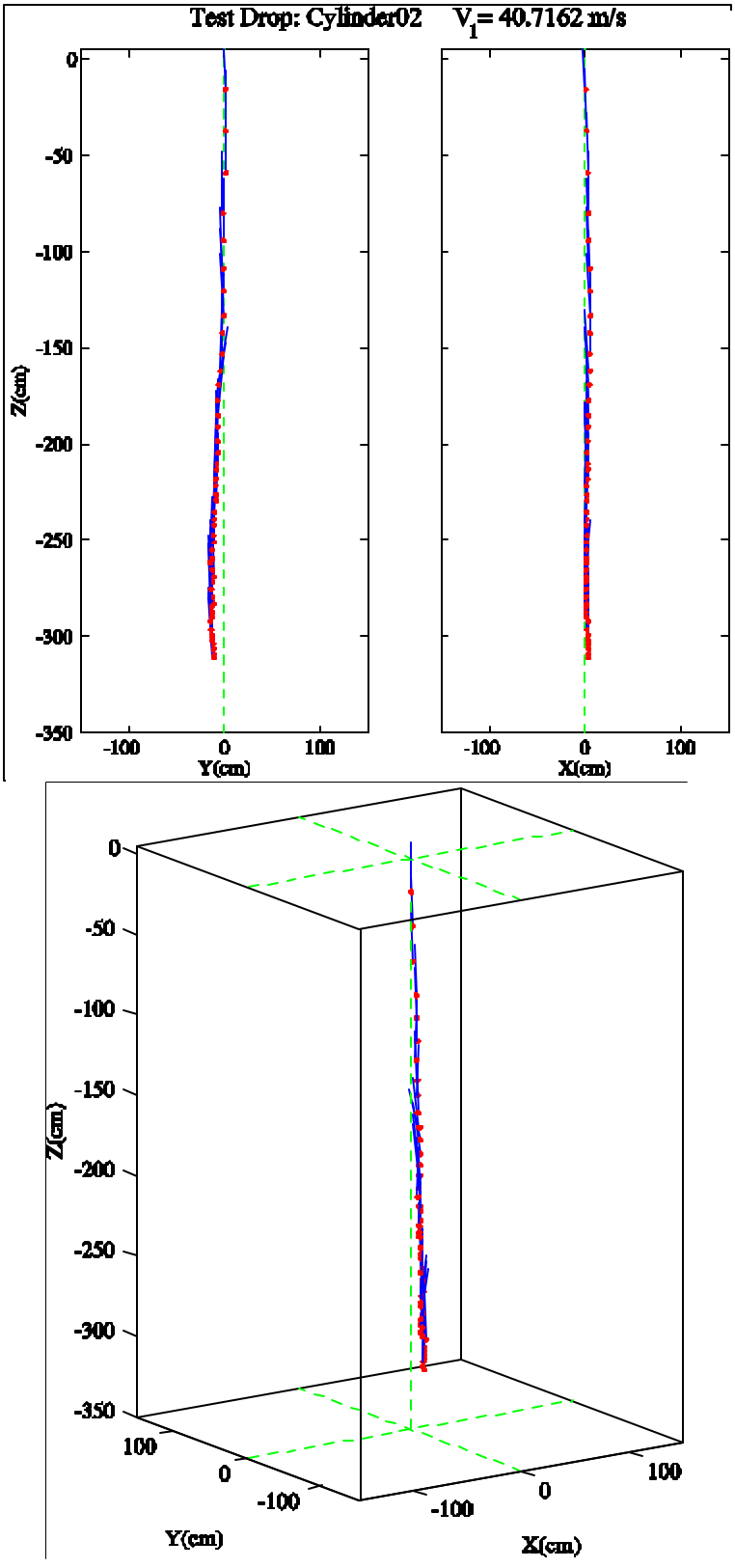
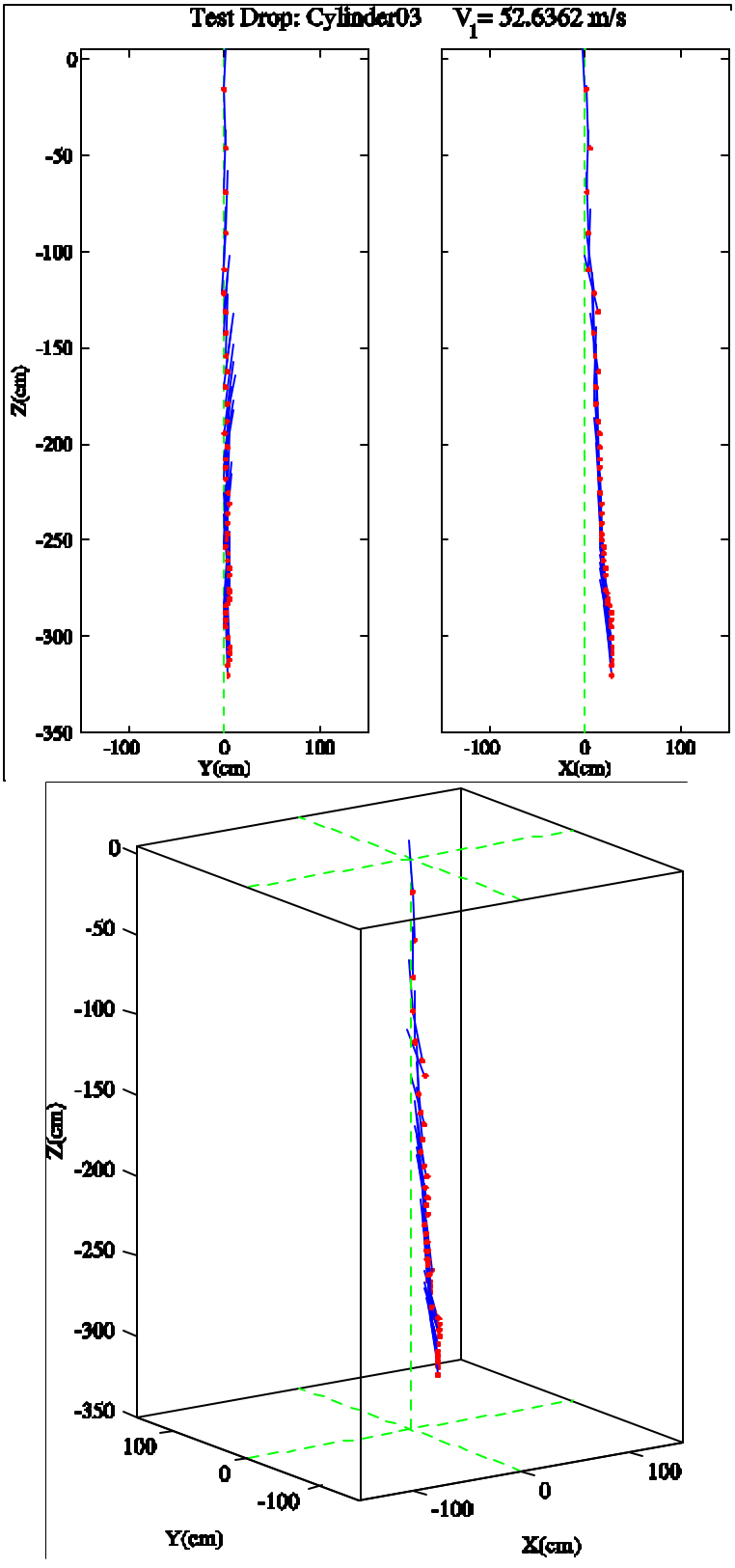
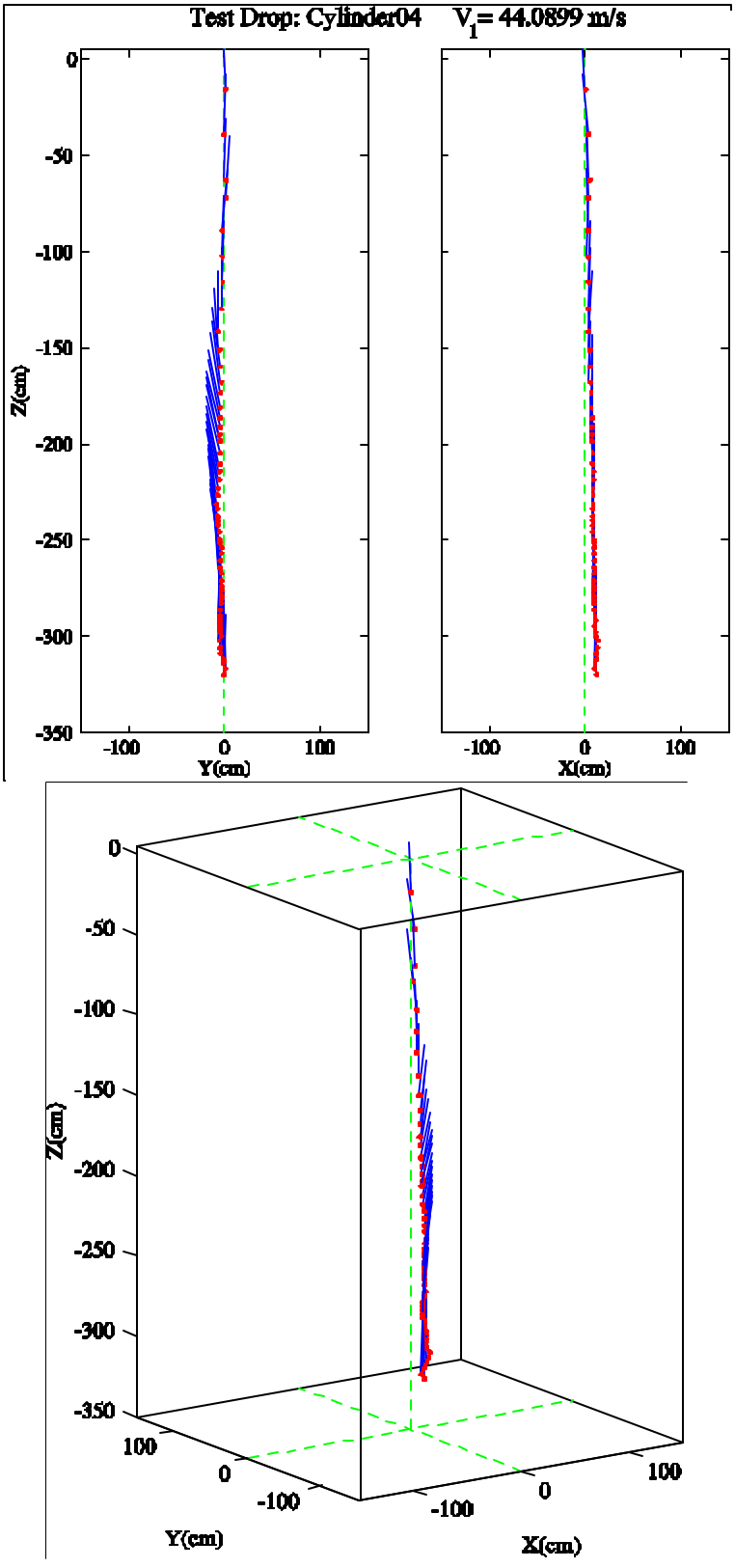
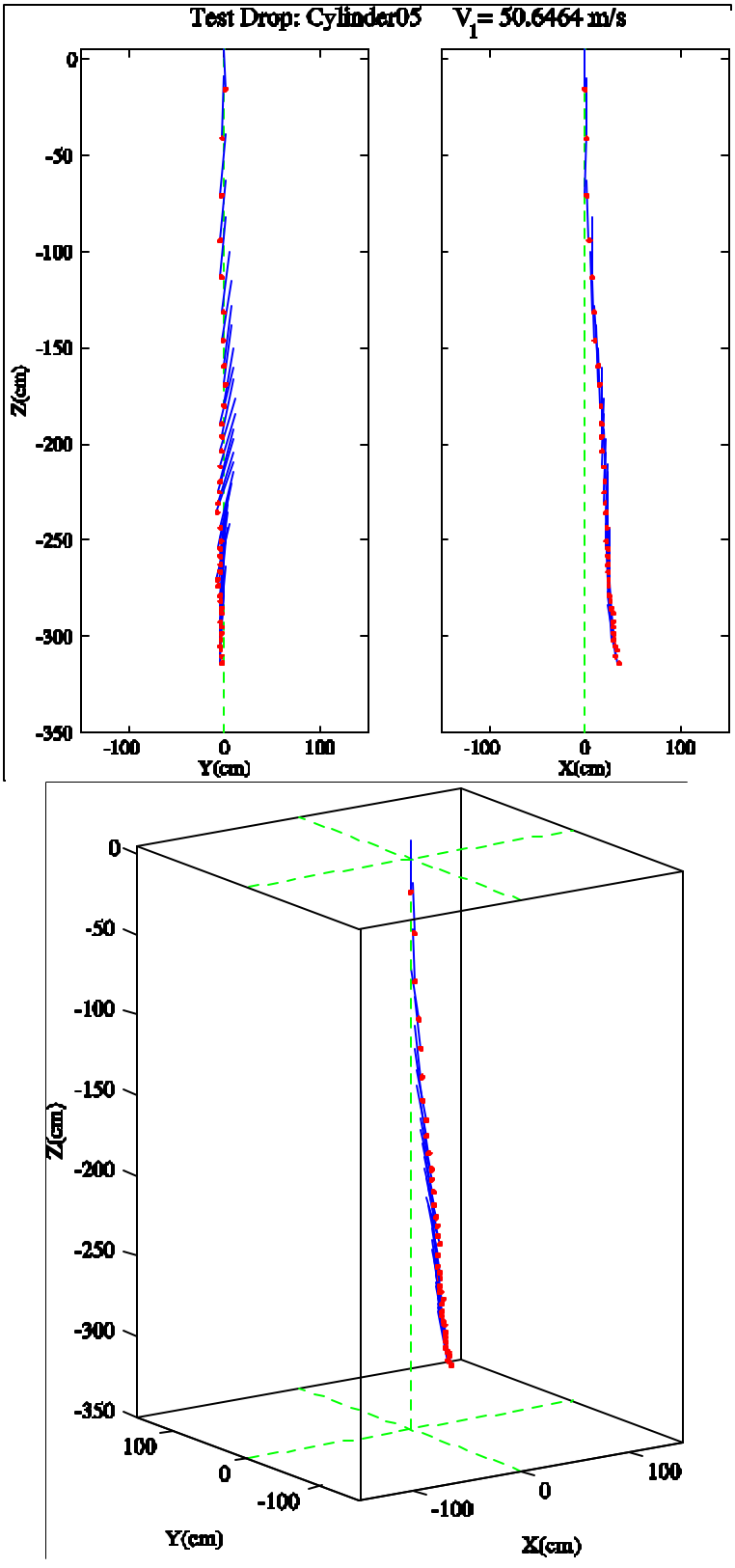
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

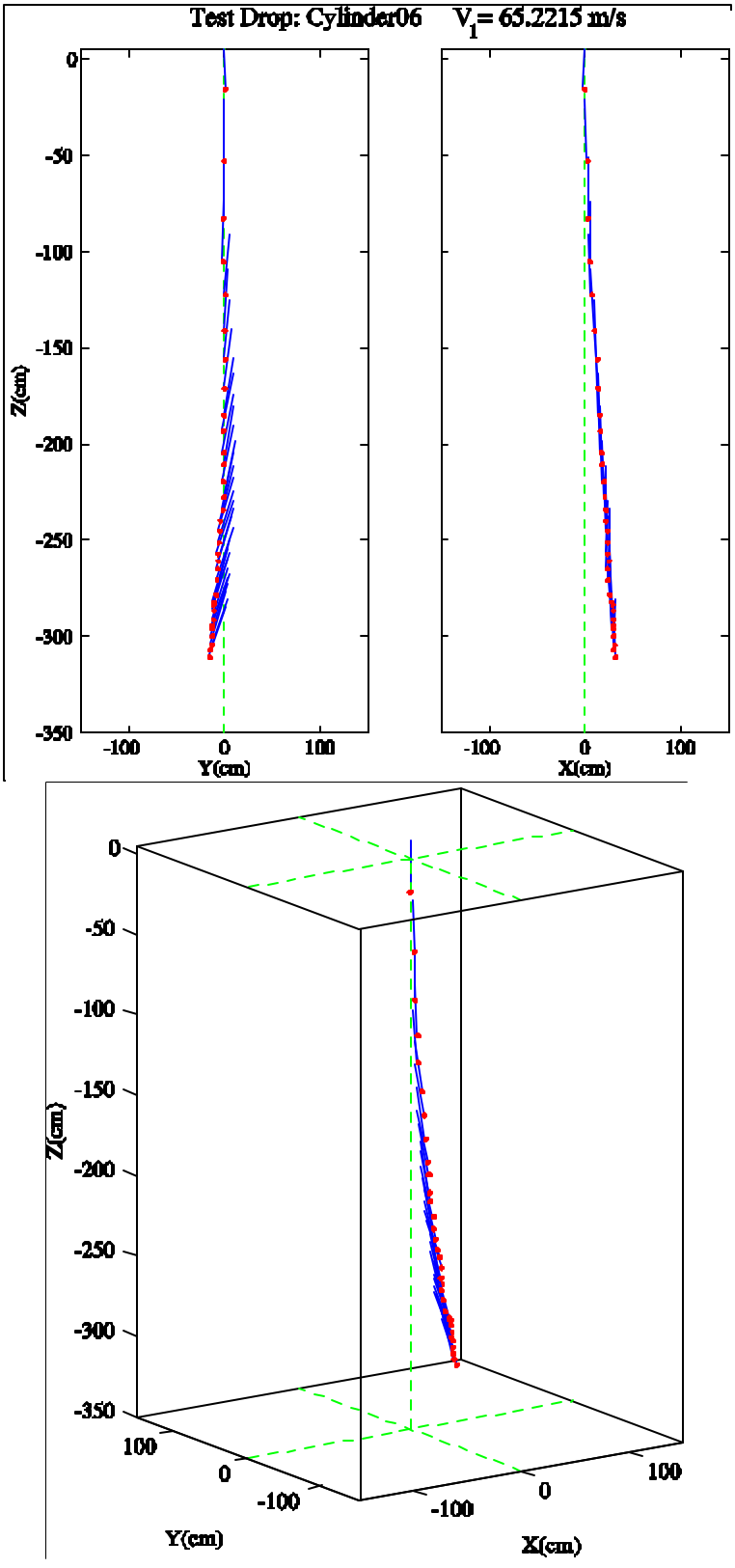

Test Drop: Cylinder01 V1= 28.157 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

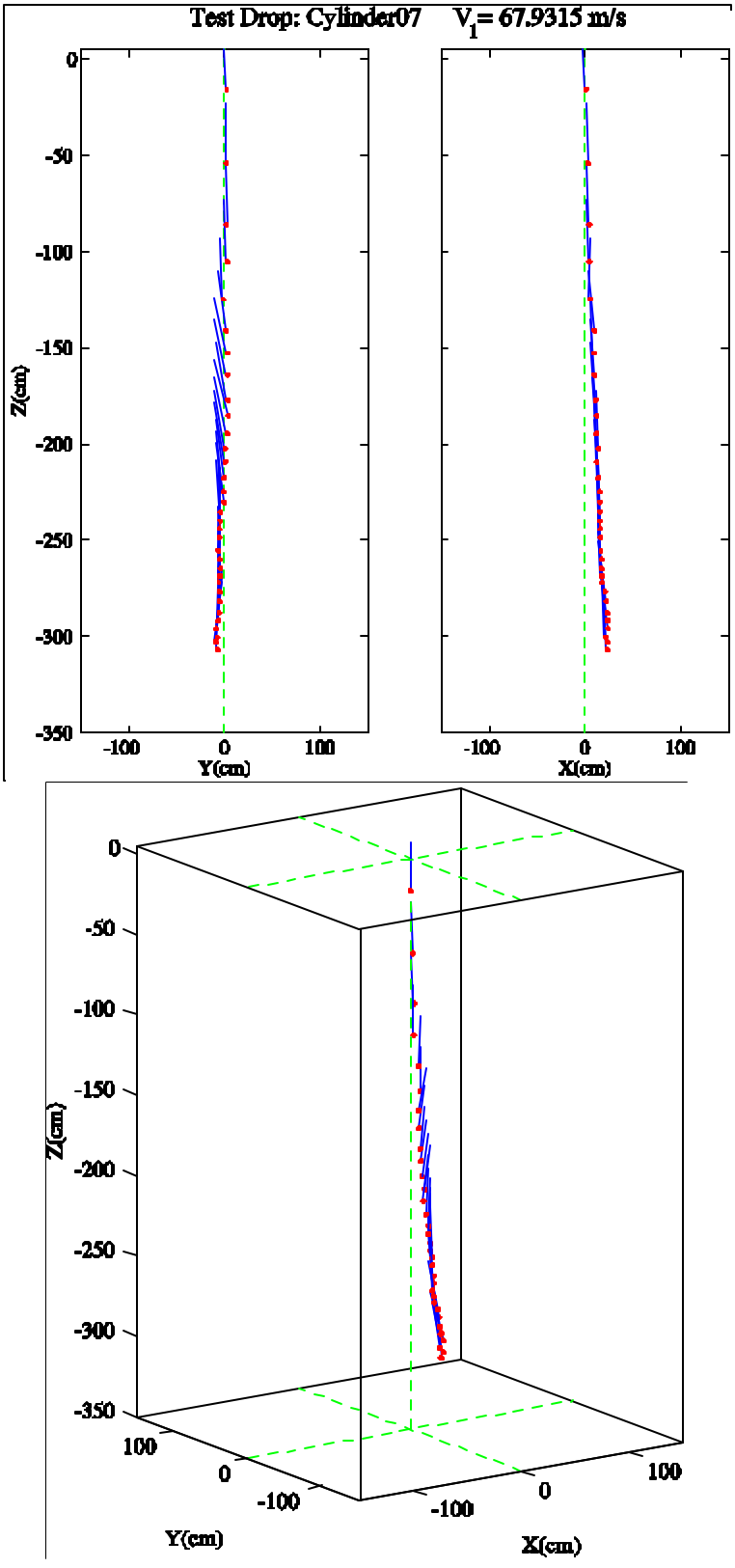

Test Drop: Cylinder02 V1= 40.7162 m/s
Z(cm)
Y(cm)
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
100

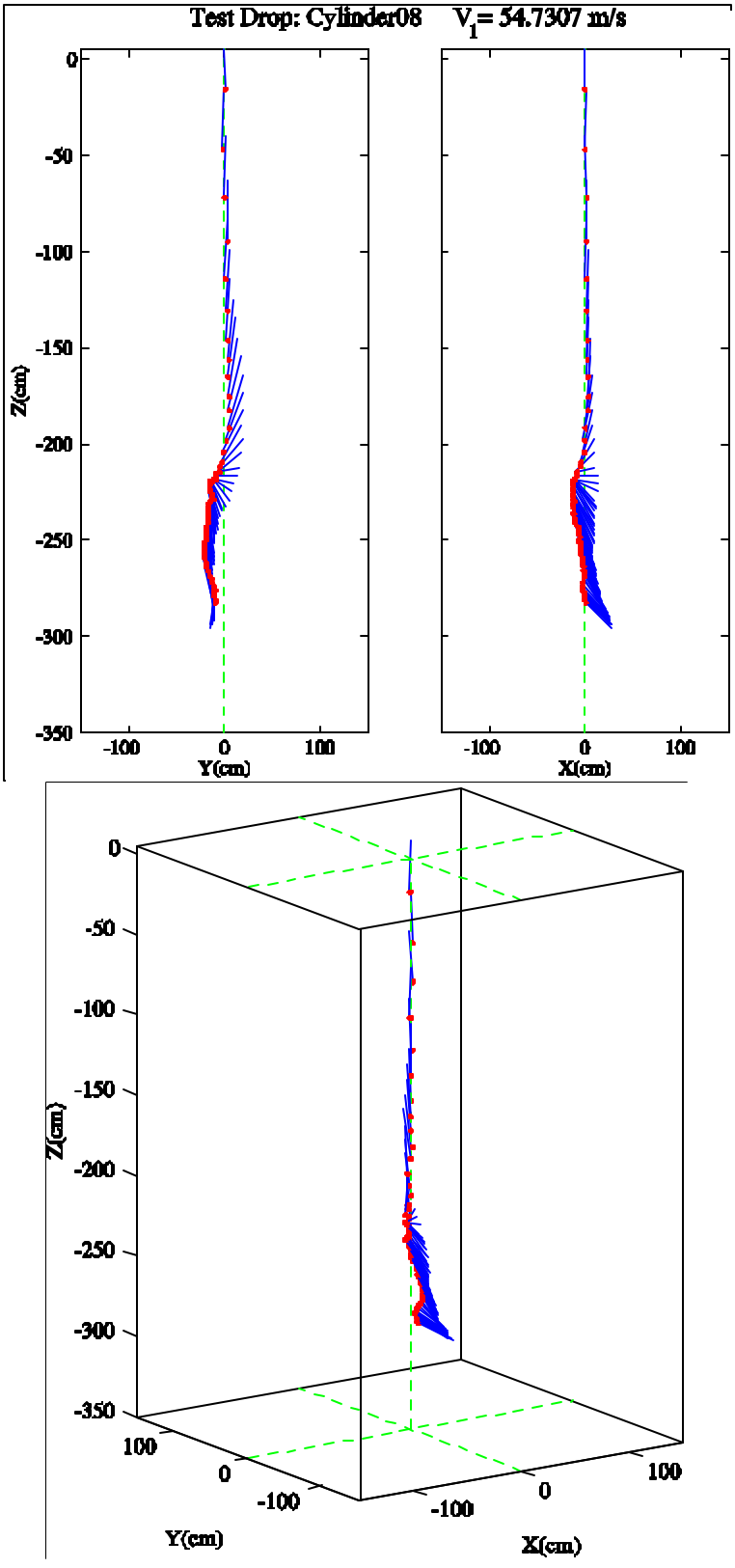

Test Drop: Cylinder03 V1= 52.6362 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

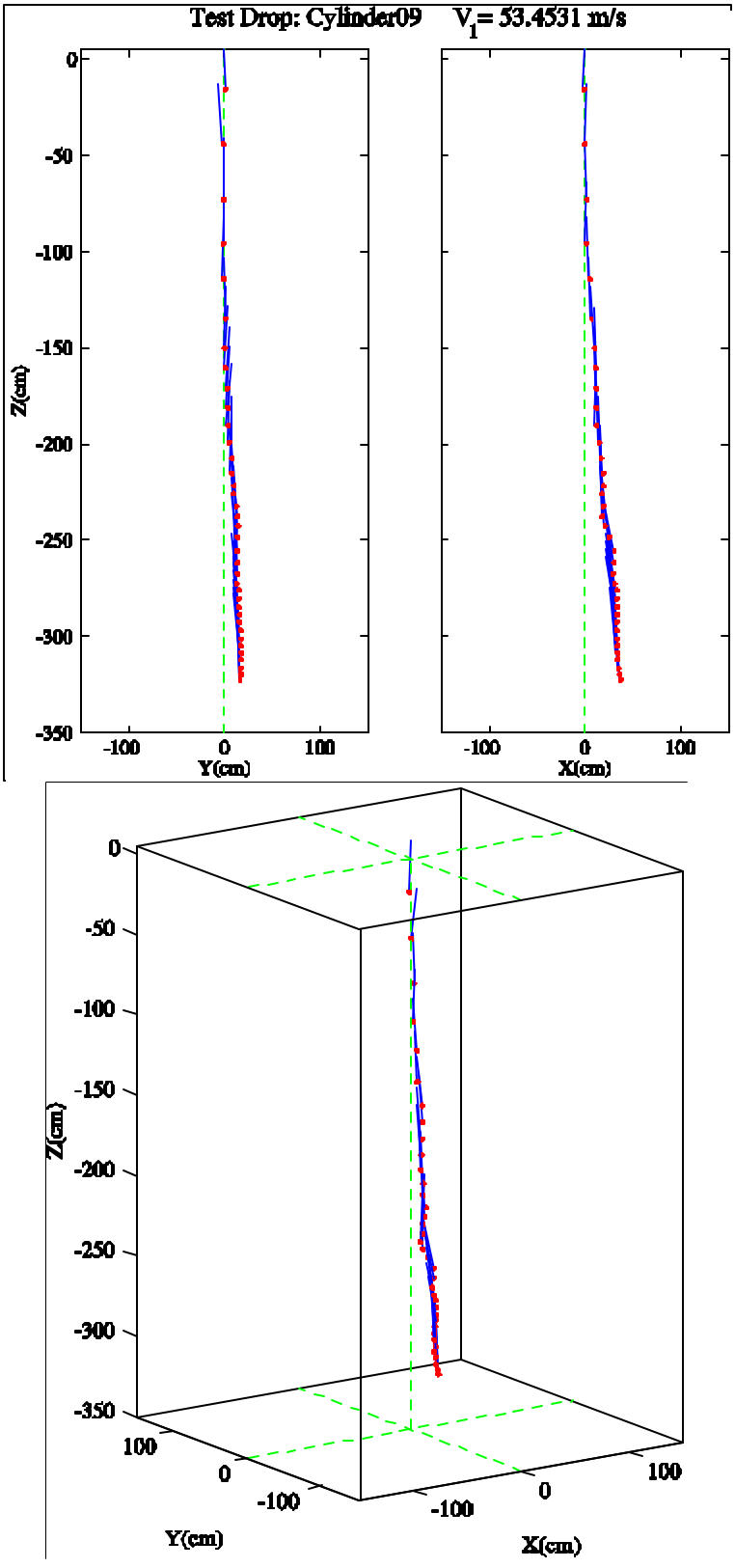

Test Drop: Cylinder04 V1= 44.0899 m/s
Z(cm)
Y(cm)
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
100

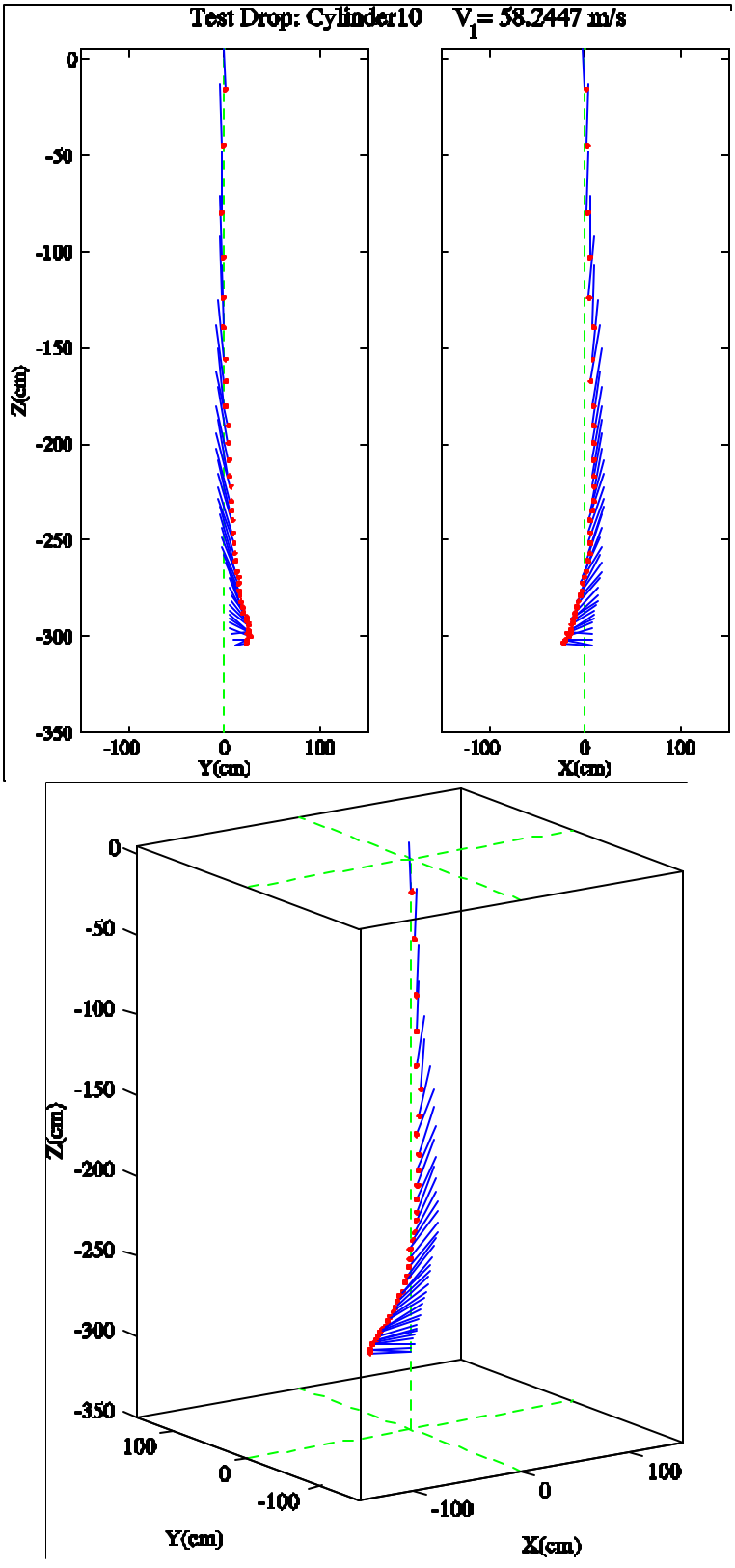

Test Drop: Cylinder05 V1= 50.6464 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

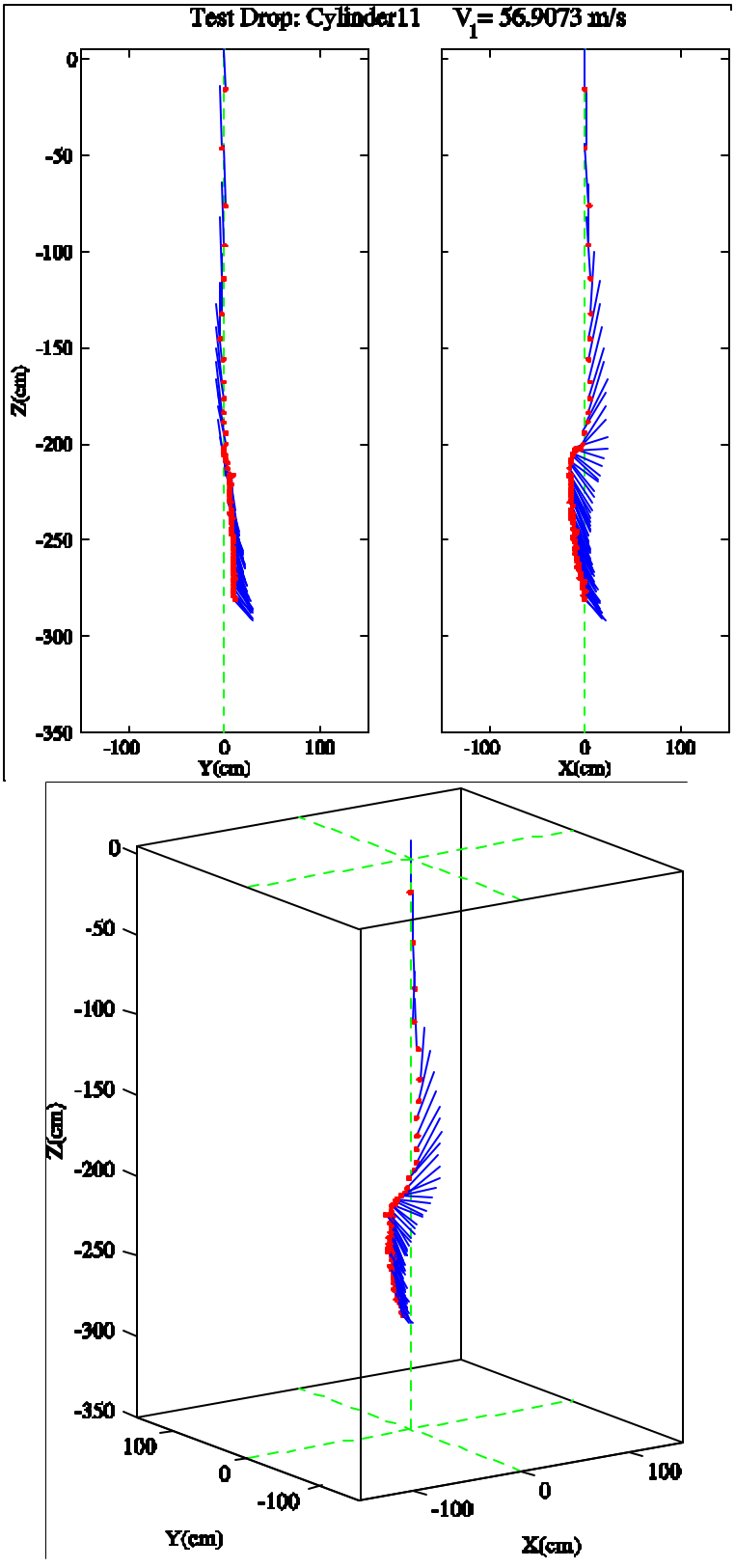

Test Drop: Cylinder06 V1= 65.2215 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

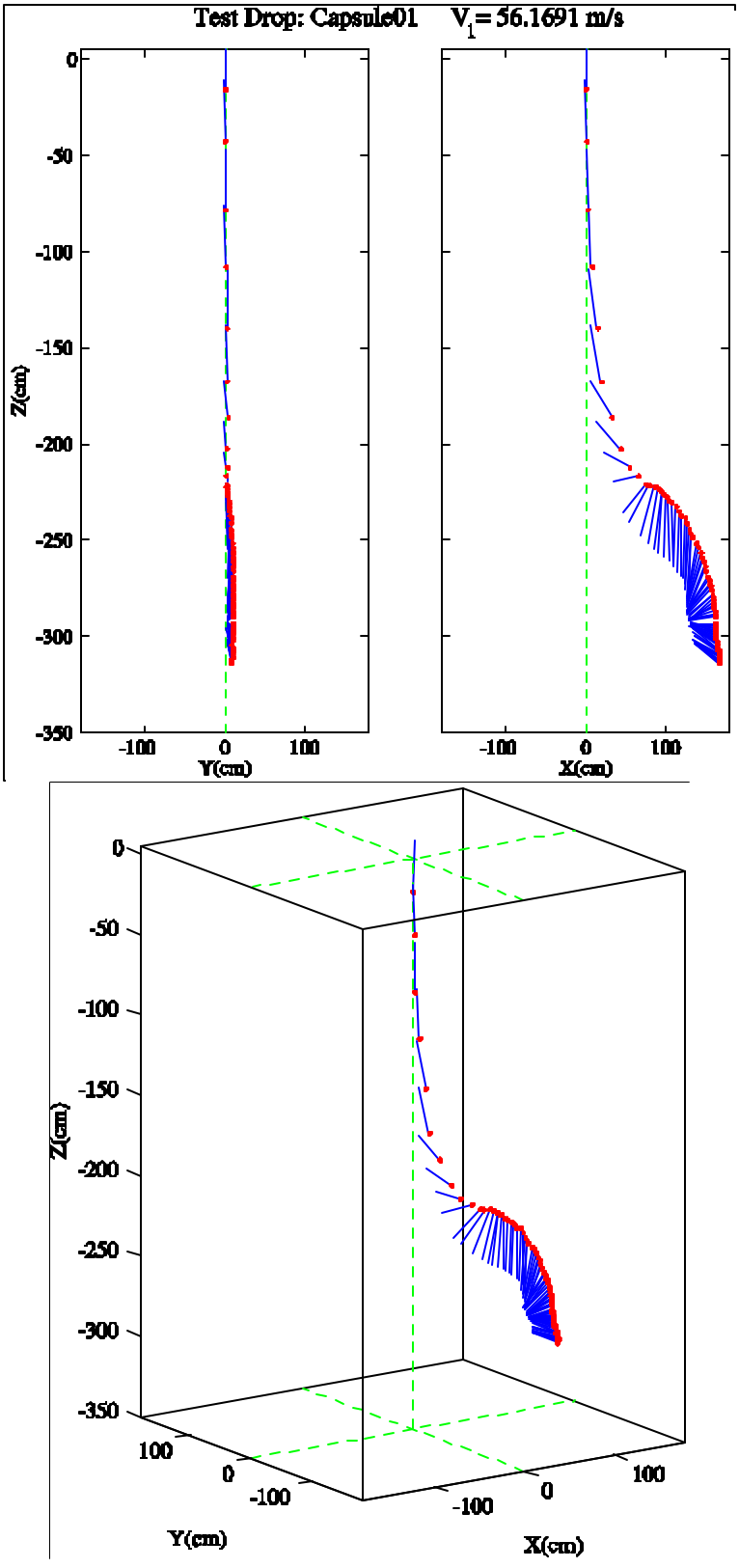

Test Drop: Cylinder07 V1= 67.9315 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

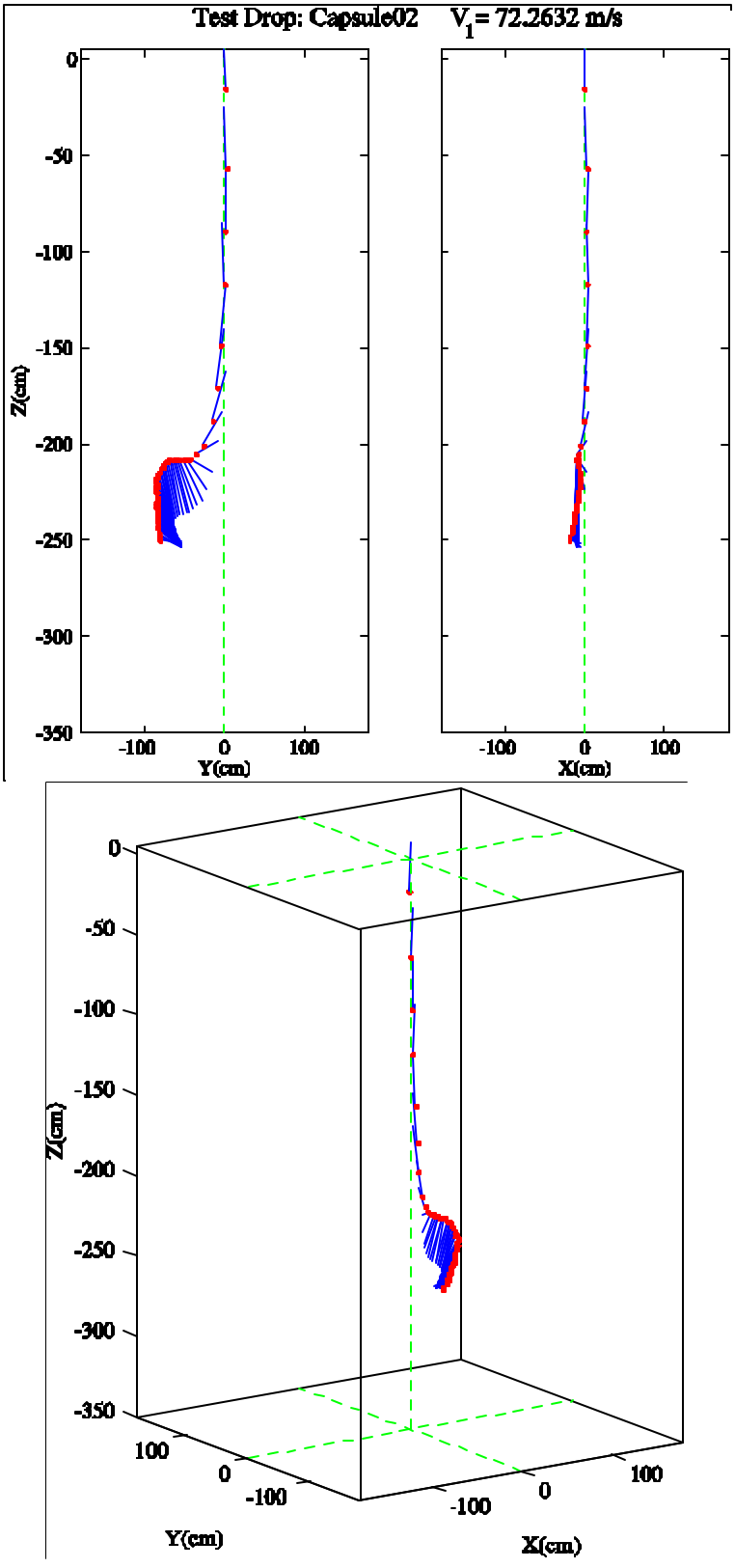

Test Drop: Cylinder08 V1= 54.7307 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

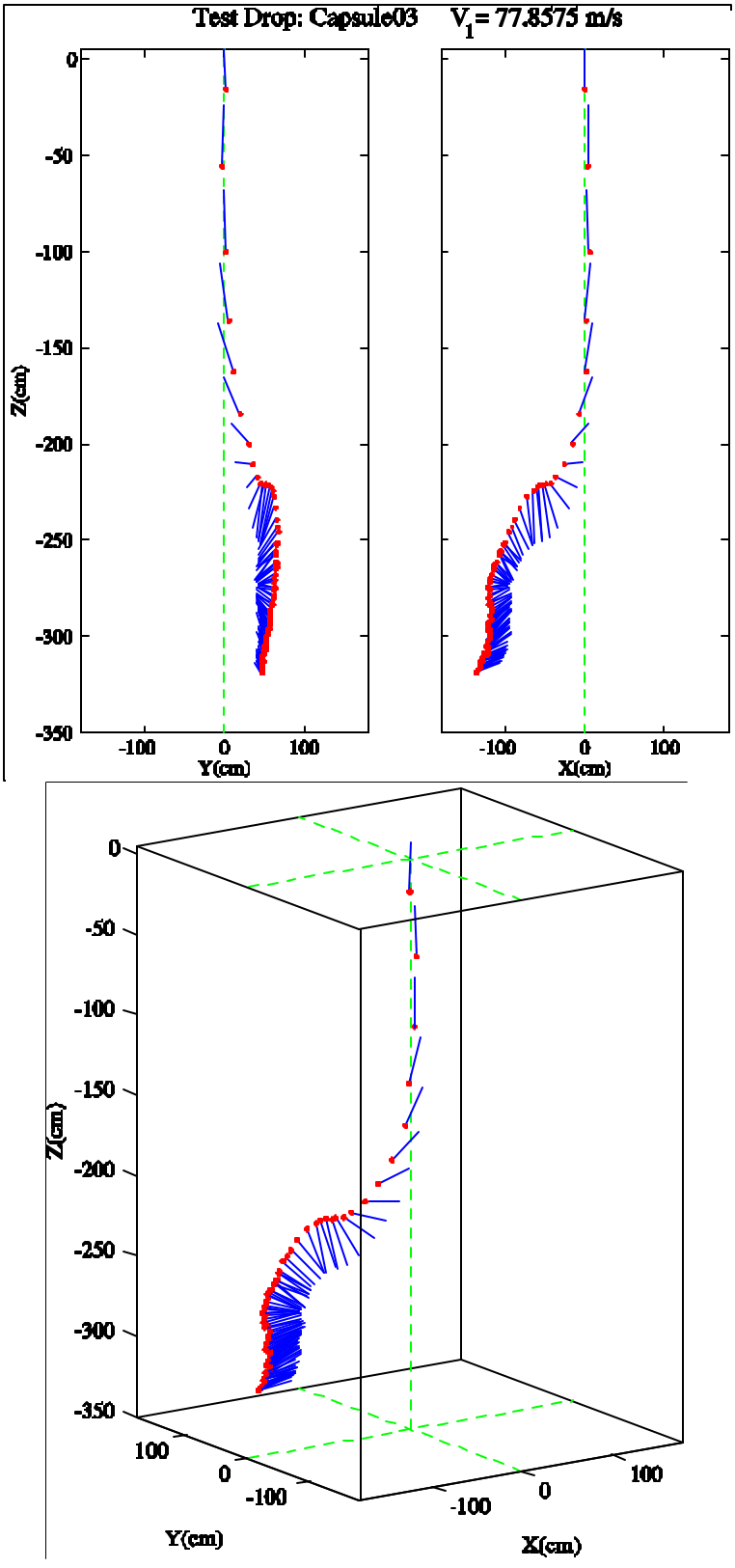

Test Drop: Cylinder09 V1= 53.4531 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

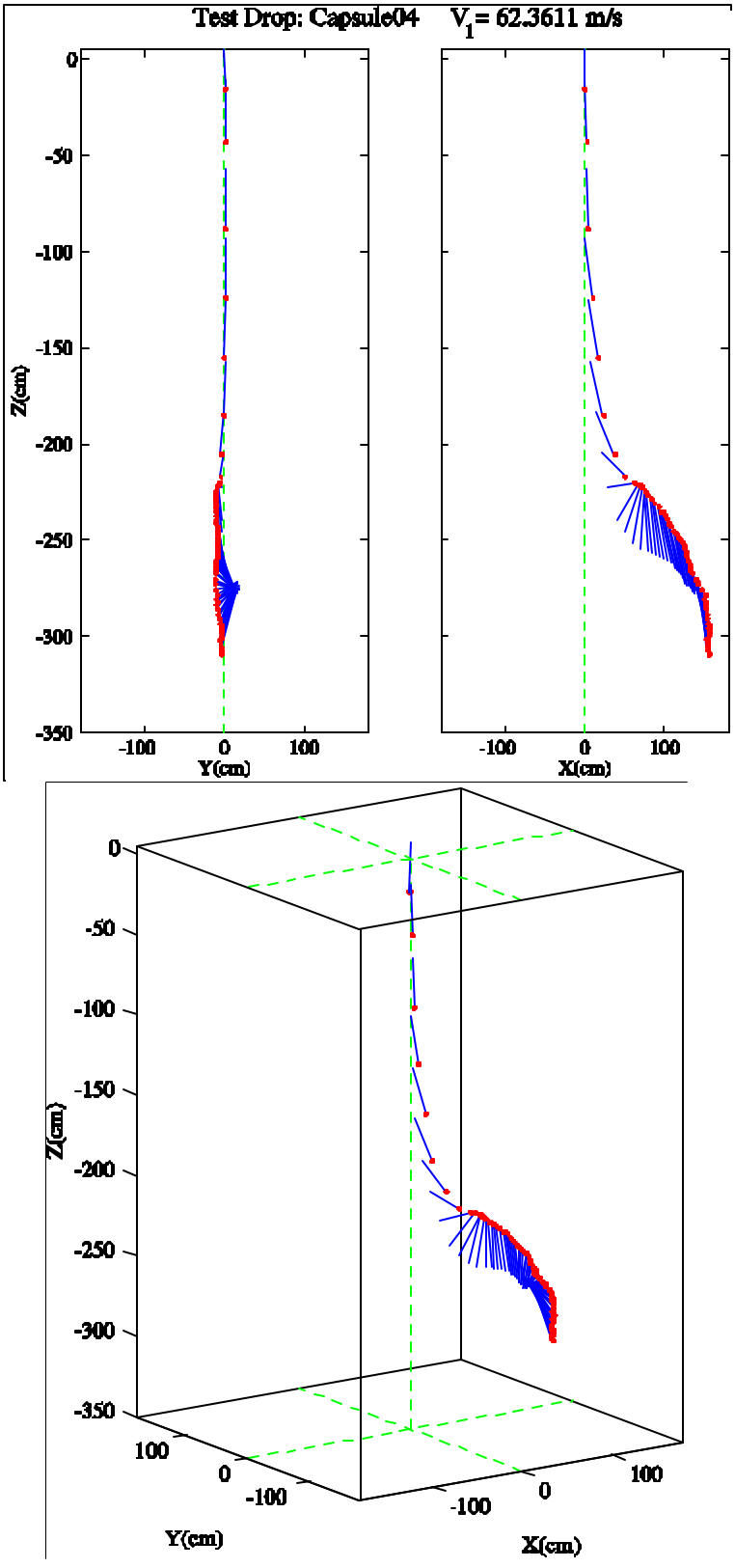

Test Drop: Cylinder10 V1= 58.2447 m/s
Z(cm)
Y(cm)
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
100

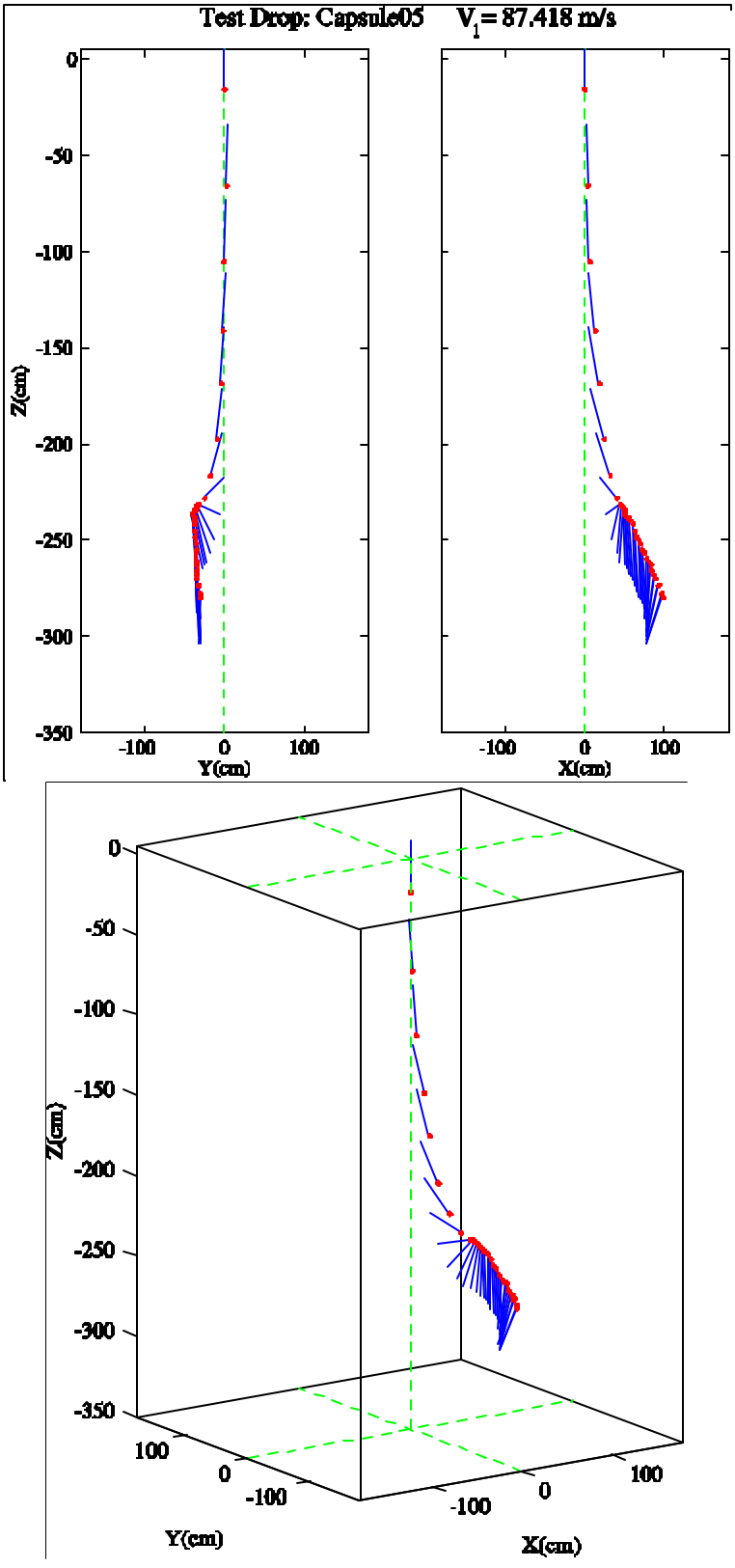

Test Drop: Cylinder11 V1= 56.9073 m/s
Z(cm)
Y(cm)
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
100

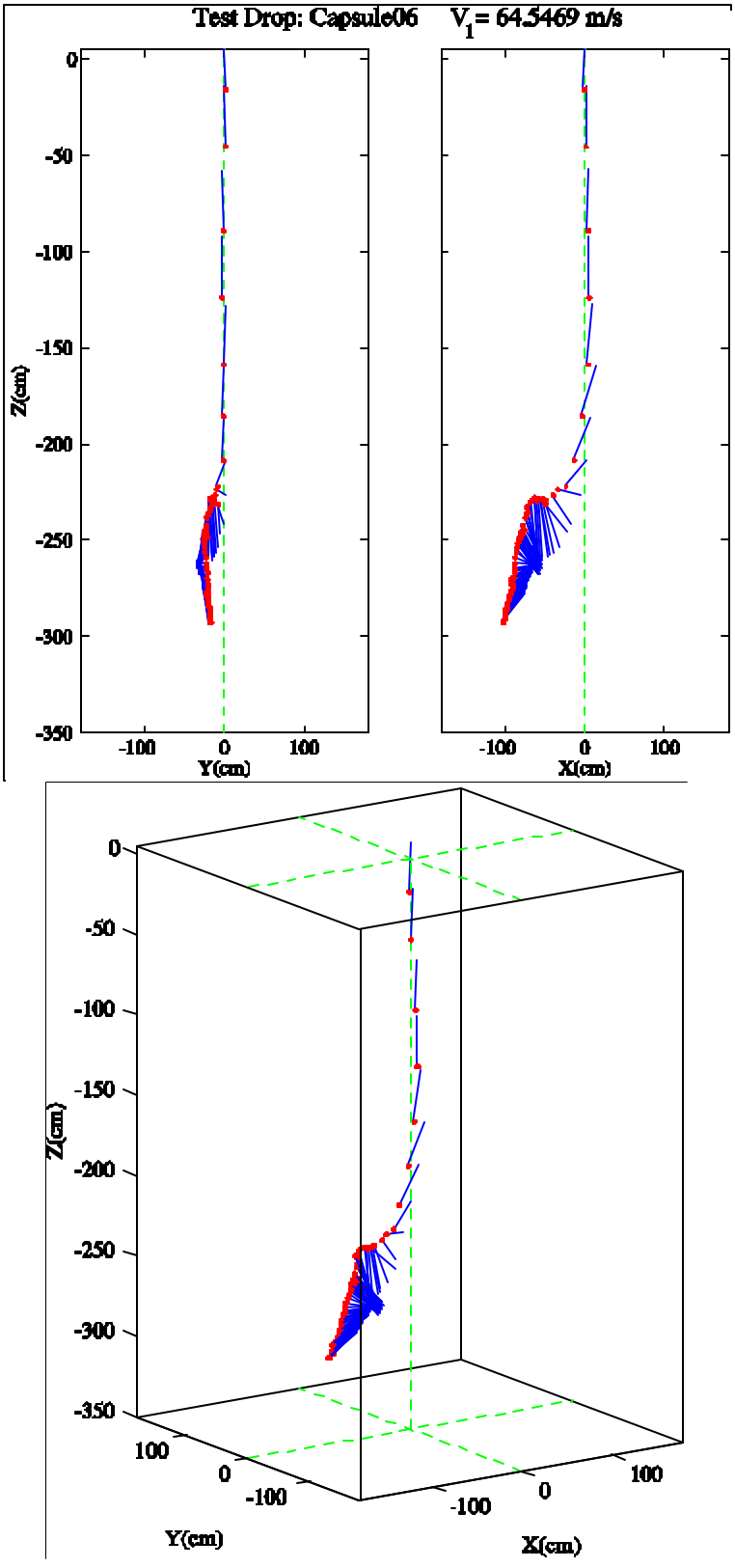

Test Drop: Capsule01 V_i = 56.1691 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

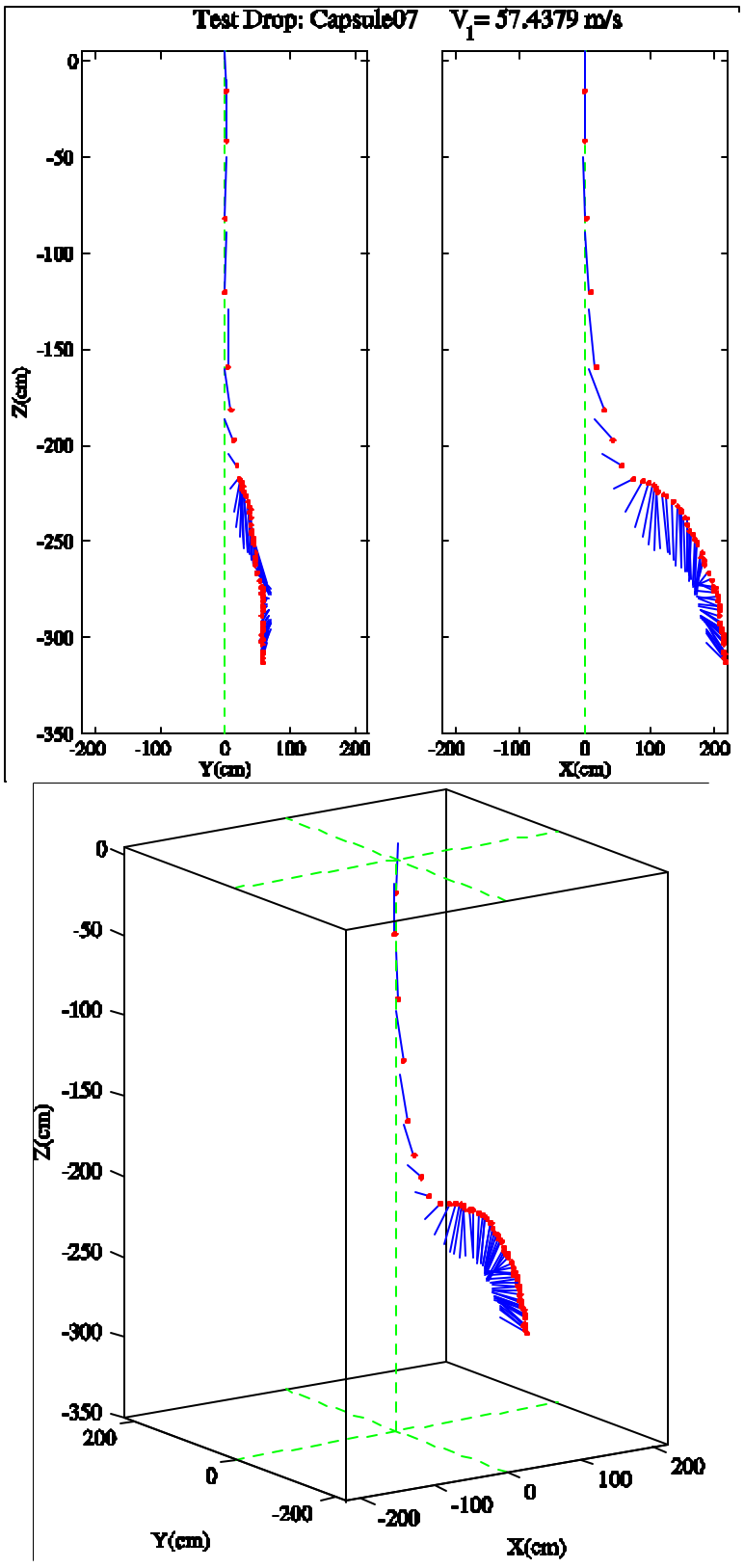

Test Drop: Capsule02 V1= 72.2632 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

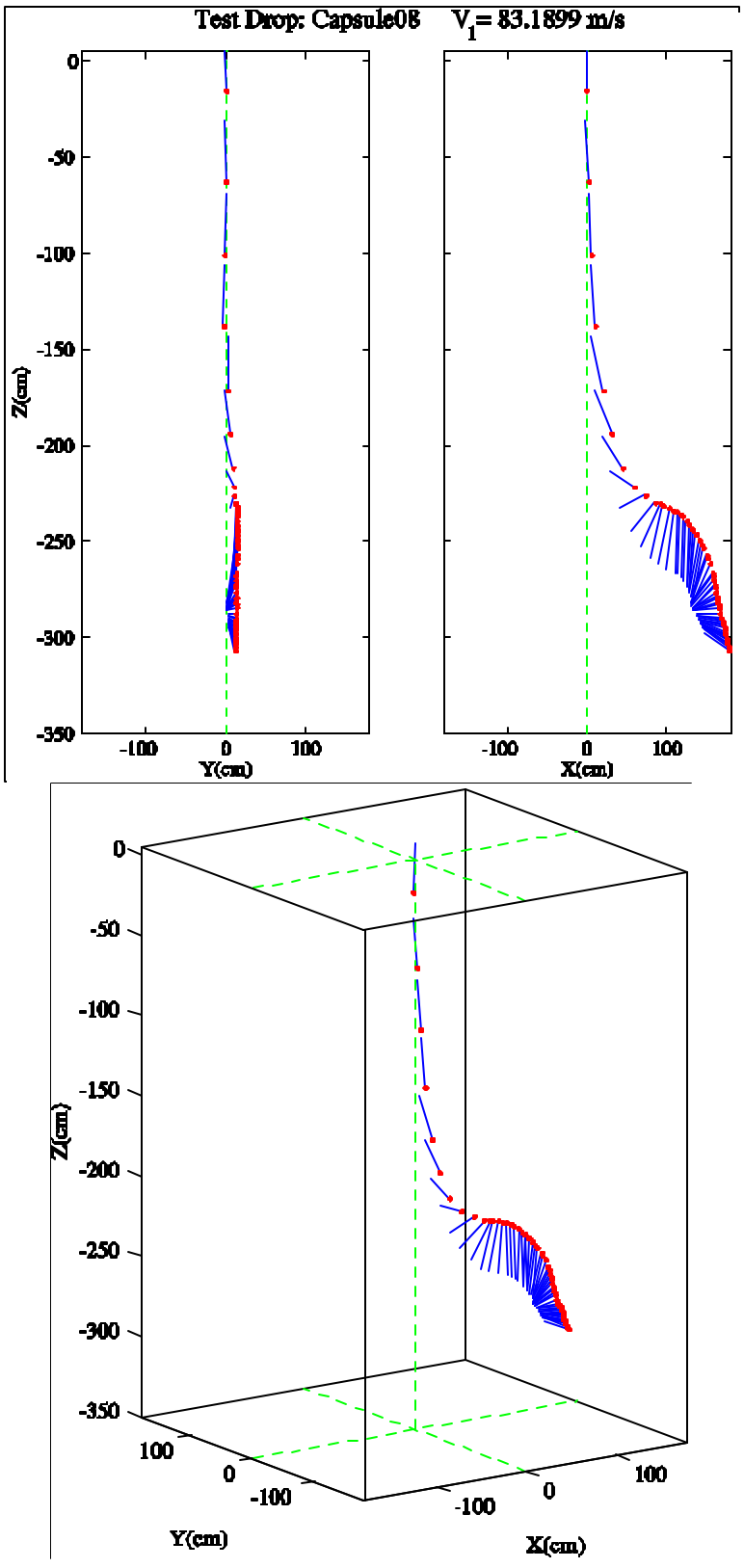

Test Drop: Capsule03 V1= 77.8575 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

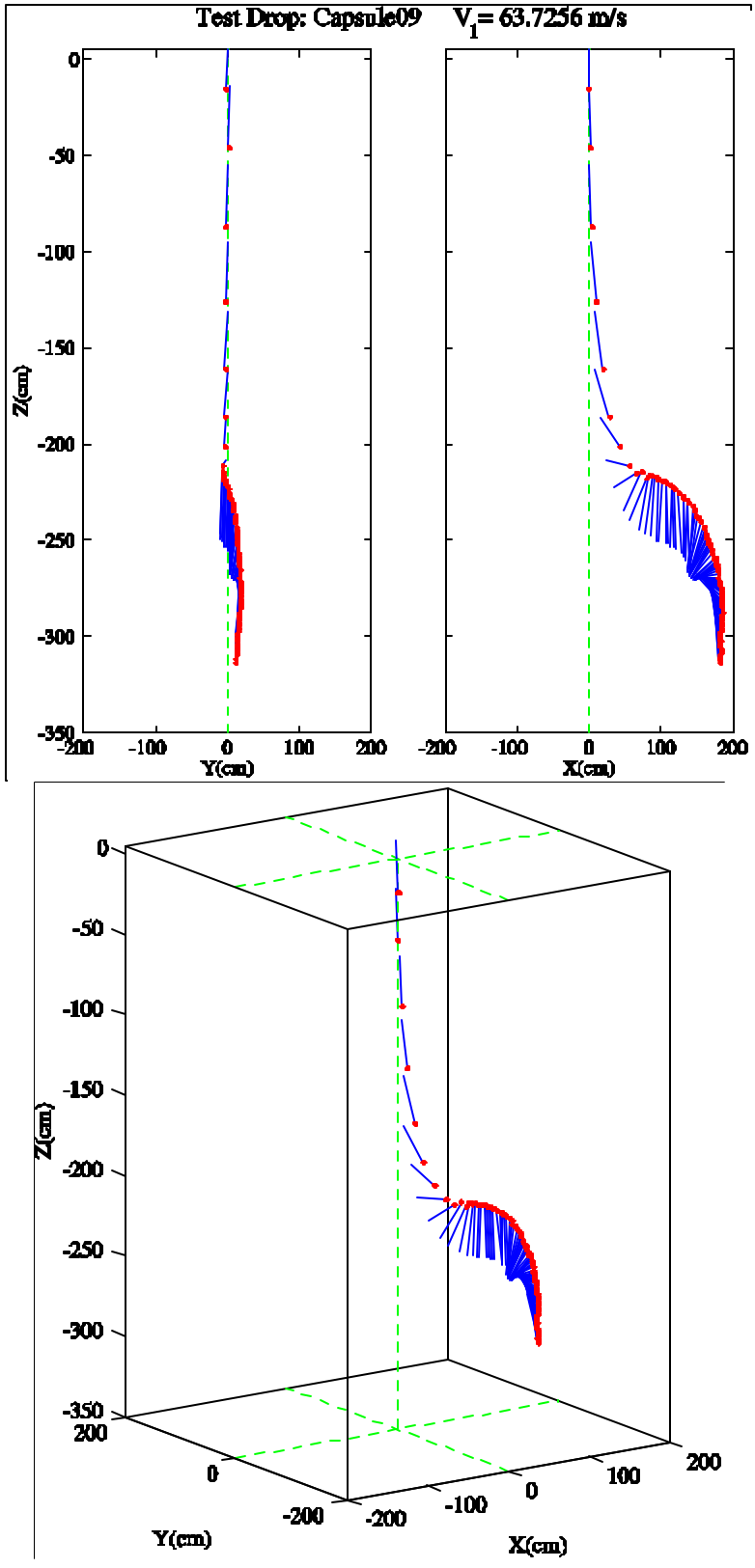

Test Drop: Capsule04 V1= 62.3611 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

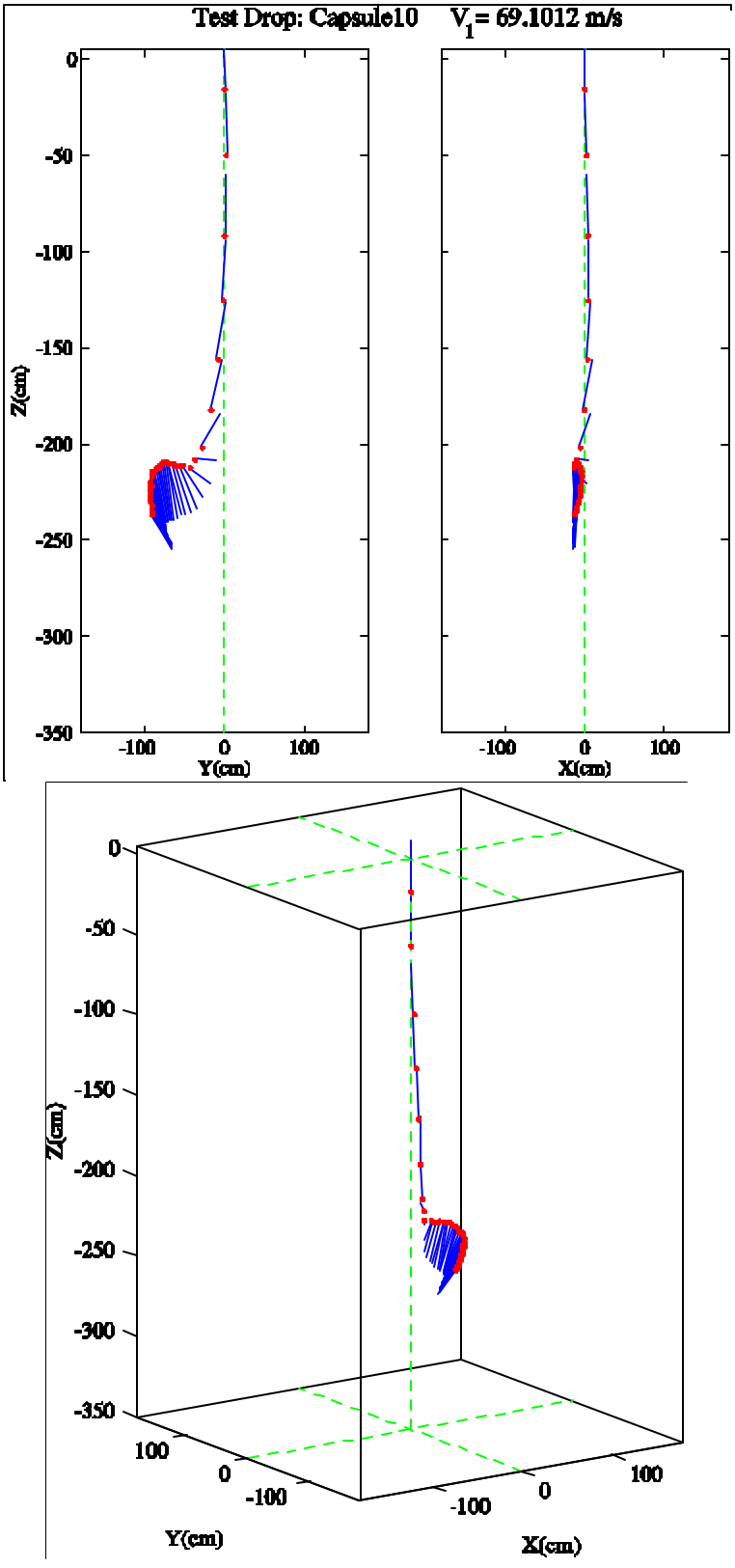

Test Drop: Capsule05 V1 = 87.418 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

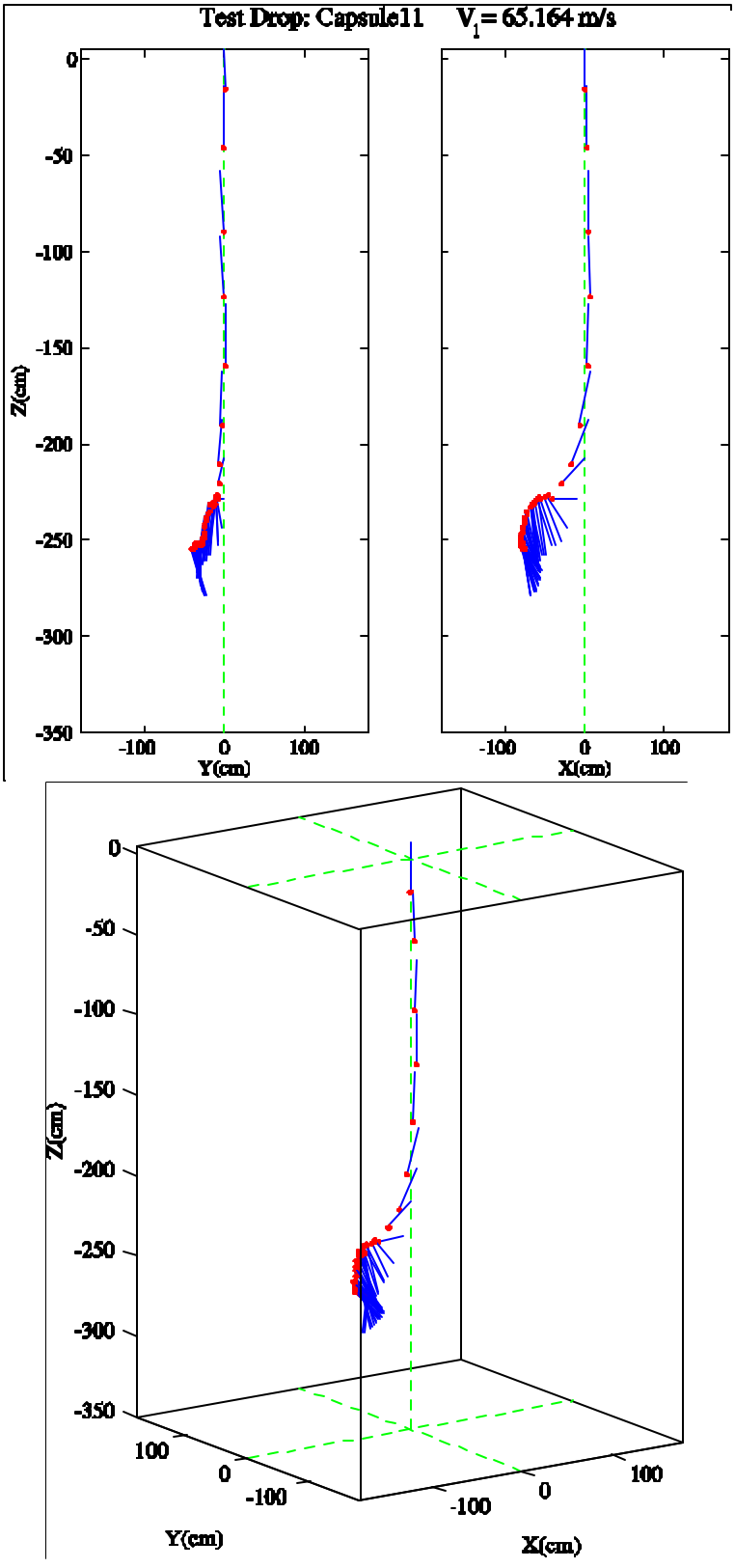

Test Drop: Capsule06 V1= 64.5469 m/s
Z(cm)
Y(cm)
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
100
0
-100


Test Drop: Capsule07 V1= 57.4379 m/s
Z(cm)
Y(cm)
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
200
100
0
-100
-200


Test Drop: Capsule08 V1= 83.1899 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

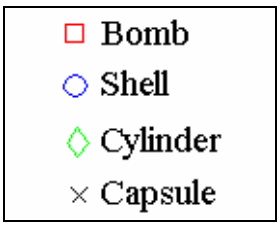

Test Drop: Capsule09 V1= 63.7256 m/s
Z(cm)
Y(cm)
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
-200
-100
0
100
200

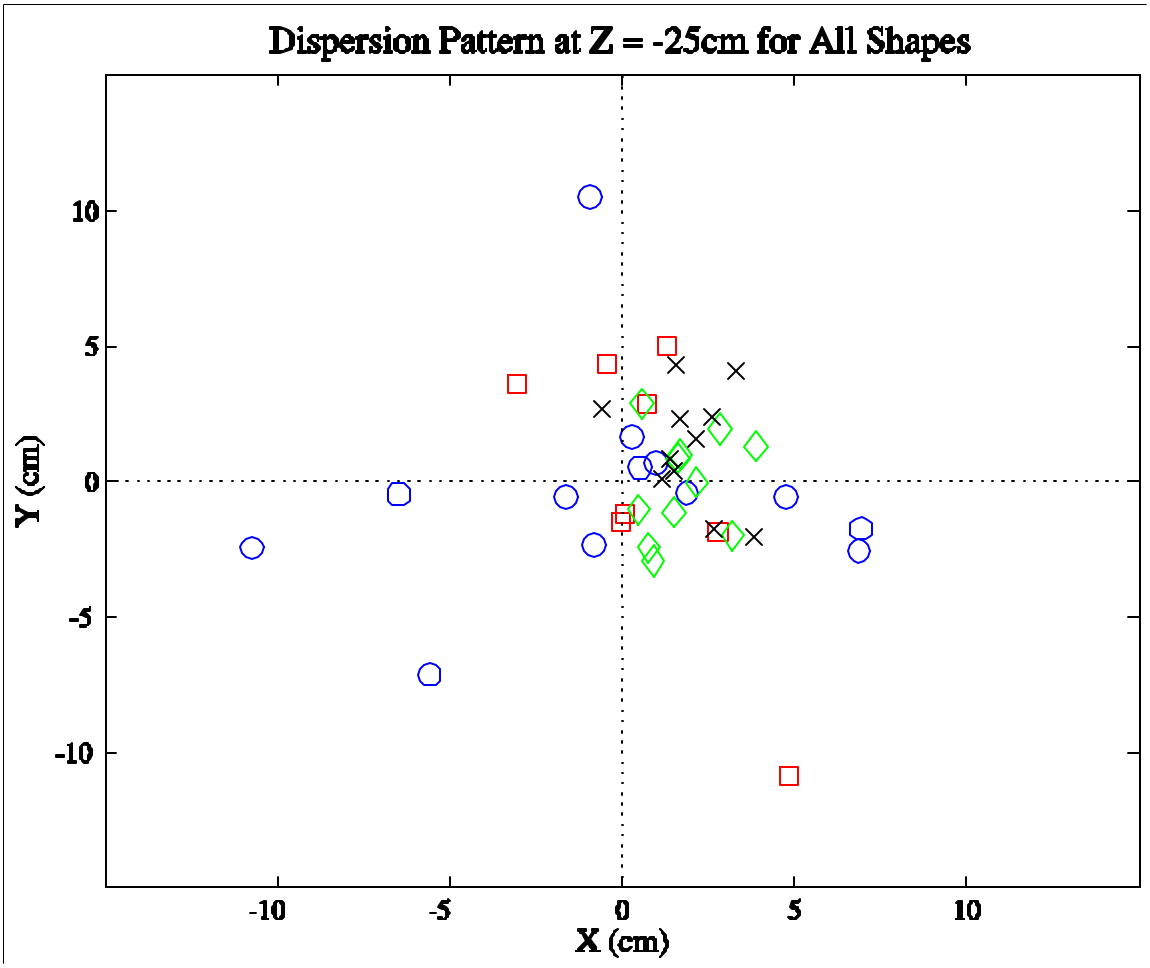

Test Drop: Capsule10 V1= 69.1012 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
-100
0
100
X(cm)
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
100
0
-100
Y(cm)
-100
0
100
X(cm)

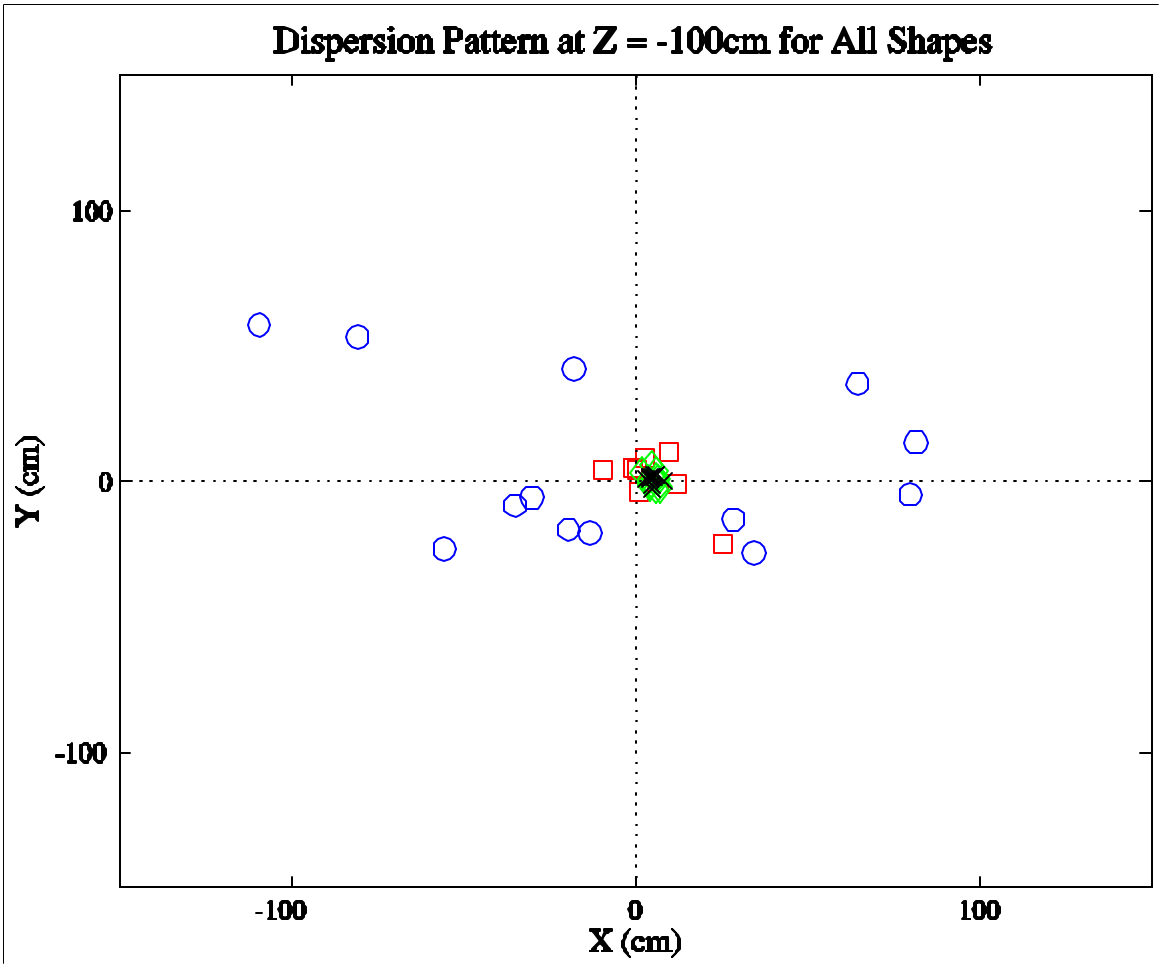

Test Drop: Capsule11 V1 = 65.164 m/s
0
-50
-100
-150
-200
-250
-300
-350
Z(cm)
-100
0
100
Y(cm)
X(cm)

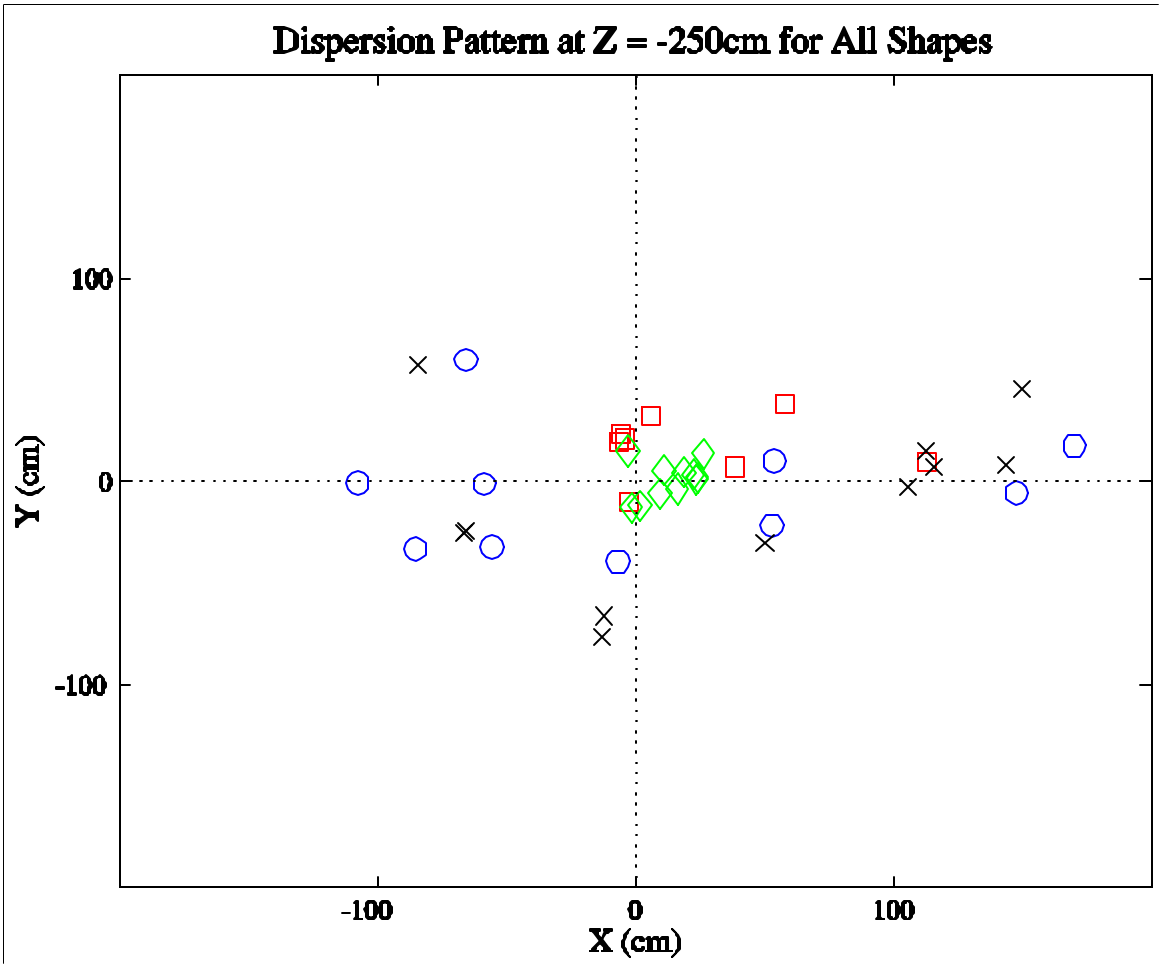
APPENDIX B. DISPERSION PLOTS

Appendix B contains three dispersion plots that were derived from the x-y position of the model shape at the specified z-levels of -25cm, -100cm and -250cm. The plots are keyed to the following legend:






Dispersion Pattern at Z = -100cm for All Shapes
100
0
-100
Y (cm)
-100
0
100
X (cm)


Dispersion Pattern at Z = -250cm for All Shapes
100
0
-100
Y (cm)
-100
0
100
X (cm)

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APPENDIX C. ANALYSIS SOURCE CODE

The following Appendix comprises the MATLAB source code for the analysis of the raw trajectory data from the Bomb Strike Experiment. These programs were developed in conjunction with during January 2006 in the Naval Ocean Analysis and Prediction Laboratory (NOAP), Naval Postgraduate School, Monterey CA. These subroutines provide for the transformation of the raw data, production of simulation movies, 2-D and 3-D trajectory plots, and dispersion plots. Please contact the NOAP lab, Naval Postgraduate School Monterey, CA with questions concerning this source code. The points of contact are Professor Peter C. Chu, chu@nps.navy.mil, or Mr. Chenwu Fan, NPS Oceanographer, fan@nps.navy.mil.

A. MATLAB ROUTINE

```
%****BOMB STRIKE EXPERIMENT ANALYSIS ROUTINE*****************
% Naval Ocean Analysis and Prediction Laboratory  (NOAP)
% January - February 2006
% Developed by:
%       Chenwu Fan, NOAP, NPS
%       Charles Allen, NPS
%       LT Greg Ray, NPS
%************************************************************
% ***************************OVERVIEW**************************
% This MATLAB routine is responsible for transforming raw trajectory
% data into proper 3-D data, production of all plots and simulations.
%****DEFINE ALL VARIBALES TO PROCESS THE NEW FILE****
% dr - directory data file is located in
% flnm - name of file minus extension
% v1 - Initial Velocity for the drop
% L - Length along the long axis
% D - Diameter
dr='Processed_Data/';
flnm='Bomb01';
L=31.75; D=15; Ltail=7; Dtail=17;
gsize=220
gfreq=1

%*** Open and parse data file ****
fid=fopen([dr,flnm,'.mqa']);
fgetl(fid);
tt=fscanf(fid,'%f',[8,inf]);
%time=tt(2,:);
m=size(tt);
n=m(2);
for i=1:n
   time(i)=0-(1-i)*(.008);
end xyz1=tt(3:5,:); xyz2=tt(6:8,:);
```

```
fclose(fid);

zlm=[min(xyz1(3,end),xyz2(3,end))-1,max(xyz1(3,1),xyz2(3,1))+1];
xym=diff(zlm)/6; xlm=xym*[-1,1]; ylm=xym*[-1,1];

%*** TRANSFORM DATA***
[pos,az,el]=xyz2ang(xyz1,xyz2);
xyz1=xyz1-pos(:,1)*ones(1,size(xyz1,2));
xyz2=xyz2-pos(:,1)*ones(1,size(xyz2,2));
pos=pos-pos(:,1)*ones(1,size(xyz2,2));
xyzh=pos+L/2*[cos(el).*cos(az);cos(el).*sin(az);-sin(el)];
xyzt=pos-L/2*[cos(el).*cos(az);cos(el).*sin(az);-sin(el)];

%*** FUNCTION - Save Final Processed Data File *****************
% The data file is saved as "flnm.dat"
dz=(sum(pos(3,1:3)));
dt=(time(3));
m=size(pos);
n=m(2);
for i=1:n
   v1(i)=(dz/dt)/-100
end
data=[v1;time;pos;el;az;xyz1;xyz2];
fid=fopen([flnm,'.dat'],'w+');
 %fprintf(fid,'ID  v1  time    pos(x)   pos(y)   pos(y) el   az   x1 y1   z1   x2   y2 z2\n');
fprintf(fid,[flnm,'\t%10.4f\t%8.3f\t%10.4f\t%10.4f\t%10.4f\t%10.4f\t%10.4f\t%10.4f\t%10.4f\t%1
0.4f\t%10.4f\t%10.4f\t%10.4f\n'],data);
fclose(fid);
fid=fopen(['FINAL_Data_Capsule.dat'],'a+');
fprintf(fid,[flnm,'\t%10.4f\t%8.3f\t%10.4f\t%10.4f\t%10.4f\t%10.4f\t%10.4f\t%10.4f\t%10.4f\t%1
0.4f\t%10.4f\t%10.4f\t%10.4f\n'],data);
fclose(fid);

%*** FUNCTION - POSITION PLOTS *********************************
% This function plots the y-z, x-z, and 3D plots for the paper
openfg([8,8]);
v1=v1(1:1)

% Y-Z Plot
axes('position',[0.1,0.97,0.8,0.03],'xlim',[-1,1]); axis('equal');
text(0,.5,['TestDrop:',flnm,'     V_1= ',num2str(v1),'
m/s'],'horizontalalignment','center','FontName','times','fontsize',18);
axes('position',[0.1,0.07,0.35,0.88],'xlim',gsize*[-1,1],'ylim',[-
350,5],'box','on','FontName','times','fontsize',14);
hold on;
plot([0,0],[-350,5],'g--');
plot([xyzh(2,1:gfreq:end);xyzt(2,1:gfreq:end)],[xyzh(3,1:gfreq:end);xyzt(3,1:gfreq:end)],'b-');
plot(xyzh(2,1:gfreq:end),xyzh(3,1:gfreq:end),'r.','markersize',8);
xlabel('Y(cm)','FontName','times','fontsize',14); ylabel('Z(cm)','FontName','times','fontsize',14);

% X-Z Plot
axes('position',[0.54,0.07,0.35,0.88],'xlim',gsize*[-1,1],'ylim',[-
350,5],'box','on','FontName','times','fontsize',14);
hold on;
plot([0,0],[-350,5],'g--');
plot([xyzh(1,1:gfreq:end);xyzt(1,1:gfreq:end)],[xyzh(3,1:gfreq:end);xyzt(3,1:gfreq:end)],'b-');
```

```
plot(xyzh(1,1:gfreq:end),xyzh(3,1:gfreq:end),'r.','markersize',8);
xlabel('X(cm)','FontName','times','fontsize',14);
set(gca,'yticklabels',[]);

% Save first two plots
svinsert([flnm,'2D'],7);

% 3D Data Plot
openfg([6.1,8]);
set(gca,'xlim',gsize*[-1,1],'ylim',gsize*[-1,1],'zlim',[-
350,5],'box','on','FontName','times','fontsize',14);
hold on;
view([-34.5,10]);
plot3([0,0],[0,0],[-350,5],'g--');
plot3(gsize*[-1,1],[0,0],5*[1,1],'g--'); plot3([0,0],gsize*[-1,1],5*[1,1],'g--');
plot3(gsize*[-1,1],[0,0],-350*[1,1],'g--'); plot3([0,0],gsize*[-1,1],-350*[1,1],'g--');
plot3([xyzh(1,:);xyzt(1,:)],[xyzh(2,:);xyzt(2,:)],[xyzh(3,:);xyzt(3,:)],'b-');
plot3(xyzh(1,:),xyzh(2,:),xyzh(3,:),'r.','markersize',8);
xlabel('X(cm)','FontName','times','fontsize',14); ylabel('Y(cm)','FontName','times','fontsize',14);
zlabel('Z(cm)','FontName','times','fontsize',14);

%****SAVE FILE AS function sfinsert(name,kpr) where kpr:  1-2: ps, 3-psc2, 4-jpeg, 5-bmp256,
6-eps, 7-epsc, 8-tiff
svinsert([flnm,'3D'],7);
%*************** END POSITION PLOTS FUNCTION ***************

%*** 3-D MOVIE FUNCTION ************************************
% loads wireframe model
[bomb3d,facdata,colordata]=getbomb3Ddata(L,D);
bomb3dr=bomb3d'; nnb=size(bomb3dr,2);
figure('units','inches','position',[5,-2,6,9]);
k=1;
b3D=fbdmtxr('zy',[az(k),el(k)])*bomb3dr;
CR=b3D+pos(:,k)*ones(1,nnb);
set(gca,'xlim',pos(1,k)+gsize*[-1,1],'ylim',pos(2,k)+gsize*[-1,1],'zlim',[-350,5],'box','on');
hold on;
view([-34.5,10]);
H=patch('vertices',CR,'faces',facdata,'FaceVertexCData',colordata,'FaceColor','flat','edgecolor','no
ne');
xlabel('X(cm)'); ylabel('Y(cm)'); zlabel('Z(cm)');
plot3([0,0],[0,0],[-350,5],'k:');
plot3(gsize*[-1,1],[0,0],5*[1,1],'k:'); plot3([0,0],gsize*[-1,1],5*[1,1],'k:');
plot3(gsize*[-1,1],[0,0],-350*[1,1],'k:'); plot3([0,0],gsize*[-1,1],-350*[1,1],'k:');
for k=2:length(time)
   b3D=fbdmtxr('zy',[az(k),el(k)])*bomb3dr;
   CR=b3D+pos(:,k)*ones(1,nnb);
   set(H,'visible','off');

H=patch('vertices',CR,'faces',facdata,'FaceVertexCData',colordata,'FaceColor','flat','edgecolor','no
ne');
   drawnow;
   hold on;
   plot3([xyzt(1,k),xyzh(1,k)],[xyzt(2,k),xyzh(2,k)],[xyzt(3,k),xyzh(3,k)],'b:','erasemode','none');
   plot3(xyzh(1,k),xyzh(2,k),xyzh(3,k),'r.','erasemode','none');
   %****SAVE FILE AS function sfinsert(name,kpr) where kpr:  1-2: ps, 3-psc2, 4-jpeg, 5-
bmp256, 6-eps, 7-epsc, 8-tiff
```

```
   text(-5,300,[flnm,'     V1 = ',num2str(v1),' cm/s'],'horizontalalignment','center','fontsize',12);
   svinsert([flnm,'mv_',int2str(k)],8);
   pause(0.1);
end
%*** END 3D MOVIE FUNCTION **********************************

%*******DISPERSION SCATTERPLOT FUNCTION**********************
%This m-file will generate a scatterplot of the shapes at -250cm Z.
%Created 1-25-06 by Charles Allen

clear all
close all

%*****Define All Variables***********************************
flnm1 = 'xy25_Bomb'
lbl1  = '1/12 Model Bomb'
flnm2 = 'xy25_Shell'
lbl2  = 'Shell'
flnm3 = 'xy25_Cylinder'
lbl3 = 'Cylinder'
flnm4 = 'xy25_Capsule'
lbl4 = 'Capsule'
depth = '-25cm'

%This section plots all all of the dispersion points.
data1 = load([flnm1,'.txt']);
m=size(data1);
r=m(1);
for i = 1:r
   data1x(i) = data1(i,2);
   data1y(i) = data1(i,3);
end
for i = 1:r
   plot(data1x(i),data1y(i),'rs','MarkerSize',10)
   hold on;
end
xlim([-150 150]);
ylim([-150 150]);
title([lbl1,' Dispersion Pattern at Z = ',depth],'FontName','times','fontsize',14);
xlabel('X (cm)','FontName','times','fontsize',14);
ylabel('Y (cm)','FontName','times','fontsize',14);
plot(xlim,[0,0],':k');
m = [0 0];
n = [-150 150];
plot(m,n,':k');
hold on;

figure;
data2 = load([flnm2,'.txt']);
m=size(data2);
o=m(1);
for i = 1:o
   data2x(i) = data2(i,2);
   data2y(i) = data2(i,3);
end
for i = 1:o
```

```
   plot(data2x(i),data2y(i),'ob','MarkerSize',10)
   hold on;
end
xlim([-150 150]);
ylim([-150 150]);
title([lbl2,' Dispersion Pattern at Z = ',depth],'FontName','times','fontsize',14);
xlabel('X (cm)','FontName','times','fontsize',14);
ylabel('Y (cm)','FontName','times','fontsize',14);
plot(xlim,[0,0],':k');
m = [0 0];
n = [-150 150];
plot(m,n,':k');
hold off;

figure;
data3 = load([flnm3,'.txt']);
m=size(data3);
p=m(1);
for i = 1:p
   data3x(i) = data3(i,2);
   data3y(i) = data3(i,3);
end
for i = 1:p
   plot(data3x(i),data3y(i),'dg','MarkerSize',10)
   hold on;
end
xlim([-150 150]);
ylim([-150 150]);
title([lbl3,' Dispersion Pattern at Z = ',depth],'FontName','times','fontsize',14);
xlabel('X (cm)','FontName','times','fontsize',14);
ylabel('Y (cm)','FontName','times','fontsize',14);
plot(xlim,[0,0],':k');
m = [0 0];
n = [-150 150];
plot(m,n,':k');
hold off;

figure;
data4 = load([flnm4,'.txt']);
m=size(data4);
q=m(1);
for i = 1:q
   data4x(i) = data4(i,2);
   data4y(i) = data4(i,3);
end
for i = 1:q
   plot(data4x(i),data4y(i),'xk','MarkerSize',10)
   hold on;
end
xlim([-150 150]);
ylim([-150 150]);
title([lbl4,' Dispersion Pattern at Z = ',depth],'FontName','times','fontsize',14);
xlabel('X (cm)','FontName','times','fontsize',14);
ylabel('Y (cm)','FontName','times','fontsize',14);
plot(xlim,[0,0],':k');
m = [0 0];
```

```
n = [-150 150];
plot(m,n,':k');
hold off;


%Now this next section plots them ALL on one plot.
figure;
for i = 1:r
   plot(data1x(i),data1y(i),'rs','MarkerSize',10) %Red Square.
   hold on;
end
for i = 1:o
   plot(data2x(i),data2y(i),'bo','MarkerSize',10) %Blue circles.
   hold on;
end
for i = 1:p
   plot(data3x(i),data3y(i),'gd','MarkerSize',10) %Green Diamonds.
   hold on;
end
for i = 1:q
   plot(data4x(i),data4y(i),'kx','MarkerSize',10) %Black XXX.
   hold on;
end
xlim([-150 150]);
ylim([-150 150]);
title(['Dispersion Pattern at Z = ',depth,' for All Shapes'],'FontName','times','fontsize',14);
xlabel('X (cm)','FontName','times','fontsize',14);
ylabel('Y (cm)','FontName','times','fontsize',14);
plot(xlim,[0,0],':k');
m = [0 0];
n = [-150 150];
plot(m,n,':k');
hold off;
```

%********END DISPERSION SCATTERPLOT FUNCTION**********

APPENDIX D. NUMERICAL DATA

Appendix D contains all of the numerical data points used in the mine shape trajectory graphs.

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Bomb01	59.6398	0	0	0	0	1.5422	1.3602
Bomb01	59.6398	0.008	-0.0206	-1.5815	-20.7084	1.5391	1.6066
Bomb01	59.6398	0.016	3.2307	2.2524	-74.7153	1.397	0.7352
Bomb01	59.6398	0.024	10.0427	10.0474	-115.4052	1.2362	0.5306
Bomb01	59.6398	0.032	16.9935	17.2535	-149.0697	1.19	0.6929
Bomb01	59.6398	0.04	29.0391	27.5904	-194.3451	1.1694	0.3584
Bomb01	59.6398	0.048	45.7811	30.8872	-239.9548	1.2015	0.0645
Bomb01	59.6398	0.056	58.3178	37.1772	-270.8066	0.9437	0.0756
Bomb01	59.6398	0.064	84.5458	36.0838	-304.3571	0.7441	0.0352
Bomb01	59.6398	0.072	110.0643	37.1559	-332.6951	0.609	-0.0211
Bomb02	42.5558	0	0	0	0	1.5498	1.7038
Bomb02	42.5558	0.008	0.0865	-1.281	-14.1826	1.5625	-2.8472
Bomb02	42.5558	0.016	0.3326	-3.2469	-53.9067	1.5583	-1.202
Bomb02	42.5558	0.024	1.3095	-4.4284	-92.4245	1.5196	-1.8544
Bomb02	42.5558	0.032	1.2951	-9.0374	-136.4358	1.5038	-1.5973
Bomb02	42.5558	0.04	0.7295	-11.2129	-175.5524	1.5469	-3.1285
Bomb02	42.5558	0.048	0.56	-11.0139	-216.1285	1.4732	-2.5468
Bomb02	42.5558	0.056	-1.6702	-11.1022	-250.3702	1.42	3.0642
Bomb02	42.5558	0.064	-4.7501	-11.3636	-280.2845	1.3658	2.9414
Bomb02	42.5558	0.072	-9.0549	-7.5407	-308.8868	1.2871	2.8707
Bomb03	87.091	0	0	0	0	1.5299	1.0831
Bomb03	87.091	0.008	4.874	-10.9245	-59.4861	0.9625	-0.1724
Bomb03	87.091	0.016	7.6605	-13.7884	-79.8595	-0.138	-0.2252
Bomb03	87.091	0.024	15.4321	-16.1163	-88.5091	-0.6814	-0.3338
Bomb03	87.091	0.032	17.5428	-18.7886	-92.6837	-0.7817	-0.3464
Bomb03	87.091	0.04	21.7346	-21.6891	-97.3599	-1.0718	-0.2111
Bomb03	87.091	0.048	25.6286	-23.7196	-100.2017	-1.251	-0.0488
Bomb03	87.091	0.056	27.4476	-25.328	-103.0865	-1.3559	0.0775
Bomb03	87.091	0.064	29.8881	-26.3096	-105.4727	-1.3582	0.2091
Bomb03	87.091	0.072	31.3778	-27.0205	-108.1181	-1.3551	0.2394
Bomb03	87.091	0.08	32.5827	-28.1992	-110.6342	-1.3598	0.1992
Bomb03	87.091	0.088	33.7163	-29.213	-112.6919	-1.3494	0.1329
Bomb03	87.091	0.096	35.4678	-29.8155	-114.9202	-1.2947	0.145
Bomb03	87.091	0.104	37.1043	-30.1359	-116.7734	-1.2344	0.0329
Bomb03	87.091	0.112	37.3681	-30.1452	-118.227	-1.2224	-0.0587
Bomb03	87.091	0.12	38.0284	-30.1016	-119.0241	-1.1982	-0.1287
Bomb03	87.091	0.128	39.4267	-29.9092	-121.4428	-1.0798	-0.1244
Bomb03	87.091	0.136	40.4295	-29.5232	-122.7381	-0.9824	-0.1928
Bomb03	87.091	0.144	41.5663	-28.9914	-123.149	-0.9129	-0.1672
Bomb03	87.091	0.152	41.6561	-28.6507	-123.7203	-0.8989	-0.1661
Bomb03	87.091	0.16	42.4474	-28.2405	-124.4666	-0.8479	-0.2237
Bomb03	87.091	0.168	42.7559	-28.0982	-125.8964	-0.7411	-0.1806
Bomb03	87.091	0.176	42.8969	-28.0369	-127.2175	-0.5879	-0.1672
Bomb03	87.091	0.184	43.3793	-27.6344	-127.3189	-0.5204	-0.158
Bomb03	87.091	0.192	43.4192	-27.4378	-128.0866	-0.4527	-0.1166

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Bomb03	87.091	0.2	43.7978	-27.2343	-129.2818	-0.3975	-0.0531
Bomb03	87.091	0.208	44.6126	-26.641	-129.245	-0.2594	-0.0694
Bomb03	87.091	0.216	44.6461	-26.4585	-129.8831	-0.2855	-0.0419
Bomb03	87.091	0.224	45.2681	-25.8183	-130.3376	-0.2451	0.0005
Bomb03	87.091	0.232	45.5896	-25.3439	-130.1505	-0.1043	-0.0043
Bomb03	87.091	0.24	45.6332	-25.2912	-130.9249	-0.0813	0.0247
Bomb03	87.091	0.248	46.0044	-24.8425	-131.0012	-0.0449	0.069
Bomb03	87.091	0.256	46.3048	-24.6357	-131.3591	-0.077	0.0854
Bomb03	87.091	0.264	46.3751	-24.6835	-131.4579	-0.0043	0.073
Bomb03	87.091	0.272	46.0995	-24.4504	-131.1981	0.0222	0.0707
Bomb03	87.091	0.28	46.5808	-24.0409	-131.1935	-0.0365	0.1264
Bomb03	87.091	0.288	46.6967	-24.1577	-131.4322	-0.0307	0.1198
Bomb03	87.091	0.296	47.0076	-23.7257	-131.6065	0.0124	0.1066
Bomb03	87.091	0.304	48.3218	-22.5332	-131.2175	-0.034	0.1627
Bomb03	87.091	0.312	48.3796	-22.4157	-131.3378	-0.0019	0.123
Bomb03	87.091	0.32	48.3083	-22.271	-132.2577	0.0334	0.161
Bomb03	87.091	0.328	48.8225	-21.4404	-131.5466	-0.0144	0.1415
Bomb03	87.091	0.336	48.8533	-21.2875	-131.1659	-0.034	0.104
Bomb03	87.091	0.344	49.3292	-20.817	-130.9173	-0.0477	0.1177
Bomb03	87.091	0.352	49.726	-20.269	-130.7195	-0.0407	0.0984
Bomb03	87.091	0.36	50.3071	-20.1026	-130.7497	-0.042	0.0815
Bomb03	87.091	0.368	50.6648	-19.6515	-130.5872	-0.0443	0.0888
Bomb03	87.091	0.376	50.6648	-19.6515	-130.5872	-0.0443	0.0888
Bomb03	87.091	0.384	51.6254	-18.9598	-130.2613	-0.0514	0.0624
Bomb03	87.091	0.392	51.5723	-18.5065	-130.009	-0.1123	0.1211
Bomb03	87.091	0.4	52.097	-17.8555	-129.9352	-0.0808	0.1214
Bomb03	87.091	0.408	52.5464	-17.5144	-129.7198	-0.0624	0.0977
Bomb03	87.091	0.416	52.7029	-17.3108	-129.8088	-0.0418	0.0824
Bomb03	87.091	0.424	52.348	-17.8702	-130.0093	-0.0755	0.1371
Bomb03	87.091	0.432	52.7495	-17.3374	-130.0619	-0.0589	0.1095
Bomb03	87.091	0.44	53.2921	-16.9444	-129.7618	-0.0607	0.1176
Bomb03	87.091	0.448	53.8893	-16.786	-130.0953	-0.0181	0.0954
Bomb03	87.091	0.456	54.4721	-16.4963	-130.2394	-0.0416	0.1403
Bomb03	87.091	0.464	54.7198	-16.2041	-130.3598	-0.0669	0.1509
Bomb03	87.091	0.472	55.1278	-15.6625	-130.4697	-0.0368	0.1356
Bomb03	87.091	0.48	55.2072	-15.8146	-130.6696	-0.0307	0.1143
Bomb03	87.091	0.488	55.674	-15.2872	-130.726	-0.0149	0.1248
Bomb03	87.091	0.496	55.6588	-15.2867	-130.7263	-0.0251	0.117
Bomb03	87.091	0.504	55.8515	-14.8741	-130.6466	-0.0284	0.1111
Bomb03	87.091	0.512	56.1221	-14.5862	-130.7079	-0.0328	0.1233
Bomb03	87.091	0.52	56.3029	-14.4276	-130.8977	-0.0568	0.137
Bomb03	87.091	0.528	56.0231	-14.2029	-130.9566	-0.0578	0.1707
Bomb03	87.091	0.536	55.8393	-14.4144	-131.1104	-0.0465	0.1565
Bomb03	87.091	0.544	56.1074	-14.4569	-131.1977	-0.0525	0.1877
Bomb03	87.091	0.552	56.4321	-14.0697	-131.2236	-0.0402	0.1876
Bomb03	87.091	0.56	56.3918	-14.1581	-131.7775	0.0062	0.2031
Bomb03	87.091	0.568	56.4912	-14.2827	-131.6632	-0.0058	0.1768
Bomb03	87.091	0.576	56.6327	-14.1169	-132.1473	-0.0054	0.1645
Bomb03	87.091	0.584	57.2022	-13.6602	-132.2195	0.0196	0.1419
Bomb03	87.091	0.592	57.5362	-13.8555	-132.3501	0.0104	0.1447
Bomb03	87.091	0.6	58.0128	-13.3933	-132.6013	0.0058	0.1694
Bomb03	87.091	0.608	58.2026	-13.1125	-132.8125	0.0346	0.1519
Bomb03	87.091	0.616	58.3993	-13.0006	-133.3216	0.0541	0.1911

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Bomb03	87.091	0.624	58.61	-12.6512	-133.1879	0.0642	0.1703
Bomb03	87.091	0.632	58.954	-12.2297	-133.1295	0.0477	0.1701
Bomb03	87.091	0.64	58.8837	-12.3947	-133.3505	0.0403	0.1866
Bomb03	87.091	0.648	59.1913	-12.0291	-133.5421	0.0489	0.1896
Bomb03	87.091	0.656	59.4172	-11.8174	-133.7101	0.0542	0.2108
Bomb03	87.091	0.664	59.8153	-11.358	-133.7115	0.05	0.2204
Bomb03	87.091	0.672	60.2123	-10.7554	-133.4222	0.078	0.1935
Bomb03	87.091	0.68	60.3188	-10.6322	-133.5415	0.0901	0.1895
Bomb03	87.091	0.688	60.6009	-10.2931	-133.9036	0.0969	0.1952
Bomb03	87.091	0.696	60.546	-10.4201	-134.0302	0.0952	0.2085
Bomb03	87.091	0.704	60.6732	-10.2277	-134.1927	0.1023	0.205
Bomb03	87.091	0.712	60.3908	-10.2726	-134.6819	0.1412	0.1953
Bomb03	87.091	0.72	59.8499	-10.2811	-134.6761	0.1459	0.2019
Bomb03	87.091	0.728	59.8959	-9.8978	-134.4685	0.1308	0.2267
Bomb03	87.091	0.736	60.0114	-9.7699	-134.6671	0.1427	0.2334
Bomb03	87.091	0.744	60.2059	-9.5183	-134.7448	0.1512	0.2364
Bomb03	87.091	0.752	60.3412	-9.3639	-135.0106	0.1468	0.2446
Bomb03	87.091	0.76	60.4322	-9.2356	-135.207	0.1641	0.2412
Bomb03	87.091	0.768	60.5704	-8.5695	-135.0511	0.2391	0.2193
Bomb03	87.091	0.776	59.976	-8.4053	-135.3228	0.2395	0.249
Bomb03	87.091	0.784	60.4427	-8.1866	-135.6485	0.2382	0.2477
Bomb03	87.091	0.792	60.929	-7.5177	-135.7543	0.269	0.2312
Bomb03	87.091	0.8	61.7468	-6.4818	-136.2292	0.3156	0.219
Bomb03	87.091	0.808	62.3541	-5.8288	-136.3473	0.348	0.2052
Bomb03	87.091	0.816	62.6578	-5.4184	-136.4639	0.3568	0.1998
Bomb03	87.091	0.824	62.8785	-5.0716	-136.4343	0.3567	0.1933
Bomb03	87.091	0.832	62.6785	-5.1981	-136.4045	0.3643	0.1934
Bomb03	87.091	0.84	63.1103	-4.6089	-136.7006	0.3949	0.1771
Bomb03	87.091	0.848	63.3961	-4.3676	-136.6992	0.4288	0.1551
Bomb03	87.091	0.856	63.8989	-4.0752	-137.0849	0.4192	0.153
Bomb03	87.091	0.864	64.8036	-3.2476	-137.5066	0.449	0.1526
Bomb03	87.091	0.872	65.7023	-2.5457	-137.5671	0.4375	0.1869
Bomb03	87.091	0.88	66.0943	-2.6981	-137.8501	0.4601	0.1469
Bomb03	87.091	0.888	66.7567	-2.5741	-138.4853	0.4632	0.1687
Bomb03	87.091	0.896	67.5122	-1.9807	-139.1591	0.4544	0.2083
Bomb03	87.091	0.904	68.3803	-1.8843	-140.2906	0.4529	0.2121
Bomb03	87.091	0.912	68.743	-1.8373	-140.5285	0.4395	0.2343
Bomb03	87.091	0.92	68.6471	-2.1011	-141.4724	0.5025	0.2008
Bomb03	87.091	0.928	69.952	-1.5048	-141.5178	0.4643	0.2078
Bomb03	87.091	0.936	70.2921	-1.2713	-141.9365	0.4693	0.1976
Bomb03	87.091	0.944	71.2529	-0.9649	-142.9512	0.4478	0.204
Bomb03	87.091	0.952	72.1379	-0.74	-143.6211	0.4587	0.2037
Bomb03	87.091	0.96	72.8726	-0.5552	-144.0807	0.4377	0.22
Bomb03	87.091	0.968	74.4037	-0.0673	-144.9826	0.4516	0.2533
Bomb03	87.091	0.976	75.2939	0.2356	-146.5028	0.4576	0.2589
Bomb03	87.091	0.984	75.9537	0.3704	-146.5886	0.484	0.2808
Bomb03	87.091	0.992	76.8139	0.6028	-147.5419	0.4767	0.2964
Bomb03	87.091	1	77.6034	0.5772	-148.1508	0.4794	0.3062
Bomb03	87.091	1.008	78.5589	0.8575	-148.7537	0.4733	0.3011
Bomb03	87.091	1.016	79.5397	1.0033	-149.6012	0.4432	0.2817
Bomb03	87.091	1.024	80.6453	1.936	-151.2401	0.4775	0.2875
Bomb03	87.091	1.032	81.9976	2.447	-151.9506	0.5038	0.2865
Bomb03	87.091	1.04	82.6719	2.5635	-152.8827	0.5237	0.2902

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Bomb03	87.091	1.048	83.6715	3.0755	-153.2812	0.5392	0.2608
Bomb03	87.091	1.056	84.1732	3.2832	-154.0753	0.5199	0.252
Bomb03	87.091	1.064	85.1709	3.5329	-155.0166	0.5266	0.2239
Bomb03	87.091	1.072	86.0918	3.8591	-155.7832	0.5312	0.1999
Bomb03	87.091	1.08	87.0661	4.4488	-156.1759	0.5174	0.1803
Bomb03	87.091	1.088	88.3779	4.8885	-157.3461	0.5336	0.1471
Bomb03	87.091	1.096	89.8459	5.1827	-158.4475	0.5921	0.13
Bomb03	87.091	1.104	90.2517	5.475	-159.4664	0.6056	0.0901
Bomb03	87.091	1.112	91.0166	5.4382	-159.8937	0.6505	0.0898
Bomb03	87.091	1.12	91.6691	5.6277	-160.8095	0.6505	0.0844
Bomb03	87.091	1.128	92.6778	5.8557	-162.2844	0.727	0.0563
Bomb03	87.091	1.136	93.1822	6.5037	-162.9245	0.7319	0.0472
Bomb03	87.091	1.144	94.0514	6.7643	-164.2249	0.7492	-0.0052
Bomb03	87.091	1.152	94.3901	6.6557	-165.1051	0.7553	-0.0381
Bomb03	87.091	1.16	94.5599	6.7977	-166.003	0.78	-0.0498
Bomb03	87.091	1.168	95.1712	7.0994	-167.1207	0.8081	-0.0934
Bomb03	87.091	1.176	97.12	8.11	-169.0386	0.8575	-0.1428
Bomb03	87.091	1.184	98.0072	8.1811	-169.4254	0.8739	-0.1568
Bomb03	87.091	1.192	99.1478	8.5539	-170.7976	0.8833	-0.2017
Bomb03	87.091	1.2	99.7819	8.8916	-171.8919	0.9182	-0.2647
Bomb03	87.091	1.208	100.1659	8.4845	-172.8477	0.9445	-0.3708
Bomb03	87.091	1.216	102.2399	8.7329	-174.5054	1.0304	-0.3866
Bomb03	87.091	1.224	103.1263	8.5116	-175.7459	1.0953	-0.5212
Bomb03	87.091	1.232	103.7891	8.4216	-176.6927	1.1005	-0.7522
Bomb03	87.091	1.24	105.3554	8.9393	-178.5167	1.1118	-0.6814
Bomb03	87.091	1.248	106.1604	8.6049	-179.3152	1.1125	-0.6399
Bomb03	87.091	1.256	106.4498	9.1878	-179.4304	1.1364	-0.7231
Bomb03	87.091	1.264	107.0188	8.7229	-180.6816	1.248	-1.0969
Bomb03	87.091	1.272	108.6699	8.4012	-181.9383	1.2583	-1.4437
Bomb03	87.091	1.28	110.3876	8.4326	-183.0791	1.323	-1.4927
Bomb03	87.091	1.288	110.2756	8.0303	-184.0117	1.3247	-1.4519
Bomb03	87.091	1.296	110.0417	8.3626	-184.9529	1.3046	-1.4559
Bomb03	87.091	1.304	110.2739	8.5331	-185.9568	1.3262	-1.2692
Bomb03	87.091	1.312	111.1879	7.8782	-187.2172	1.3371	-1.4205
Bomb03	87.091	1.32	110.4011	7.5442	-188.9111	1.3537	-1.5001
Bomb03	87.091	1.328	111.7121	7.5408	-190.6659	1.3403	-1.7309
Bomb03	87.091	1.336	112.2122	7.2159	-192.4974	1.3662	-1.6966
Bomb03	87.091	1.344	113.7635	6.5969	-194.1662	1.3187	-2.1765
Bomb03	87.091	1.352	114.9629	6.3791	-195.8158	1.328	-2.262
Bomb03	87.091	1.36	115.3661	6.2623	-197.8262	1.3423	-2.3515
Bomb03	87.091	1.368	117.6337	6.6825	-199.3386	1.3323	-2.5144
Bomb03	87.091	1.376	118.272	6.9996	-201.7264	1.2878	-2.8307
Bomb03	87.091	1.384	117.985	6.578	-203.2136	1.2701	-2.8441
Bomb03	87.091	1.392	118.0439	6.329	-204.6468	1.3002	-2.9374
Bomb03	87.091	1.4	118.1746	6.148	-206.1058	1.2995	-3.0115
Bomb03	87.091	1.408	118.8745	6.0448	-207.7064	1.3179	-3.1159
Bomb03	87.091	1.416	118.7185	5.6164	-209.1243	1.3431	3.1391
Bomb03	87.091	1.424	118.5899	5.7536	-210.4758	1.2883	2.9937
Bomb03	87.091	1.432	118.1077	5.4775	-211.605	1.3275	2.8405
Bomb03	87.091	1.44	118.6628	4.9903	-214.1552	1.2293	2.8558
Bomb03	87.091	1.448	117.9274	5.0016	-215.8857	1.2567	2.7181
Bomb03	87.091	1.456	117.2178	5.0283	-218.3555	1.2505	2.5336
Bomb03	87.091	1.464	117.2711	5.143	-220.1262	1.243	2.5081

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Bomb03	87.091	1.472	117.3839	5.1023	-221.7707	1.2389	2.3301
Bomb03	87.091	1.48	117.314	5.1829	-223.0997	1.2112	2.2403
Bomb03	87.091	1.488	116.8882	5.299	-224.6246	1.2301	2.0277
Bomb03	87.091	1.496	116.5673	5.1802	-226.4688	1.1991	2.003
Bomb03	87.091	1.504	117.0911	5.3955	-228.6673	1.2091	2.0063
Bomb03	87.091	1.512	117.0841	5.7763	-230.0966	1.1931	1.9748
Bomb03	87.091	1.52	116.774	5.8458	-231.5765	1.1261	1.9308
Bomb03	87.091	1.528	117.4736	5.5294	-232.4934	1.0919	1.8334
Bomb03	87.091	1.536	116.1596	5.8747	-234.8944	1.0938	1.6041
Bomb03	87.091	1.544	116.5936	6.1735	-236.0878	1.095	1.5077
Bomb03	87.091	1.552	116.7728	6.4219	-238.2302	1.0302	1.3513
Bomb03	87.091	1.56	116.3205	6.5867	-239.7256	0.988	1.3752
Bomb03	87.091	1.568	116.05	6.6019	-241.537	0.9503	1.2553
Bomb03	87.091	1.576	115.5878	6.9936	-243.0223	0.8717	1.1855
Bomb03	87.091	1.584	115.1439	6.3898	-244.0849	0.8803	1.1995
Bomb03	87.091	1.592	114.3259	6.6261	-245.2354	0.859	1.2022
Bomb03	87.091	1.6	114.0654	7.3092	-247.0785	0.812	1.1339
Bomb03	87.091	1.608	113.3575	7.7403	-248.3919	0.8042	1.1014
Bomb03	87.091	1.616	113.4165	8.2615	-250.2076	0.7366	1.0014
Bomb03	87.091	1.624	113.0955	8.3304	-250.9203	0.7212	0.9866
Bomb03	87.091	1.632	112.948	8.7282	-252.1327	0.6605	0.9327
Bomb03	87.091	1.64	112.3282	8.5755	-253.1549	0.7123	0.9831
Bomb03	87.091	1.648	112.4963	9.1275	-254.6353	0.6643	0.9247
Bomb03	87.091	1.656	112.0982	9.4781	-255.2998	0.6843	0.9458
Bomb03	87.091	1.664	110.8089	9.661	-256.7043	0.7181	0.9113
Bomb03	87.091	1.672	112.2706	10.0695	-257.608	0.7255	0.8754
Bomb03	87.091	1.68	112.0835	10.8188	-259.6178	0.6785	0.7364
Bomb03	87.091	1.688	112.354	11.1408	-260.4403	0.6652	0.6937
Bomb03	87.091	1.696	112.0392	11.6352	-261.8066	0.6499	0.6485
Bomb03	87.091	1.704	113.0442	12.7499	-262.8201	0.6351	0.5735
Bomb03	87.091	1.712	113.9906	13.1567	-263.9238	0.6926	0.5626
Bomb03	87.091	1.72	114.1934	13.8663	-265.7157	0.6778	0.5227
Bomb03	87.091	1.728	115.6103	15.0513	-266.7356	0.7312	0.5192
Bomb03	87.091	1.736	115.7973	15.3587	-267.6827	0.7648	0.5063
Bomb03	87.091	1.744	116.215	16.1934	-269.4375	0.816	0.4989
Bomb03	87.091	1.752	117.1883	16.5611	-270.6806	0.8294	0.4978
Bomb03	87.091	1.76	117.4674	17.1051	-271.5026	0.8773	0.4163
Bomb03	87.091	1.768	118.6912	17.3995	-273.0395	0.9069	0.3472
Bomb03	87.091	1.776	118.9628	18.4843	-273.6317	0.9162	0.3596
Bomb03	87.091	1.784	119.7575	18.5174	-276.3443	1.0061	0.3669
Bomb03	87.091	1.792	121.2563	19.2204	-277.5528	1.036	0.2825
Bomb03	87.091	1.8	121.8585	19.531	-278.7616	1.044	0.2994
Bomb03	87.091	1.808	122.4439	21.1205	-279.9398	1.0605	0.2949
Bomb03	87.091	1.816	123.3319	21.4682	-280.4923	1.1304	0.3261
Bomb03	87.091	1.824	125.3233	22.4447	-282.6174	1.2491	0.254
Bomb03	87.091	1.832	125.3618	22.7362	-284.1722	1.2195	0.13
Bomb03	87.091	1.84	125.7027	23.1113	-286.3664	1.1816	0.0286
Bomb03	87.091	1.848	125.9802	22.6536	-287.9529	1.2569	0.0646
Bomb03	87.091	1.856	126.0017	22.8468	-288.5526	1.2851	0.0479
Bomb03	87.091	1.864	126.3866	23.3045	-290.4572	1.2867	0.0195
Bomb03	87.091	1.872	127.747	24.0439	-292.464	1.3116	-0.0116
Bomb03	87.091	1.88	128.4121	24.7462	-294.9289	1.3679	-0.2623
Bomb03	87.091	1.888	129.4877	25.0394	-297.565	1.4312	-0.3696

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Bomb03	87.091	1.896	129.4669	25.9088	-298.9872	1.4182	-0.3527
Bomb03	87.091	1.904	130.1152	25.9674	-301.0102	1.4345	-0.6208
Bomb03	87.091	1.912	130.5152	26.7074	-302.342	1.4147	-0.1724
Bomb03	87.091	1.92	130.3576	26.5689	-305.3831	1.4645	-1.1662
Bomb03	87.091	1.928	130.6959	27.0235	-307.0774	1.4157	-1.7277
Bomb03	87.091	1.936	131.0303	26.8042	-309.6426	1.3562	-1.8485
Bomb04	69.4836	0	0	0	0	1.5322	1.451
Bomb04	69.4836	0.008	2.8037	-1.9499	-36.4053	1.4724	0.0691
Bomb04	69.4836	0.016	7.6789	1.7774	-74.7685	1.4267	0.3835
Bomb04	69.4836	0.024	12.1537	-1.7781	-113.6186	1.401	0.4152
Bomb04	69.4836	0.032	16.7495	-0.258	-145.2112	1.3615	0.5829
Bomb04	69.4836	0.04	23.8292	3.2715	-184.1214	1.3377	0.2628
Bomb04	69.4836	0.048	30.7558	4.8066	-217.0455	1.3354	0.2915
Bomb04	69.4836	0.056	39.3385	6.1469	-255.8363	1.3288	0.1918
Bomb04	69.4836	0.064	44.0998	10.2611	-282.5035	1.3838	0.2373
Bomb05	73.0189	0	0	0	0	1.5347	1.6957
Bomb05	73.0189	0.008	-3.031	3.492	-38.4692	1.5014	2.7962
Bomb05	73.0189	0.016	-4.9694	2.2546	-78.361	1.4638	2.6904
Bomb05	73.0189	0.024	-9.0045	3.6822	-117.8183	1.389	2.3726
Bomb05	73.0189	0.032	-11.6415	11.2278	-159.1541	1.3534	1.7636
Bomb05	73.0189	0.04	-9.9224	19.4969	-197.7367	1.258	1.4945
Bomb05	73.0189	0.048	-4.9347	29.1411	-238.1403	1.1933	0.5595
Bomb05	73.0189	0.056	6.1366	31.2498	-268.6819	0.8951	0.0911
Bomb05	73.0189	0.064	20.6867	36.6669	-300.8834	0.8422	0.0066
Bomb06	66.9995	0	0	0	0	1.5554	1.6165
Bomb06	66.9995	0.008	0.7611	2.7944	-33.6779	1.5188	1.1319
Bomb06	66.9995	0.016	0.3152	6.4141	-73.5214	1.4884	2.1205
Bomb06	66.9995	0.024	0.8988	3.3609	-112.1718	1.392	1.5878
Bomb06	66.9995	0.032	1.3957	10.7529	-151.7678	1.3698	1.5276
Bomb06	66.9995	0.04	0.1157	19.0579	-196.0111	1.4522	2.1066
Bomb06	66.9995	0.048	-3.7909	20.1155	-241.1181	1.2153	-3.1404
Bomb06	66.9995	0.056	-10.2436	18.3911	-271.6584	1.0304	3.1225
Bomb06	66.9995	0.064	-24.7972	13.8319	-307.2089	0.9692	-3.1335
Bomb07	67.5673	0	0	0	0	1.5476	1.6097
Bomb07	67.5673	0.008	-0.4393	4.2524	-36.4067	1.5128	1.8419
Bomb07	67.5673	0.016	-2.1469	9.4094	-71.7009	1.4418	1.9304
Bomb07	67.5673	0.024	-0.3343	4.0875	-114.5677	1.4201	1.2133
Bomb07	67.5673	0.032	-0.0619	11.5056	-149.2299	1.3555	1.6253
Bomb07	67.5673	0.04	-1.8035	18.9515	-195.7454	1.3983	2.7082
Bomb07	67.5673	0.048	-6.0488	18.2478	-237.9136	1.1972	-3.0644
Bomb07	67.5673	0.056	-12.0716	18.4775	-271.656	1.1475	-2.9102
Bomb07	67.5673	0.064	-28.0932	16.3127	-308.6614	1.0446	3.1165
Bomb08	70.4424	0	0	0	0	1.5557	1.6125
Bomb08	70.4424	0.008	1.3008	4.9001	-37.0332	1.4913	1.2764
Bomb08	70.4424	0.016	0.6561	8.929	-75.6746	1.4879	1.6393
Bomb08	70.4424	0.024	3.065	7.8872	-119.9604	1.3898	1.0901
Bomb08	70.4424	0.032	2.5844	16.1634	-154.8857	1.382	1.6909
Bomb08	70.4424	0.04	-1.1927	22.2801	-197.0977	1.365	2.6651
Bomb08	70.4424	0.048	-5.1897	22.5753	-237.0446	1.283	-2.9876
Bomb08	70.4424	0.056	-12.0782	18.8167	-271.4685	1.1368	-2.9278
Bomb08	70.4424	0.064	-22.8134	16.4698	-303.5772	1.0589	-2.9709
Capsule01	56.1691	0	0	0	0	1.5262	1.5292
Capsule01	56.1691	0.008	1.1685	0.0044	-27.0669	1.5129	0.4337

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule01	56.1691	0.016	1.7937	0.584	-62.8036	1.5205	0.4165
Capsule01	56.1691	0.024	6.0494	1.4018	-92.1412	1.4307	0.1629
Capsule01	56.1691	0.032	10.4163	2.4343	-124.8569	1.2528	-0.0451
Capsule01	56.1691	0.04	13.8597	1.897	-153.0907	1.2025	0.0576
Capsule01	56.1691	0.048	20.1873	2.4112	-177.1657	0.6106	0.1433
Capsule01	56.1691	0.056	29.9144	1.3412	-195.9558	0.4444	0.0659
Capsule01	56.1691	0.064	39.9422	1.5272	-208.4531	0.2444	0.1227
Capsule01	56.1691	0.072	50.9479	2.4837	-218.2921	-0.0859	-0.0362
Capsule01	56.1691	0.08	62.7316	3.9346	-228.7039	-0.4935	-0.1163
Capsule01	56.1691	0.088	68.0824	3.2465	-231.3954	-0.6423	-0.0483
Capsule01	56.1691	0.096	78.343	2.3365	-235.2027	-0.9554	-0.0669
Capsule01	56.1691	0.104	85.4071	2.9079	-238.0454	-1.1535	-0.1044
Capsule01	56.1691	0.112	90.9327	3.3573	-240.1592	-1.2528	-0.0713
Capsule01	56.1691	0.12	94.6251	4.2028	-241.8036	-1.3683	-0.1602
Capsule01	56.1691	0.128	100.037	4.828	-243.1093	-1.4605	-0.4896
Capsule01	56.1691	0.136	105.1252	6.4309	-245.6906	-1.4466	-1.8037
Capsule01	56.1691	0.144	108.4949	6.2866	-246.7067	-1.5024	-1.9541
Capsule01	56.1691	0.152	112.876	6.2039	-248.6129	-1.476	-1.2372
Capsule01	56.1691	0.16	115.8488	6.4982	-250.9689	-1.5064	-1.1511
Capsule01	56.1691	0.168	120.1565	6.8558	-253.3138	-1.5564	2.8599
Capsule01	56.1691	0.176	123.9885	6.8402	-254.3216	-1.4423	0.8252
Capsule01	56.1691	0.184	126.649	7.4758	-257.2337	-1.5166	0.8757
Capsule01	56.1691	0.192	128.1337	7.3506	-260.4884	-1.4359	0.2523
Capsule01	56.1691	0.2	131.3567	8.0944	-262.8642	-1.5116	0.2819
Capsule01	56.1691	0.208	130.9436	7.6099	-264.331	-1.3601	0.4175
Capsule01	56.1691	0.216	133.1594	7.4846	-266.3955	-1.1741	0.324
Capsule01	56.1691	0.224	135.1356	7.642	-268.0716	-1.0844	0.3166
Capsule01	56.1691	0.232	136.1119	7.8134	-269.7965	-0.9694	0.3176
Capsule01	56.1691	0.24	137.23	7.8627	-271.7813	-0.8968	0.3134
Capsule01	56.1691	0.248	138.6318	8.0004	-273.5142	-0.8593	0.3373
Capsule01	56.1691	0.256	139.2997	7.8058	-275.3425	-0.816	0.3384
Capsule01	56.1691	0.264	139.7479	8.3143	-277.118	-0.7566	0.2839
Capsule01	56.1691	0.272	140.6985	8.2572	-278.2724	-0.5841	0.2006
Capsule01	56.1691	0.28	141.7082	8.2884	-279.0666	-0.5281	0.2088
Capsule01	56.1691	0.288	142.3039	8.9054	-280.5284	-0.4625	0.169
Capsule01	56.1691	0.296	143.2199	8.5471	-281.3367	-0.4674	0.183
Capsule01	56.1691	0.304	143.5981	8.6886	-282.6295	-0.4319	0.1735
Capsule01	56.1691	0.312	144.4822	8.9367	-283.9459	-0.3396	0.16
Capsule01	56.1691	0.32	144.8947	8.3719	-284.9816	-0.3419	0.1766
Capsule01	56.1691	0.328	145.354	8.0714	-286.6183	-0.3381	0.1583
Capsule01	56.1691	0.336	145.0845	7.8701	-287.6696	-0.2846	0.1644
Capsule01	56.1691	0.344	145.7478	7.8588	-287.8294	-0.2493	0.1778
Capsule01	56.1691	0.352	146.042	7.7274	-288.4761	-0.1934	0.1735
Capsule01	56.1691	0.36	146.8338	7.7644	-289.2949	-0.1317	0.209
Capsule01	56.1691	0.368	146.7864	8.0052	-290.2156	-0.085	0.1978
Capsule01	56.1691	0.376	146.5133	7.8106	-290.6138	-0.0898	0.1947
Capsule01	56.1691	0.384	146.8615	7.782	-290.9711	-0.0578	0.2129
Capsule01	56.1691	0.392	147.4341	8.0237	-293.3839	-0.0005	0.2096
Capsule01	56.1691	0.4	147.5218	7.8587	-293.5981	0.0044	0.2025
Capsule01	56.1691	0.408	147.8485	8.2738	-294.3489	0.0064	0.2239
Capsule01	56.1691	0.416	147.3304	7.6883	-294.7005	0.0741	0.2
Capsule01	56.1691	0.424	147.8418	7.514	-295.3138	0.0885	0.1847
Capsule01	56.1691	0.432	147.7246	7.3451	-295.6874	0.0912	0.1771

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule01	56.1691	0.44	147.3563	7.1803	-295.9171	0.1417	0.1802
Capsule01	56.1691	0.448	146.9316	6.7534	-296.8271	0.1192	0.1809
Capsule01	56.1691	0.456	148.0811	6.7262	-296.7976	0.1681	0.1772
Capsule01	56.1691	0.464	148.6345	6.7653	-297.8353	0.1864	0.1805
Capsule01	56.1691	0.472	148.344	6.7737	-298.1297	0.1964	0.1813
Capsule01	56.1691	0.48	148.7684	6.9557	-298.5436	0.2041	0.1774
Capsule01	56.1691	0.488	149.2903	6.7648	-299.0104	0.2341	0.1707
Capsule01	56.1691	0.496	149.3207	6.6712	-299.1633	0.2428	0.1647
Capsule01	56.1691	0.504	149.1673	6.6164	-299.8935	0.2765	0.1728
Capsule01	56.1691	0.512	149.7484	6.3366	-300.3065	0.2706	0.1767
Capsule01	56.1691	0.52	150.0483	6.7159	-301.1777	0.3221	0.2059
Capsule01	56.1691	0.528	151.2613	7.4973	-302.8555	0.3011	0.1804
Capsule01	56.1691	0.536	151.9718	7.4492	-303.7805	0.2516	0.1695
Capsule01	56.1691	0.544	152.212	7.5566	-304.5257	0.2495	0.1385
Capsule01	56.1691	0.552	151.9537	7.0977	-305.5397	0.2188	0.1401
Capsule01	56.1691	0.56	151.9231	7.4339	-306.1712	0.2261	0.1387
Capsule01	56.1691	0.568	152.334	7.3482	-307.04	0.2285	0.1441
Capsule01	56.1691	0.576	153.1712	7.6009	-307.5737	0.2348	0.1403
Capsule01	56.1691	0.584	152.5484	7.1911	-308.0667	0.2735	0.1201
Capsule01	56.1691	0.592	152.6785	7.1623	-308.2328	0.2913	0.1209
Capsule01	56.1691	0.6	152.5959	6.9824	-308.5204	0.2786	0.1229
Capsule01	56.1691	0.608	151.9307	6.9795	-309.1518	0.303	0.1102
Capsule02	72.2632	0	0	0	0	1.4535	1.4664
Capsule02	72.2632	0.008	2.6155	2.2932	-41.6554	1.455	1.077
Capsule02	72.2632	0.016	3.4468	1.301	-73.9658	1.5231	3.0644
Capsule02	72.2632	0.024	3.1998	-0.1121	-101.8115	1.517	1.3748
Capsule02	72.2632	0.032	3.4526	-0.5724	-133.5505	1.3589	-1.6354
Capsule02	72.2632	0.04	3.5274	-3.4536	-156.1474	1.2365	-1.8065
Capsule02	72.2632	0.048	1.9086	-5.3385	-175.468	0.951	-1.8393
Capsule02	72.2632	0.056	0.6505	-13.7404	-192.5133	0.5833	-1.9782
Capsule02	72.2632	0.064	-1.4643	-20.9296	-202.3078	0.222	-1.9685
Capsule02	72.2632	0.072	-2.9215	-28.5696	-211.5768	-0.2171	-1.9859
Capsule02	72.2632	0.08	-4.7594	-33.8905	-216.3468	-0.5194	-1.9286
Capsule02	72.2632	0.088	-6.3846	-39.0247	-219.4046	-0.7245	-1.7758
Capsule02	72.2632	0.096	-8.2743	-44.6315	-220.3352	-0.7965	-1.6574
Capsule02	72.2632	0.104	-9.0992	-48.174	-221.4601	-0.9387	-1.6086
Capsule02	72.2632	0.112	-9.722	-51.5896	-222.4036	-1.0218	-1.5451
Capsule02	72.2632	0.12	-9.7245	-54.6731	-222.325	-1.0245	-1.4643
Capsule02	72.2632	0.128	-9.7366	-57.7409	-223.1112	-1.0857	-1.4868
Capsule02	72.2632	0.136	-8.9594	-61.6373	-222.6624	-1.161	-1.517
Capsule02	72.2632	0.144	-8.7126	-62.7385	-223.4593	-1.0433	-1.4351
Capsule02	72.2632	0.152	-8.3218	-65.4746	-223.9322	-1.1012	-1.4293
Capsule02	72.2632	0.16	-8.0103	-67.55	-224.2789	-1.1238	-1.4051
Capsule02	72.2632	0.168	-8.0285	-68.5146	-225.0727	-1.1186	-1.4134
Capsule02	72.2632	0.176	-7.9771	-69.1814	-225.4681	-1.1078	-1.4278
Capsule02	72.2632	0.184	-7.8024	-69.3199	-226.6796	-1.1345	-1.4712
Capsule02	72.2632	0.192	-7.601	-70.8171	-226.7738	-1.0549	-1.4658
Capsule02	72.2632	0.2	-7.4533	-71.3138	-227.7583	-0.9478	-1.4627
Capsule02	72.2632	0.208	-7.167	-72.4728	-228.4156	-0.9188	-1.4531
Capsule02	72.2632	0.216	-7.0897	-73.1045	-228.3261	-0.8691	-1.4784
Capsule02	72.2632	0.224	-7.4576	-72.7413	-229.4571	-0.8676	-1.4873
Capsule02	72.2632	0.232	-7.0967	-74.8549	-229.4856	-0.7588	-1.4524
Capsule02	72.2632	0.24	-6.9353	-74.9651	-229.9853	-0.7693	-1.4682

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule02	72.2632	0.248	-7.0502	-75.095	-230.6139	-0.7591	-1.4825
Capsule02	72.2632	0.256	-6.8933	-74.9032	-230.7343	-0.7785	-1.4879
Capsule02	72.2632	0.264	-7.3725	-73.4997	-232.8271	-0.7999	-1.4864
Capsule02	72.2632	0.272	-7.5521	-72.8805	-233.7916	-0.7626	-1.5016
Capsule02	72.2632	0.28	-7.38	-73.5441	-233.6599	-0.7222	-1.4867
Capsule02	72.2632	0.288	-7.3369	-74.616	-233.1906	-0.7166	-1.4964
Capsule02	72.2632	0.296	-7.3583	-74.3508	-233.5341	-0.7071	-1.4889
Capsule02	72.2632	0.304	-7.6321	-73.3479	-234.8809	-0.7177	-1.5019
Capsule02	72.2632	0.312	-7.8014	-73.2622	-235.6575	-0.734	-1.5165
Capsule02	72.2632	0.32	-7.6985	-72.8063	-235.7246	-0.7125	-1.5225
Capsule02	72.2632	0.328	-7.7554	-73.0257	-235.7531	-0.703	-1.5285
Capsule02	72.2632	0.336	-7.804	-72.796	-236.1222	-0.716	-1.5263
Capsule02	72.2632	0.344	-8.0911	-71.9797	-237.6767	-0.6562	-1.5571
Capsule02	72.2632	0.352	-8.2111	-71.7359	-238.148	-0.679	-1.5592
Capsule02	72.2632	0.36	-8.3017	-71.4015	-238.8536	-0.6419	-1.5711
Capsule02	72.2632	0.368	-8.3598	-71.2224	-239.1935	-0.6584	-1.5698
Capsule02	72.2632	0.376	-8.4435	-71.213	-239.4283	-0.6387	-1.5812
Capsule02	72.2632	0.384	-8.2699	-71.9061	-239.416	-0.6164	-1.5997
Capsule02	72.2632	0.392	-8.3728	-71.4146	-240.398	-0.5586	-1.6388
Capsule02	72.2632	0.4	-8.2133	-71.4031	-240.5154	-0.5694	-1.6611
Capsule02	72.2632	0.408	-8.2935	-71.2859	-241.1191	-0.518	-1.673
Capsule02	72.2632	0.416	-8.3802	-70.8062	-241.821	-0.539	-1.6985
Capsule02	72.2632	0.424	-8.4748	-70.8779	-241.8398	-0.5334	-1.6852
Capsule02	72.2632	0.432	-8.9148	-70.1326	-242.6012	-0.495	-1.7341
Capsule02	72.2632	0.44	-9.0482	-69.9186	-242.9439	-0.4688	-1.7311
Capsule02	72.2632	0.448	-8.9632	-69.7458	-243.2649	-0.48	-1.7675
Capsule02	72.2632	0.456	-9.027	-69.544	-243.7228	-0.4794	-1.7709
Capsule02	72.2632	0.464	-9.0917	-69.4607	-243.8105	-0.4732	-1.7829
Capsule02	72.2632	0.472	-9.1629	-69.741	-243.7143	-0.4672	-1.7844
Capsule02	72.2632	0.48	-9.299	-70.0085	-243.8973	-0.4475	-1.7389
Capsule02	72.2632	0.488	-9.415	-70.0243	-244.097	-0.4611	-1.7439
Capsule02	72.2632	0.496	-9.6842	-69.6142	-244.94	-0.399	-1.761
Capsule02	72.2632	0.504	-9.7703	-69.3534	-245.1652	-0.3982	-1.7769
Capsule02	72.2632	0.512	-9.8927	-69.1015	-245.5748	-0.3571	-1.8026
Capsule02	72.2632	0.52	-10.0056	-68.9833	-245.8202	-0.3318	-1.7942
Capsule02	72.2632	0.528	-10.0849	-68.9469	-246.2147	-0.3795	-1.7828
Capsule02	72.2632	0.536	-10.8015	-68.0316	-247.4653	-0.2443	-1.865
Capsule02	72.2632	0.544	-11.0936	-67.8034	-247.918	-0.2901	-1.8317
Capsule02	72.2632	0.552	-11.3622	-67.7049	-248.1115	-0.314	-1.7419
Capsule02	72.2632	0.56	-11.2262	-67.5787	-248.4511	-0.3421	-1.7698
Capsule02	72.2632	0.568	-11.3478	-67.6959	-248.7474	-0.2933	-1.7848
Capsule02	72.2632	0.576	-11.3731	-67.6501	-248.8083	-0.2862	-1.7902
Capsule02	72.2632	0.584	-11.505	-67.3609	-249.7217	-0.2848	-1.7882
Capsule02	72.2632	0.592	-11.4306	-67.1552	-250.1293	-0.2259	-1.8483
Capsule02	72.2632	0.6	-11.9904	-66.3804	-251.3023	-0.0636	-2.0185
Capsule02	72.2632	0.608	-11.9768	-67.4895	-251.2881	-0.1831	-2.0256
Capsule03	77.8575	0	0	0	0	1.483	1.4118
Capsule03	77.8575	0.008	3.8233	-2.1061	-40.0246	1.5082	-1.1337
Capsule03	77.8575	0.016	5.0676	1.0851	-84.5474	1.4957	1.0063
Capsule03	77.8575	0.024	5.2313	0.6469	-121.3083	1.1844	2.1812
Capsule03	77.8575	0.032	5.8979	3.0124	-149.9941	0.923	1.9598
Capsule03	77.8575	0.04	1.295	10.2431	-175.1245	0.6364	2.2888
Capsule03	77.8575	0.048	-4.5722	20.313	-195.2386	0.3313	2.3499

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Capsule03	77.8575	0.056	-13.2638	25.9805	-210.6247	0.0167	2.4653
Capsule03	77.8575	0.064	-22.7595	34.9452	-219.9786	-0.1719	2.712
Capsule03	77.8575	0.072	-30.0118	38.534	-227.1711	-0.424	2.6189
Capsule03	77.8575	0.08	-40.2461	43.9555	-232.3963	-0.8031	2.4319
Capsule03	77.8575	0.088	-47.4053	45.3309	-235.4591	-1.1009	2.4471
Capsule03	77.8575	0.096	-54.25	49.1972	-236.1896	-1.1956	2.058
Capsule03	77.8575	0.104	-56.1183	51.5872	-236.213	-1.0548	2.0346
Capsule03	77.8575	0.112	-62.9315	53.3096	-238.3951	-1.0872	1.6755
Capsule03	77.8575	0.12	-68.459	54.2753	-239.9919	-0.9349	2.0193
Capsule03	77.8575	0.128	-72.8688	55.6303	-243.1604	-0.682	2.3713
Capsule03	77.8575	0.136	-78.9254	55.3905	-247.3021	-0.5177	2.3002
Capsule03	77.8575	0.144	-84.0722	56.061	-250.6981	-0.5032	2.1391
Capsule03	77.8575	0.152	-87.6731	56.1736	-252.6853	-0.4552	2.1555
Capsule03	77.8575	0.16	-90.6329	55.2968	-256.5515	-0.327	2.25
Capsule03	77.8575	0.168	-91.047	54.4654	-256.7198	-0.28	2.3653
Capsule03	77.8575	0.176	-92.8322	53.4312	-258.037	-0.3796	2.2632
Capsule03	77.8575	0.184	-95.3465	53.7539	-259.858	-0.2629	2.3659
Capsule03	77.8575	0.192	-94.4578	52.7059	-261.0772	-0.3191	2.3038
Capsule03	77.8575	0.2	-96.5102	54.2897	-261.2469	-0.2062	2.3913
Capsule03	77.8575	0.208	-98.1985	52.0985	-264.3904	-0.4547	2.2044
Capsule03	77.8575	0.216	-98.4323	52.0367	-264.5202	-0.4183	2.1743
Capsule03	77.8575	0.224	-100.9062	52.9126	-265.7071	-0.2555	2.2379
Capsule03	77.8575	0.232	-101.9415	53.8242	-266.6025	-0.2988	2.2098
Capsule03	77.8575	0.24	-103.5574	52.9054	-267.4272	-0.2951	2.3046
Capsule03	77.8575	0.248	-104.5296	54.2479	-268.0392	-0.2462	2.2479
Capsule03	77.8575	0.256	-103.1929	52.8498	-268.8307	-0.2236	2.3721
Capsule03	77.8575	0.264	-105.1868	53.7206	-270.4808	-0.1495	2.4215
Capsule03	77.8575	0.272	-106.3217	52.8879	-271.6968	-0.1219	2.4687
Capsule03	77.8575	0.28	-106.9767	53.1668	-272.5398	-0.0994	2.4398
Capsule03	77.8575	0.288	-106.3004	52.798	-272.7472	-0.0313	2.4899
Capsule03	77.8575	0.296	-108.559	53.3903	-274.2494	0.0271	2.4837
Capsule03	77.8575	0.304	-109.2543	53.8551	-274.2555	0.0434	2.4689
Capsule03	77.8575	0.312	-105.7991	52.2222	-275.2267	0.0367	2.5135
Capsule03	77.8575	0.32	-107.442	53.2493	-276.9738	0.1215	2.4881
Capsule03	77.8575	0.328	-108.382	53.4434	-277.6743	0.167	2.5204
Capsule03	77.8575	0.336	-105.5485	51.5524	-279.3656	0.1879	2.5364
Capsule03	77.8575	0.344	-104.7648	50.6558	-280.6754	0.1593	2.5274
Capsule03	77.8575	0.352	-107.9801	51.5481	-281.3239	0.1437	2.5192
Capsule03	77.8575	0.36	-103.7867	49.3026	-282.4109	0.2043	2.5242
Capsule03	77.8575	0.368	-103.8072	48.7108	-283.8161	0.2043	2.5977
Capsule03	77.8575	0.376	-104.9678	50.0451	-284.7012	0.2573	2.612
Capsule03	77.8575	0.384	-105.4842	49.8191	-285.4893	0.2495	2.5819
Capsule03	77.8575	0.392	-104.8437	50.0551	-286.0067	0.2406	2.5885
Capsule03	77.8575	0.4	-104.4935	50.0235	-287.137	0.2657	2.6084
Capsule03	77.8575	0.408	-103.371	49.1034	-287.586	0.2663	2.6314
Capsule03	77.8575	0.416	-107.9123	50.0755	-288.5551	0.2769	2.6678
Capsule03	77.8575	0.424	-107.9135	49.9464	-289.7893	0.3112	2.6919
Capsule03	77.8575	0.432	-109.2328	50.7119	-290.6936	0.361	2.7314
Capsule03	77.8575	0.44	-108.3129	49.6572	-291.1278	0.3799	2.7788
Capsule03	77.8575	0.448	-104.8909	48.5921	-291.3499	0.3449	2.7708
Capsule03	77.8575	0.456	-106.3759	49.314	-291.3289	0.3575	2.762
Capsule03	77.8575	0.464	-105.538	48.9085	-292.12	0.3374	2.7649
Capsule03	77.8575	0.472	-105.6351	48.5229	-292.5218	0.3652	2.7822

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule03	77.8575	0.48	-105.5779	48.7912	-293.0936	0.3966	2.7644
Capsule03	77.8575	0.488	-105.3512	47.9989	-293.7082	0.4024	2.7912
Capsule03	77.8575	0.496	-105.8877	48.2571	-293.9483	0.4098	2.7918
Capsule03	77.8575	0.504	-106.2086	47.4673	-294.7209	0.4293	2.7773
Capsule03	77.8575	0.512	-107.6652	48.9967	-296.6625	0.3782	2.9153
Capsule03	77.8575	0.52	-108.2616	48.6982	-297.2657	0.3697	2.9154
Capsule03	77.8575	0.528	-108.5183	48.6527	-298.1445	0.4075	2.9842
Capsule03	77.8575	0.536	-108.3785	48.4413	-299.3856	0.3845	2.947
Capsule03	77.8575	0.544	-107.8272	48.1371	-299.404	0.4059	2.9655
Capsule03	77.8575	0.552	-107.7486	48.0383	-300.24	0.4754	2.9736
Capsule03	77.8575	0.56	-108.6123	48.3644	-300.2666	0.3343	2.8533
Capsule03	77.8575	0.568	-109.0356	48.7464	-300.667	0.3202	2.8594
Capsule03	77.8575	0.576	-107.7236	47.4003	-300.6614	0.2679	2.91
Capsule03	77.8575	0.584	-107.5504	47.3688	-301.9495	0.3358	2.8745
Capsule03	77.8575	0.592	-106.6579	46.3903	-302.2629	0.2911	2.868
Capsule03	77.8575	0.6	-106.7192	46.3659	-303.6368	0.2882	2.9156
Capsule03	77.8575	0.608	-107.4647	46.4819	-304.5448	0.323	2.9489
Capsule03	77.8575	0.616	-112.018	47.4633	-305.9682	0.1906	2.9695
Capsule03	77.8575	0.624	-110.0927	45.5933	-307.4801	0.1772	3.0452
Capsule03	77.8575	0.632	-112.7337	46.3611	-308.6978	0.1468	3.0074
Capsule03	77.8575	0.64	-113.1442	45.586	-309.5998	0.1363	2.9988
Capsule03	77.8575	0.648	-112.352	44.8202	-310.3066	0.1659	2.9661
Capsule03	77.8575	0.656	-113.1198	44.8882	-310.4219	0.1218	2.9935
Capsule03	77.8575	0.664	-114.3908	44.8783	-311.1078	0.1022	2.9337
Capsule03	77.8575	0.672	-115.0296	45.4054	-311.4677	0.098	2.9253
Capsule03	77.8575	0.68	-115.134	45.2962	-311.8631	0.0871	2.9005
Capsule03	77.8575	0.688	-114.9357	44.7333	-312.7551	0.1533	2.9505
Capsule03	77.8575	0.696	-115.1493	44.7356	-312.8808	0.1337	2.9119
Capsule03	77.8575	0.704	-115.197	44.3545	-313.3981	0.1531	2.9075
Capsule03	77.8575	0.712	-117.7971	44.3851	-314.4407	0.1752	2.9236
Capsule03	77.8575	0.72	-118.9541	44.4649	-315.3728	0.1527	2.9283
Capsule03	77.8575	0.728	-121.0563	44.3835	-316.1814	0.1955	2.9549
Capsule03	77.8575	0.736	-121.7451	43.128	-316.8586	0.1458	2.856
Capsule04	62.3611	0	0	0	0	1.5116	1.6827
Capsule04	62.3611	0.008	2.1543	1.4822	-27.2893	1.5173	0.1552
Capsule04	62.3611	0.016	3.6199	0.5255	-72.4884	1.5264	0.2448
Capsule04	62.3611	0.024	6.1511	1.4527	-108.5544	1.3173	-0.0211
Capsule04	62.3611	0.032	11.3083	1.6898	-140.6836	1.1822	-0.3248
Capsule04	62.3611	0.04	15.9704	1.2219	-171.7478	1.026	-0.1996
Capsule04	62.3611	0.048	26.4404	-1.383	-194.7116	0.7541	-0.1708
Capsule04	62.3611	0.056	36.9202	-2.084	-210.8081	0.4097	-0.173
Capsule04	62.3611	0.064	46.8884	-4.6078	-221.589	-0.0697	-0.1301
Capsule04	62.3611	0.072	55.2276	-4.3877	-230.7543	-0.6417	-0.2071
Capsule04	62.3611	0.08	62.2526	-5.2134	-234.1708	-0.8769	-0.3537
Capsule04	62.3611	0.088	67.5134	-6.4605	-237.5267	-1.1836	-0.5503
Capsule04	62.3611	0.096	73.0902	-6.7147	-239.9429	-1.3219	-0.8296
Capsule04	62.3611	0.104	78.2531	-8.0597	-240.7673	-1.3712	-2.1666
Capsule04	62.3611	0.112	83.0497	-7.8961	-242	-1.2562	-2.4468
Capsule04	62.3611	0.12	87.1239	-7.8409	-243.5702	-1.2486	-2.408
Capsule04	62.3611	0.128	89.9828	-8.0842	-244.1643	-1.2426	-2.6106
Capsule04	62.3611	0.136	93.7109	-7.1213	-245.3955	-1.1259	-2.6236
Capsule04	62.3611	0.144	99.1338	-6.0792	-246.9511	-1.086	-2.5684
Capsule04	62.3611	0.152	102.9441	-5.2285	-248.8226	-1.0012	-2.5062

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule04	62.3611	0.16	105.8427	-4.1619	-249.047	-0.9968	-2.4677
Capsule04	62.3611	0.168	107.5472	-4.2608	-251.1256	-1.0249	-2.4196
Capsule04	62.3611	0.176	110.3846	-3.6042	-252.6741	-0.9977	-2.3447
Capsule04	62.3611	0.184	112.3052	-3.1904	-254.282	-0.9403	-2.3423
Capsule04	62.3611	0.192	115.3525	-2.3605	-255.7245	-0.9267	-2.3545
Capsule04	62.3611	0.2	118.2959	-1.3951	-257.8069	-0.8978	-2.3154
Capsule04	62.3611	0.208	120.8955	-0.2249	-259.4593	-0.9069	-2.1738
Capsule04	62.3611	0.216	122.9985	0.7133	-260.9195	-0.8707	-2.1038
Capsule04	62.3611	0.224	125.0925	1.3104	-261.6627	-0.8569	-2.074
Capsule04	62.3611	0.232	127.0996	1.2266	-262.6767	-0.8029	-1.9944
Capsule04	62.3611	0.24	128.9849	1.7491	-263.995	-0.7652	-1.981
Capsule04	62.3611	0.248	130.6872	2.2106	-265.162	-0.7251	-2.0229
Capsule04	62.3611	0.256	131.3206	2.4427	-266.927	-0.7223	-1.9268
Capsule04	62.3611	0.264	132.5801	2.8061	-267.6208	-0.6613	-2.0314
Capsule04	62.3611	0.272	133.818	3.0437	-268.5966	-0.638	-1.975
Capsule04	62.3611	0.28	133.8759	2.6726	-269.1345	-0.5535	-1.8882
Capsule04	62.3611	0.288	136.0262	3.2714	-270.0591	-0.5076	-1.8725
Capsule04	62.3611	0.296	137.2414	3.4134	-270.6107	-0.3894	-1.9717
Capsule04	62.3611	0.304	137.6795	2.9966	-271.0666	-0.4257	-1.9609
Capsule04	62.3611	0.312	138.5783	3.0162	-271.5633	-0.3512	-1.931
Capsule04	62.3611	0.32	139.8039	3.1608	-272.4317	-0.322	-1.8309
Capsule04	62.3611	0.328	141.0359	3.7164	-273.3616	-0.1648	-1.6809
Capsule04	62.3611	0.336	141.4897	3.5473	-273.7283	-0.132	-1.5954
Capsule04	62.3611	0.344	142.5739	3.8145	-274.4185	-0.0796	-1.5562
Capsule04	62.3611	0.352	143.8513	4.3597	-275.0257	0.0763	-1.3559
Capsule04	62.3611	0.36	144.3187	4.5075	-275.5119	0.2019	-1.1066
Capsule04	62.3611	0.368	143.9575	4.0886	-276.5758	0.2777	-1.1259
Capsule04	62.3611	0.376	145.0259	4.4786	-277.727	0.3034	-1.092
Capsule04	62.3611	0.384	146.147	4.6899	-278.9331	0.2233	-1.1305
Capsule04	62.3611	0.392	147.3283	4.9375	-279.5363	0.2757	-1.2985
Capsule04	62.3611	0.4	147.1373	4.4911	-279.6396	0.4126	-1.1341
Capsule04	62.3611	0.408	147.6138	4.6719	-280.7337	0.5378	-1.1092
Capsule04	62.3611	0.416	148.3092	5.0228	-281.4369	0.6316	-1.1279
Capsule04	62.3611	0.424	148.7862	5.3168	-283.0155	0.7003	-0.9783
Capsule04	62.3611	0.432	149.8921	5.4937	-283.6855	0.7257	-0.9009
Capsule04	62.3611	0.44	149.5218	5.3621	-284.1717	0.7085	-0.9828
Capsule04	62.3611	0.448	149.0454	5.0242	-284.6799	0.7031	-0.9212
Capsule04	62.3611	0.456	148.7592	5.529	-285.0831	0.7516	-0.8841
Capsule04	62.3611	0.464	148.4968	5.3934	-285.6095	0.7425	-0.9384
Capsule04	62.3611	0.472	149.003	5.3058	-286.4501	0.7598	-0.9366
Capsule04	62.3611	0.48	149.2099	5.0273	-286.6912	0.8171	-0.8608
Capsule04	62.3611	0.488	149.3172	5.0662	-287.8377	0.8916	-0.8591
Capsule04	62.3611	0.496	149.4718	4.7913	-288.5848	0.9201	-1.0013
Capsule04	62.3611	0.504	149.4291	4.6903	-289.4909	0.8742	-1.1961
Capsule04	62.3611	0.512	150.603	4.7118	-290.6411	0.8688	-1.2116
Capsule04	62.3611	0.52	151.2436	4.641	-291.2203	0.8606	-1.1218
Capsule04	62.3611	0.528	151.3526	4.5751	-292.5263	0.8764	-1.1337
Capsule04	62.3611	0.536	151.5432	4.4914	-293.0931	0.9204	-1.2097
Capsule04	62.3611	0.544	151.961	4.5551	-293.5447	0.9264	-1.209
Capsule04	62.3611	0.552	151.1571	3.8218	-294.149	0.9996	-1.0941
Capsule04	62.3611	0.56	151.6737	3.9355	-295.5098	0.9956	-1.0755
Capsule04	62.3611	0.568	151.9356	3.5305	-296.1176	1.0182	-1.0179
Capsule06	64.5469	0	0	0	0	1.491	2.0269

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule06	64.5469	0.008	1.5303	0.3292	-29.7226	1.5108	2.0459
Capsule06	64.5469	0.016	4.5848	-2.0193	-73.5525	1.5495	1.7001
Capsule06	64.5469	0.024	5.0374	-3.3494	-108.3688	1.5484	0.0962
Capsule06	64.5469	0.032	7.2337	0.119	-143.3645	1.3416	-3.0078
Capsule06	64.5469	0.04	6.0212	-1.0814	-172.87	0.9312	-3.0932
Capsule06	64.5469	0.048	-2.4098	-1.0548	-197.6876	0.7807	-3.0606
Capsule06	64.5469	0.056	-10.5397	-2.4067	-215.6182	0.4229	-2.7287
Capsule06	64.5469	0.064	-19.0692	-3.2533	-225.5137	-0.0965	-2.7171
Capsule06	64.5469	0.072	-27.3113	-5.8007	-234.5332	-0.5137	-2.6706
Capsule06	64.5469	0.08	-35.2789	-7.4132	-238.9599	-0.4913	-3.1037
Capsule06	64.5469	0.088	-39.442	-9.565	-241.6709	-0.9219	-2.8232
Capsule06	64.5469	0.096	-45.0812	-11.1242	-242.9936	-1.0994	-2.6986
Capsule06	64.5469	0.104	-47.7935	-12.6672	-243.8642	-1.1829	-2.9022
Capsule06	64.5469	0.112	-50.1477	-14.3894	-243.9386	-1.2225	-3.0108
Capsule06	64.5469	0.12	-54.7166	-15.0891	-243.954	-1.3277	-2.7567
Capsule06	64.5469	0.128	-58.1381	-15.6389	-243.713	-1.3749	-2.3135
Capsule06	64.5469	0.136	-59.3565	-15.9657	-244.8795	-1.4169	-2.2593
Capsule06	64.5469	0.144	-60.241	-17.7173	-243.6392	-1.3783	2.5003
Capsule06	64.5469	0.152	-63.2721	-18.2063	-244.3461	-1.2697	2.3811
Capsule06	64.5469	0.16	-63.4434	-19.6566	-244.8968	-1.1334	2.4646
Capsule06	64.5469	0.168	-65.3026	-19.7725	-246.1508	-1.0588	2.6814
Capsule06	64.5469	0.176	-64.1908	-21.9091	-246.8216	-0.968	2.6855
Capsule06	64.5469	0.184	-63.7041	-22.9199	-248.2879	-0.9754	2.6687
Capsule06	64.5469	0.192	-64.8112	-24.3416	-249.4178	-0.9578	2.7726
Capsule06	64.5469	0.2	-64.1893	-25.4103	-249.7646	-0.8678	2.7221
Capsule06	64.5469	0.208	-65.2505	-25.649	-250.7739	-0.8816	2.8423
Capsule06	64.5469	0.216	-65.425	-26.4555	-251.5442	-0.6095	2.7541
Capsule06	64.5469	0.224	-66.1661	-26.1112	-252.7294	-0.6909	2.8841
Capsule06	64.5469	0.232	-66.4198	-26.8055	-253.448	-0.4385	2.8005
Capsule06	64.5469	0.24	-67.9737	-25.6576	-254.9208	-0.4188	2.8485
Capsule06	64.5469	0.248	-66.6029	-26.9653	-254.5375	-0.5749	2.829
Capsule06	64.5469	0.256	-64.9202	-28.6431	-254.974	-0.692	2.8011
Capsule06	64.5469	0.264	-64.732	-28.7089	-255.0118	-0.5535	2.8097
Capsule06	64.5469	0.272	-66.9221	-29.0924	-255.4272	-0.5651	2.8139
Capsule06	64.5469	0.28	-67.8931	-28.4959	-255.9754	-0.688	2.8653
Capsule06	64.5469	0.288	-68.8514	-27.9471	-256.9556	-0.6122	2.9029
Capsule06	64.5469	0.296	-68.542	-28.053	-257.0298	-0.6562	2.929
Capsule06	64.5469	0.304	-68.1184	-28.3691	-257.3784	-0.5654	2.8818
Capsule06	64.5469	0.312	-68.4543	-28.4274	-257.1666	-0.4848	2.8769
Capsule06	64.5469	0.32	-69.1964	-28.1922	-257.8337	-0.4622	2.8743
Capsule06	64.5469	0.328	-69.3706	-28.3607	-258.5225	-0.6837	2.98
Capsule06	64.5469	0.336	-68.8747	-29.0487	-258.5775	-0.6007	2.9531
Capsule06	64.5469	0.344	-69.8895	-28.2877	-259.2978	-0.5739	2.9543
Capsule06	64.5469	0.352	-69.4048	-28.7737	-258.1949	-0.5329	2.9163
Capsule06	64.5469	0.36	-70.2445	-28.4111	-259.0513	-0.5001	2.9524
Capsule06	64.5469	0.368	-70.3777	-28.4856	-259.5678	-0.4834	2.9305
Capsule06	64.5469	0.376	-71.2259	-27.8096	-260.8198	-0.4381	2.9168
Capsule06	64.5469	0.384	-71.6055	-28.0731	-260.9049	-0.29	2.9148
Capsule06	64.5469	0.392	-72.4161	-27.4247	-261.769	-0.1598	2.861
Capsule06	64.5469	0.4	-72.9246	-26.9767	-262.802	-0.0285	2.8825
Capsule06	64.5469	0.408	-73.3512	-26.7466	-263.7949	0.0718	2.8194
Capsule06	64.5469	0.416	-73.5177	-26.5365	-264.2654	0.0943	2.8312
Capsule06	64.5469	0.424	-73.6111	-26.5703	-264.8162	0.1356	2.7843

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule06	64.5469	0.432	-74.2855	-26.8968	-265.2841	0.2825	2.7951
Capsule06	64.5469	0.44	-75.6907	-26.4157	-266.2476	0.231	2.8341
Capsule06	64.5469	0.448	-77.7832	-26.0595	-266.5629	0.2697	2.8382
Capsule06	64.5469	0.456	-78.0728	-26.2366	-267.5614	0.348	2.7705
Capsule06	64.5469	0.464	-77.8508	-26.7828	-267.3941	0.3267	2.7719
Capsule06	64.5469	0.472	-76.3404	-26.9466	-267.7389	0.4067	2.7555
Capsule06	64.5469	0.48	-75.9949	-27.202	-267.5626	0.408	2.6791
Capsule06	64.5469	0.488	-77.6131	-26.7098	-268.935	0.3789	2.7431
Capsule06	64.5469	0.496	-77.4333	-26.4632	-269.7456	0.3904	2.7853
Capsule06	64.5469	0.504	-79.2583	-25.0038	-271.5789	0.3425	2.853
Capsule06	64.5469	0.512	-77.7664	-25.9871	-271.1323	0.4249	2.9228
Capsule06	64.5469	0.52	-77.9191	-25.6832	-271.4818	0.3973	2.919
Capsule06	64.5469	0.528	-80.1706	-23.868	-273.7086	0.3473	2.9588
Capsule06	64.5469	0.536	-80.3516	-24.1047	-273.7257	0.3856	2.9659
Capsule06	64.5469	0.544	-79.6574	-24.7484	-273.6493	0.4166	2.9443
Capsule06	64.5469	0.552	-80.3738	-24.4299	-274.3435	0.4151	2.904
Capsule06	64.5469	0.56	-81.372	-24.0075	-275.3404	0.3952	2.9023
Capsule06	64.5469	0.568	-82.621	-23.1383	-276.3963	0.4223	2.8886
Capsule06	64.5469	0.576	-83.4593	-22.6973	-276.9111	0.4334	2.9375
Capsule06	64.5469	0.584	-84.3687	-21.7415	-278.1906	0.444	2.9796
Capsule06	64.5469	0.592	-85.0757	-21.9078	-278.8571	0.4617	2.9265
Capsule06	64.5469	0.6	-85.1293	-21.2689	-278.4568	0.448	2.901
Capsule06	64.5469	0.608	-84.4663	-22.0717	-278.2937	0.4701	2.904
Capsule06	64.5469	0.616	-84.2027	-22.2273	-278.2814	0.5155	2.9047
Capsule06	64.5469	0.624	-85.2144	-22.1457	-279.1282	0.4372	2.8923
Capsule06	64.5469	0.632	-85.4066	-22.4011	-279.6415	0.46	2.8834
Capsule06	64.5469	0.64	-85.0913	-22.7233	-278.9149	0.4695	2.8351
Capsule06	64.5469	0.648	-85.5972	-22.5676	-280.6075	0.5148	2.8665
Capsule06	64.5469	0.656	-85.964	-22.2832	-281.1488	0.4816	2.8916
Capsule06	64.5469	0.664	-86.0723	-22.2271	-281.375	0.4996	2.8877
Capsule06	64.5469	0.672	-87.145	-21.654	-281.6253	0.4779	2.9067
Capsule06	64.5469	0.68	-86.0036	-21.659	-282.3041	0.5741	2.8517
Capsule06	64.5469	0.688	-86.3839	-21.8083	-282.6101	0.5162	2.9226
Capsule06	64.5469	0.696	-88.5841	-20.5221	-284.8528	0.5108	2.9556
Capsule06	64.5469	0.704	-88.582	-20.6483	-285.3555	0.4884	2.9458
Capsule06	64.5469	0.712	-89.3358	-19.9729	-286.0929	0.4461	2.9193
Capsule08	83.1899	0.008	1.4099	0.7781	-47.3625	1.4482	0.1276
Capsule08	83.1899	0.016	4.7111	0.0186	-85.7413	1.4769	-0.6975
Capsule08	83.1899	0.024	8.5884	-1.5308	-122.2853	1.4292	-0.1591
Capsule08	83.1899	0.032	14.0503	2.2676	-157.7653	1.1086	0.026
Capsule08	83.1899	0.04	21.3206	3.3652	-182.8083	0.8063	0.2463
Capsule08	83.1899	0.048	32.4208	4.7843	-204.1962	0.5207	0.3226
Capsule08	83.1899	0.056	45.4341	6.5934	-217.8998	0.26	0.3047
Capsule08	83.1899	0.064	58.7013	9.2466	-229.4931	-0.2025	0.1338
Capsule08	83.1899	0.072	72.1537	11.9285	-237.533	-0.48	0.0483
Capsule08	83.1899	0.08	81.3915	12.1288	-241.6713	-0.7607	0.0687
Capsule08	83.1899	0.088	89.0836	13.0524	-245.7605	-1.0462	0.1374
Capsule08	83.1899	0.096	97.9585	14.1716	-247.4892	-1.1576	0.2006
Capsule08	83.1899	0.104	104.7262	13.9491	-249.5591	-1.2516	0.4016
Capsule08	83.1899	0.112	113.1573	14.4858	-250.8312	-1.4749	1.1712
Capsule08	83.1899	0.12	116.3425	13.497	-251.7817	-1.3922	1.0518
Capsule08	83.1899	0.128	119.745	12.6984	-253.0595	-1.4587	1.0823
Capsule08	83.1899	0.136	123.7396	12.1756	-255.2338	-1.3702	0.9007

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule08	83.1899	0.144	127.7929	11.4977	-257.3504	-1.3955	1.2737
Capsule08	83.1899	0.152	129.9221	11.3803	-259.0324	-1.3018	0.8197
Capsule08	83.1899	0.16	132.0178	10.514	-260.0244	-1.2932	1.1413
Capsule08	83.1899	0.168	133.9862	10.3029	-261.6538	-1.2003	0.8287
Capsule08	83.1899	0.176	135.5337	9.9672	-263.3052	-1.0382	0.687
Capsule08	83.1899	0.184	137.7317	9.8734	-265.422	-1.0049	0.71
Capsule08	83.1899	0.192	140.1426	9.7803	-266.8988	-0.982	0.6997
Capsule08	83.1899	0.2	140.845	8.8109	-268.2977	-0.7685	0.4848
Capsule08	83.1899	0.208	142.103	8.8083	-270.2387	-0.8043	0.5647
Capsule08	83.1899	0.216	144.4445	8.7538	-272.0278	-0.6884	0.4419
Capsule08	83.1899	0.224	145.2762	8.1732	-274.3357	-0.4969	0.4079
Capsule08	83.1899	0.232	145.8989	8.116	-275.9334	-0.4997	0.3805
Capsule08	83.1899	0.24	146.3007	8.1158	-277.4125	-0.4463	0.391
Capsule08	83.1899	0.248	146.9926	7.8881	-279.1314	-0.3991	0.3556
Capsule08	83.1899	0.256	147.4927	7.7821	-279.5843	-0.3427	0.3525
Capsule08	83.1899	0.264	147.9628	8.0222	-281.3016	-0.2746	0.3562
Capsule08	83.1899	0.272	149.191	8.3234	-282.2661	-0.1756	0.3626
Capsule08	83.1899	0.28	149.289	7.948	-283.0175	-0.174	0.3681
Capsule08	83.1899	0.288	149.8059	7.8249	-284.0869	-0.1319	0.3469
Capsule08	83.1899	0.296	150.788	8.27	-284.7396	-0.0973	0.3576
Capsule08	83.1899	0.304	151.4703	8.4797	-285.5136	-0.0494	0.3552
Capsule08	83.1899	0.312	152.5254	8.4388	-288.0407	-0.0108	0.3302
Capsule08	83.1899	0.32	153.7777	8.622	-289.4813	0.0481	0.3269
Capsule08	83.1899	0.328	155.1957	8.4397	-290.2024	0.081	0.298
Capsule08	83.1899	0.336	156.3297	8.4897	-291.4537	0.0684	0.285
Capsule08	83.1899	0.344	157.0211	8.7336	-292.3945	0.0746	0.2799
Capsule08	83.1899	0.352	157.5786	8.452	-293.0565	0.0906	0.2658
Capsule08	83.1899	0.36	158.0623	8.7563	-293.9266	0.1055	0.2516
Capsule08	83.1899	0.368	157.9159	8.264	-294.6759	0.132	0.2345
Capsule08	83.1899	0.376	158.5362	8.6583	-295.5119	0.1682	0.2366
Capsule08	83.1899	0.384	159.218	8.8888	-295.9348	0.182	0.2294
Capsule08	83.1899	0.392	159.8422	9.0678	-297.0556	0.214	0.2268
Capsule08	83.1899	0.4	160.6237	9.1416	-297.9573	0.2322	0.2174
Capsule08	83.1899	0.408	160.8393	8.8521	-298.7816	0.2508	0.2191
Capsule08	83.1899	0.416	161.4244	8.6131	-298.8339	0.2785	0.235
Capsule08	83.1899	0.424	161.6017	8.7383	-299.2297	0.262	0.2308
Capsule08	83.1899	0.432	163.4074	9.2447	-300.5317	0.2882	0.2122
Capsule08	83.1899	0.44	164.3689	9.178	-302.5478	0.2799	0.1863
Capsule10	69.1012	0	0	0	0	1.5407	0.4483
Capsule10	69.1012	0.008	1.6836	2.2002	-34.2739	1.5217	0.2214
Capsule10	69.1012	0.016	3.2502	0.8174	-76.2881	1.509	-0.6937
Capsule10	69.1012	0.024	4.7854	0.8291	-110.0379	1.3826	-1.6036
Capsule10	69.1012	0.032	5.6938	-2.9385	-141.4252	1.2087	-2.017
Capsule10	69.1012	0.04	4.7821	-9.7336	-169.6107	0.9794	-2.1838
Capsule10	69.1012	0.048	1.0033	-16.8372	-193.4583	0.5757	-2.1375
Capsule10	69.1012	0.056	-2.6637	-22.863	-208.5828	-0.0181	-2.0704
Capsule10	69.1012	0.064	-5.3471	-30.4695	-216.4868	-0.2531	-2.1587
Capsule10	69.1012	0.072	-8.3956	-39.7942	-219.8477	-0.5624	-1.9101
Capsule10	69.1012	0.08	-10.6576	-45.4859	-222.86	-0.7906	-1.8455
Capsule10	69.1012	0.088	-11.2224	-50.9229	-223.9255	-0.8833	-1.7158
Capsule10	69.1012	0.096	-11.4357	-56.6174	-223.7874	-1.0345	-1.6879
Capsule10	69.1012	0.104	-11.3048	-61.5867	-223.7157	-1.0218	-1.496
Capsule10	69.1012	0.112	-11.7364	-64.1334	-224.3511	-1.1402	-1.4181

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule10	69.1012	0.12	-10.9691	-68.2498	-224.529	-1.2602	-1.3317
Capsule10	69.1012	0.128	-10.5246	-69.9772	-224.8029	-1.228	-1.2718
Capsule10	69.1012	0.136	-10.1801	-72.0068	-224.6036	-1.1861	-1.2601
Capsule10	69.1012	0.144	-9.9318	-73.9426	-225.6548	-1.104	-1.1673
Capsule10	69.1012	0.152	-9.5748	-75.8381	-225.8946	-1.1633	-1.1552
Capsule10	69.1012	0.16	-9.6503	-76.7212	-226.9554	-1.1413	-1.1397
Capsule10	69.1012	0.168	-8.9619	-78.8305	-226.9178	-1.1371	-1.1241
Capsule10	69.1012	0.176	-8.8523	-79.5016	-228.021	-0.9924	-1.1165
Capsule10	69.1012	0.184	-8.4226	-80.8512	-227.7878	-0.9497	-1.118
Capsule10	69.1012	0.192	-7.6084	-82.4783	-227.4924	-0.963	-1.1404
Capsule10	69.1012	0.2	-7.9924	-82.2739	-228.8928	-0.9282	-1.1351
Capsule10	69.1012	0.208	-7.6946	-82.8985	-229.807	-0.8887	-1.1687
Capsule10	69.1012	0.216	-7.9256	-82.7989	-230.2771	-0.8967	-1.1706
Capsule10	69.1012	0.224	-8.0826	-82.5789	-231.2666	-0.817	-1.1743
Capsule10	69.1012	0.232	-8.1575	-82.3636	-232.6314	-0.8098	-1.1844
Capsule10	69.1012	0.24	-8.7242	-81.5524	-233.7182	-0.8206	-1.2046
Capsule10	69.1012	0.248	-8.6798	-81.8436	-233.8213	-0.8498	-1.2264
Capsule10	69.1012	0.256	-8.404	-82.5874	-233.9533	-0.7836	-1.2183
Capsule10	69.1012	0.264	-8.6464	-82.3078	-234.5572	-0.7671	-1.2295
Capsule10	69.1012	0.272	-8.8124	-82.1629	-234.8125	-0.7621	-1.2442
Capsule10	69.1012	0.28	-8.8282	-82.161	-235.7335	-0.736	-1.2529
Capsule10	69.1012	0.288	-9.2736	-81.5295	-237.3723	-0.7057	-1.2704
Capsule10	69.1012	0.296	-9.5839	-81.36	-237.927	-0.7434	-1.2909
Capsule10	69.1012	0.304	-9.736	-81.2694	-238.5297	-0.7252	-1.3034
Capsule10	69.1012	0.312	-10.0476	-80.8228	-239.4934	-0.704	-1.3254
Capsule10	69.1012	0.32	-10.2353	-80.5588	-239.8225	-0.6971	-1.3442
Capsule10	69.1012	0.328	-10.5692	-80.1166	-240.9912	-0.6792	-1.3652
Capsule10	69.1012	0.336	-10.8628	-79.7082	-241.4319	-0.6715	-1.4007
Capsule10	69.1012	0.344	-10.9266	-79.6926	-241.4409	-0.6702	-1.3903
Capsule10	69.1012	0.352	-11.1435	-79.2713	-242.013	-0.6676	-1.4128
Capsule10	69.1012	0.36	-11.2383	-79.1028	-242.2977	-0.6514	-1.4251
Capsule10	69.1012	0.368	-11.3574	-78.9573	-242.9594	-0.5856	-1.4669
Capsule10	69.1012	0.376	-11.558	-78.6636	-243.3698	-0.5654	-1.4928
Capsule10	69.1012	0.384	-11.7675	-78.6092	-244.0686	-0.6048	-1.5359
Capsule10	69.1012	0.392	-12.1411	-78.0113	-245.2187	-0.558	-1.5764
Capsule10	69.1012	0.4	-12.3217	-77.9777	-245.6894	-0.6188	-1.5164
Capsule11	65.164	0	0	0	0	1.5039	1.2782
Capsule11	65.164	0.008	2.6984	-1.8175	-30.2777	1.5527	-0.4077
Capsule11	65.164	0.016	4.1463	-1.7702	-73.9848	1.4738	1.4478
Capsule11	65.164	0.024	5.4016	-1.6727	-107.8658	1.4693	1.081
Capsule11	65.164	0.032	4.589	0.324	-143.5786	1.5025	2.9321
Capsule11	65.164	0.04	1.3147	-2.1058	-176.6439	1.064	-3.0103
Capsule11	65.164	0.048	-5.601	-3.8399	-199.6734	0.7863	-2.9411
Capsule11	65.164	0.056	-14.4286	-3.4871	-214.3512	0.4094	-2.9477
Capsule11	65.164	0.064	-25.2046	-4.6544	-228.6383	0.0016	-2.9763
Capsule11	65.164	0.072	-33.223	-5.8234	-235.3908	-0.5634	-2.915
Capsule11	65.164	0.08	-39.4489	-7.7157	-239.5592	-0.8471	-2.9742
Capsule11	65.164	0.088	-45.5307	-9.5804	-240.9024	-0.8683	-3.0674
Capsule11	65.164	0.096	-49.5195	-12.7018	-240.6422	-0.8678	2.8466
Capsule11	65.164	0.104	-52.6451	-13.9766	-242.7003	-1.2372	2.7358
Capsule11	65.164	0.112	-55.8168	-15.8285	-243.5961	-1.1225	2.5684
Capsule11	65.164	0.12	-59.822	-16.8476	-244.802	-1.0003	2.5542
Capsule11	65.164	0.128	-59.7514	-18.8354	-245.858	-1.239	2.3703

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule11	65.164	0.136	-61.3	-19.7443	-246.7928	-1.2061	2.3837
Capsule11	65.164	0.144	-62.6263	-21.0341	-246.0257	-0.9944	2.2555
Capsule11	65.164	0.152	-62.2374	-22.0517	-246.7658	-1.3327	2.0818
Capsule11	65.164	0.16	-63.4905	-22.6979	-247.3167	-1.2687	2.3402
Capsule11	65.164	0.168	-66.581	-22.6792	-248.9131	-1.04	2.5365
Capsule11	65.164	0.176	-64.6146	-25.2518	-249.2794	-0.9752	2.5215
Capsule11	65.164	0.184	-66.2101	-26.6098	-250.0707	-0.8339	2.6758
Capsule11	65.164	0.192	-66.2875	-26.7382	-250.5871	-0.8781	2.7607
Capsule11	65.164	0.2	-66.4912	-27.8535	-251.4358	-0.8045	2.664
Capsule11	65.164	0.208	-66.2986	-28.2654	-252.2199	-0.9119	2.7048
Capsule11	65.164	0.216	-67.0754	-28.2049	-253.7598	-0.907	2.7558
Capsule11	65.164	0.224	-67.4147	-28.5606	-254.6406	-0.792	2.8633
Capsule11	65.164	0.232	-67.5428	-29.0396	-255.3912	-0.5824	2.7849
Capsule11	65.164	0.24	-67.1268	-29.7275	-255.8967	-0.6416	2.7796
Capsule11	65.164	0.248	-67.9848	-29.5219	-257.3304	-0.6447	2.8738
Capsule11	65.164	0.256	-67.7305	-30.2823	-257.2825	-0.5472	2.8204
Capsule11	65.164	0.264	-67.6776	-30.476	-257.889	-0.5635	2.8618
Capsule11	65.164	0.272	-67.4463	-30.6827	-258.1197	-0.6273	2.9044
Capsule11	65.164	0.28	-67.9346	-30.775	-259.0604	-0.5087	2.9313
Capsule11	65.164	0.288	-67.0665	-31.5967	-259.156	-0.4594	2.9216
Capsule11	65.164	0.296	-67.692	-31.5756	-259.6966	-0.4652	2.9215
Capsule11	65.164	0.304	-68.0044	-31.4481	-260.7613	-0.6119	3.0189
Capsule11	65.164	0.312	-69.0545	-30.7059	-261.4358	-0.6844	3.1306
Capsule11	65.164	0.32	-68.5933	-31.1198	-261.4731	-0.6467	-3.1302
Capsule11	65.164	0.328	-68.0132	-31.626	-261.5776	-0.6057	-3.0915
Capsule11	65.164	0.336	-68.2384	-31.7424	-262.6228	-0.7546	-2.8303
Capsule11	65.164	0.344	-67.9964	-31.9304	-262.7531	-0.7574	-2.7776
Capsule11	65.164	0.352	-68.1223	-32.0481	-263.7898	-0.8568	-2.6352
Capsule11	65.164	0.36	-69.1292	-31.2532	-264.8004	-0.8594	-2.4956
Capsule11	65.164	0.368	-69.3261	-31.1104	-265.0625	-0.8228	-2.5501
Capsule11	65.164	0.376	-70.6944	-30.9168	-265.9014	-0.8262	-2.5049
Capsule11	65.164	0.384	-71.8998	-31.5764	-266.5417	-0.8859	-2.0391
Capsule11	65.164	0.392	-71.7079	-31.8901	-266.8442	-0.9023	-1.9625
Capsule11	65.164	0.4	-71.4652	-32.3876	-267.044	-0.8878	-1.9793
Capsule05	87.418	0	0	0	0	1.5593	-3.1394
Capsule05	87.418	0.008	3.3397	3.9988	-49.9962	1.4753	-0.9999
Capsule05	87.418	0.016	4.7041	0.6848	-89.8727	1.4433	-0.8082
Capsule05	87.418	0.024	9.647	0.1073	-126.2204	1.2633	-0.5169
Capsule05	87.418	0.032	12.6984	-1.7553	-154.2906	1.1734	-0.3802
Capsule05	87.418	0.04	16.8585	-5.5859	-184.7055	0.9847	-0.4395
Capsule05	87.418	0.048	23.3226	-9.5894	-205.97	0.7419	-0.724
Capsule05	87.418	0.056	30.5091	-12.5984	-222.9002	0.3422	-0.919
Capsule05	87.418	0.064	36.6902	-17.8981	-234.4777	-0.1584	-1.0327
Capsule05	87.418	0.072	39.8751	-22.7198	-241.1476	-0.6072	-1.1453
Capsule05	87.418	0.08	44.4607	-26.2566	-245.091	-0.876	-1.2584
Capsule05	87.418	0.088	47.562	-28.4495	-248.2766	-1.0394	-1.297
Capsule05	87.418	0.096	50.5647	-31.5463	-249.2254	-1.1391	-1.6511
Capsule05	87.418	0.104	52.4228	-33.6156	-251.1635	-1.1426	-1.8106
Capsule05	87.418	0.112	55.3755	-34.5782	-253.3157	-1.2661	-2.1304
Capsule05	87.418	0.12	57.4538	-35.2932	-254.0518	-1.3427	-2.3994
Capsule05	87.418	0.128	58.6317	-35.9502	-255.2111	-1.3692	-2.3286
Capsule05	87.418	0.136	61.555	-35.9231	-257.4988	-1.4777	-2.0566
Capsule05	87.418	0.144	64.502	-35.3672	-261.2784	-1.4556	-2.0609

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule05	87.418	0.152	67.1334	-34.9702	-264.2741	-1.4091	-2.4175
Capsule05	87.418	0.16	69.7082	-35.0114	-265.7124	-1.4498	-2.3886
Capsule05	87.418	0.168	71.4577	-34.7114	-267.5126	-1.4259	-2.4599
Capsule05	87.418	0.176	73.6946	-34.3007	-270.8152	-1.4025	-2.4962
Capsule05	87.418	0.184	76.5652	-34.285	-272.5245	-1.3957	-2.3689
Capsule05	87.418	0.192	77.0219	-32.9889	-275.4818	-1.3569	-1.3551
Capsule05	87.418	0.2	79.4546	-32.6491	-276.8847	-1.3971	-1.0963
Capsule05	87.418	0.208	80.6033	-32.5288	-278.339	-1.3739	-0.622
Capsule05	87.418	0.216	81.2333	-32.484	-281.3892	-1.3559	-0.662
Capsule05	87.418	0.224	83.0139	-32.2173	-283.4044	-1.2727	-0.443
Capsule05	87.418	0.232	84.0347	-32.234	-285.0869	-1.2197	-0.4135
Capsule05	87.418	0.24	85.5819	-31.1982	-286.9276	-1.0366	-0.108
Capsule05	87.418	0.248	85.4007	-31.2392	-288.1909	-1.0925	-0.2133
Capsule05	87.418	0.256	88.0376	-30.0429	-291.243	-0.9868	-0.0971
Capsule05	87.418	0.264	88.0936	-30.2976	-292.1585	-0.876	0.0483
Capsule09	63.7256	0	0	0	0	1.4817	-1.4433
Capsule09	63.7256	0.008	1.5918	4.2514	-30.3765	1.4786	-0.8807
Capsule09	63.7256	0.016	3.9102	0.0885	-71.5845	1.4652	-0.9778
Capsule09	63.7256	0.024	8.3999	-0.2893	-110.8009	1.3488	-0.2715
Capsule09	63.7256	0.032	14.9249	0.4591	-146.6555	1.1832	-0.4079
Capsule09	63.7256	0.04	19.7027	-0.8794	-174.0072	0.8605	-0.2276
Capsule09	63.7256	0.048	30.4264	-1.4133	-194.1605	0.5016	-0.119
Capsule09	63.7256	0.056	41.3489	-2.6204	-210.0766	0.0981	-0.1994
Capsule09	63.7256	0.064	51.7034	-4.4243	-219.2441	-0.2405	-0.059
Capsule09	63.7256	0.072	62.336	-5.4044	-224.9874	-0.7094	-0.0321
Capsule09	63.7256	0.08	70.4096	-5.2219	-229.0167	-0.7621	-0.0047
Capsule09	63.7256	0.088	78.5682	-5.2989	-230.952	-1.1386	0.0497
Capsule09	63.7256	0.096	84.8834	-6.615	-232.2005	-1.2938	0.2004
Capsule09	63.7256	0.104	90.7136	-5.6523	-232.8026	-1.4017	0.4594
Capsule09	63.7256	0.112	96.1738	-5.8915	-234.5693	-1.4752	0.7601
Capsule09	63.7256	0.12	100.9249	-3.1131	-234.9862	-1.4234	0.5236
Capsule09	63.7256	0.128	106.7563	-2.923	-235.6193	-1.4674	1.3441
Capsule09	63.7256	0.136	110.0619	-2.5238	-236.5161	-1.4809	2.1353
Capsule09	63.7256	0.144	114.2383	-0.7811	-237.8043	-1.5022	1.4754
Capsule09	63.7256	0.152	118.2322	0.7774	-238.7183	-1.5058	2.1421
Capsule09	63.7256	0.16	121.1015	1.8783	-239.408	-1.5019	3.0315
Capsule09	63.7256	0.168	128.4927	2.9403	-241.4237	-1.3914	-3.1098
Capsule09	63.7256	0.176	131.2091	3.1124	-243.0326	-1.5482	2.6497
Capsule09	63.7256	0.184	133.1117	4.6868	-244.1724	-1.534	2.3419
Capsule09	63.7256	0.192	137.058	5.776	-244.9932	-1.4997	1.1471
Capsule09	63.7256	0.2	139.9309	7.1417	-246.7646	-1.5144	1.6996
Capsule09	63.7256	0.208	143.3475	7.751	-248.244	-1.3844	0.4258
Capsule09	63.7256	0.216	144.1041	7.1274	-250.0713	-1.2588	0.3295
Capsule09	63.7256	0.224	144.7356	8.1481	-252.0446	-1.1433	0.5048
Capsule09	63.7256	0.232	147.1323	8.2226	-253.104	-1.1082	0.4891
Capsule09	63.7256	0.24	148.3846	8.1582	-254.0026	-0.9677	0.3534
Capsule09	63.7256	0.248	151.1367	9.5596	-255.6562	-0.8641	0.3443
Capsule09	63.7256	0.256	151.9349	9.6302	-256.3902	-0.7817	0.3223
Capsule09	63.7256	0.264	151.66	9.6264	-257.308	-0.7564	0.3383
Capsule09	63.7256	0.272	152.4263	10.1076	-257.9711	-0.6762	0.3471
Capsule09	63.7256	0.28	153.3558	10.2794	-258.8707	-0.6548	0.3171
Capsule09	63.7256	0.288	154.2612	10.6371	-259.852	-0.6082	0.3129
Capsule09	63.7256	0.296	154.7408	10.9448	-260.7966	-0.5844	0.3169

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule09	63.7256	0.304	157.2537	11.5177	-261.4298	-0.5595	0.2584
Capsule09	63.7256	0.312	156.7251	11.5884	-262.0316	-0.5705	0.2713
Capsule09	63.7256	0.32	157.3461	11.5401	-262.7093	-0.4746	0.2583
Capsule09	63.7256	0.328	158.988	12.5802	-263.6955	-0.3999	0.2716
Capsule09	63.7256	0.336	161.063	13.2336	-265.0661	-0.3402	0.2899
Capsule09	63.7256	0.344	162.6647	14.094	-265.4658	-0.3738	0.2452
Capsule09	63.7256	0.352	163.0847	13.886	-265.8161	-0.322	0.2388
Capsule09	63.7256	0.36	163.3817	14.5022	-266.7427	-0.3094	0.2246
Capsule09	63.7256	0.368	163.6375	14.6583	-267.1575	-0.2652	0.2196
Capsule09	63.7256	0.376	163.707	14.6891	-267.7081	-0.2252	0.2208
Capsule09	63.7256	0.384	165.208	15.2266	-268.3406	-0.1879	0.2018
Capsule09	63.7256	0.392	165.5914	15.257	-268.2944	-0.1594	0.2033
Capsule09	63.7256	0.4	165.9219	14.9672	-268.8177	-0.0691	0.1997
Capsule09	63.7256	0.408	165.549	14.8974	-269.9818	0.0073	0.2001
Capsule09	63.7256	0.416	166.157	15.0377	-270.9263	0.024	0.216
Capsule09	63.7256	0.424	166.5341	15.3315	-270.6207	0.0732	0.1962
Capsule09	63.7256	0.432	167.2706	15.7835	-270.9536	0.088	0.2
Capsule09	63.7256	0.44	167.4754	15.9016	-270.8092	0.1671	0.2071
Capsule09	63.7256	0.448	168.5189	16.3534	-271.3083	0.1653	0.1859
Capsule09	63.7256	0.456	169.1413	16.7181	-271.9567	0.1988	0.2017
Capsule09	63.7256	0.464	168.9285	16.365	-272.4021	0.2304	0.1817
Capsule09	63.7256	0.472	169.7899	16.9129	-273.1021	0.2651	0.1738
Capsule09	63.7256	0.48	170.4099	17.1079	-273.1837	0.276	0.1508
Capsule09	63.7256	0.488	170.392	17.0276	-273.9931	0.3221	0.1525
Capsule09	63.7256	0.496	170.9788	17.394	-275.0291	0.3881	0.1332
Capsule09	63.7256	0.504	170.7778	17.2403	-275.9193	0.4034	0.1326
Capsule09	63.7256	0.512	171.3217	17.4263	-275.8899	0.4695	0.1159
Capsule09	63.7256	0.52	171.8436	17.3191	-275.8466	0.4693	0.1159
Capsule09	63.7256	0.528	173.0486	17.6287	-277.0162	0.5168	0.106
Capsule09	63.7256	0.536	172.8339	17.299	-277.08	0.5333	0.0863
Capsule09	63.7256	0.544	173.4432	17.6705	-277.9832	0.5639	0.0342
Capsule09	63.7256	0.552	174.4167	18.2963	-278.3725	0.6513	-0.0203
Capsule09	63.7256	0.56	174.4167	18.2963	-278.3725	0.6513	-0.0203
Capsule09	63.7256	0.568	174.5355	17.9494	-278.9688	0.7473	-0.0789
Capsule09	63.7256	0.576	174.8273	18.1625	-279.3254	0.7553	-0.0934
Capsule09	63.7256	0.584	174.319	18.0186	-279.9192	0.7549	-0.1063
Capsule09	63.7256	0.592	174.3915	17.8596	-280.0289	0.7564	-0.1242
Capsule09	63.7256	0.6	175.021	18.2485	-281.6076	0.8181	-0.2126
Capsule09	63.7256	0.608	174.7497	18.0744	-281.9278	0.8518	-0.2429
Capsule09	63.7256	0.616	175.6409	17.9618	-282.0517	0.9177	-0.2368
Capsule09	63.7256	0.624	176.5483	18.3142	-283.3747	0.9642	-0.2838
Capsule09	63.7256	0.632	176.2754	18.1014	-283.9297	1.0064	-0.3302
Capsule09	63.7256	0.64	176.2686	17.8185	-284.4596	1.1087	-0.4105
Capsule09	63.7256	0.648	176.475	17.9315	-285.2305	1.134	-0.5425
Capsule09	63.7256	0.656	176.7772	17.8621	-285.9867	1.1422	-0.481
Capsule09	63.7256	0.664	176.3105	17.5053	-287.0528	1.1254	-0.4652
Capsule09	63.7256	0.672	177.2004	17.3984	-287.1786	1.1971	-0.4955
Capsule09	63.7256	0.68	178.5242	17.3659	-287.664	1.1781	-0.4168
Capsule09	63.7256	0.688	178.028	17.1813	-289.5419	1.1931	-0.5328
Capsule09	63.7256	0.696	178.1101	17.219	-290.1071	1.2085	-0.5126
Capsule09	63.7256	0.704	178.3249	16.9164	-290.8814	1.1897	-0.4395
Capsule09	63.7256	0.712	178.7553	16.9337	-292.3687	1.1559	-0.3779
Capsule09	63.7256	0.72	178.7456	16.9133	-292.7402	1.1699	-0.3833

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule09	63.7256	0.728	180.4301	17.7408	-294.0696	1.2058	-0.823
Capsule09	63.7256	0.736	180.7027	17.4672	-293.9708	1.2443	-0.8272
Capsule09	63.7256	0.744	180.0794	16.826	-294.7188	1.2747	-0.7575
Capsule09	63.7256	0.752	179.8321	16.4388	-296.0744	1.2838	-0.9529
Capsule09	63.7256	0.76	179.9008	16.4553	-297.0161	1.2605	-0.9735
Capsule09	63.7256	0.768	179.9791	16.4269	-299.1099	1.2193	-0.8421
Capsule07	57.4379	0	0	0	0	1.495	1.963
Capsule07	57.4379	0.008	-0.5687	2.5969	-25.7727	1.5484	1.1414
Capsule07	57.4379	0.016	0.8629	0.925	-66.1279	1.4712	-0.4888
Capsule07	57.4379	0.024	5.6585	1.0571	-105.1016	1.3184	-0.3141
Capsule07	57.4379	0.032	13.2053	3.9569	-144.3395	1.2428	-0.0231
Capsule07	57.4379	0.04	20.1195	4.5458	-171.1106	0.7457	0.4093
Capsule07	57.4379	0.048	29.6344	6.4317	-191.9902	0.3394	0.4445
Capsule07	57.4379	0.056	43.3115	11.9419	-207.7878	0.1957	0.422
Capsule07	57.4379	0.064	60.8479	15.4926	-220.3945	-0.1632	0.4441
Capsule07	57.4379	0.072	76.7153	20.1396	-226.9424	-0.5345	0.3062
Capsule07	57.4379	0.08	88.4668	23.1895	-231.43	-0.8293	0.307
Capsule07	57.4379	0.088	98.9238	26.7309	-234.7589	-1.0465	0.0831
Capsule07	57.4379	0.096	104.424	28.7875	-236.9607	-1.2779	-0.4281
Capsule07	57.4379	0.104	108.9279	28.68	-238.8069	-1.4029	-1.3527
Capsule07	57.4379	0.112	115.1746	32.8626	-239.4415	-1.2706	-2.2484
Capsule07	57.4379	0.12	125.6481	33.5176	-240.874	-1.2108	-2.5626
Capsule07	57.4379	0.128	129.1697	35.0272	-241.8178	-1.2911	-2.29
Capsule07	57.4379	0.136	137.527	39.1275	-244.7812	-1.3249	-1.9436
Capsule07	57.4379	0.144	142.6347	41.2262	-247.4133	-1.3163	-1.3366
Capsule07	57.4379	0.152	147.8629	44.4702	-248.5784	-1.2498	-1.682
Capsule07	57.4379	0.16	150.1931	45.1658	-249.0442	-1.1231	-1.7591
Capsule07	57.4379	0.168	155.4046	46.6066	-251.9825	-1.0921	-1.6644
Capsule07	57.4379	0.176	156.8483	47.1575	-251.9363	-1.0602	-1.611
Capsule07	57.4379	0.184	158.8743	48.1136	-254.4966	-0.975	-1.6266
Capsule07	57.4379	0.192	162.6692	50.9148	-257.1783	-0.9018	-1.6806
Capsule07	57.4379	0.2	165.0661	51.7321	-258.7409	-0.8784	-1.4421
Capsule07	57.4379	0.208	167.9784	54.5351	-260.6264	-0.8309	-1.4493
Capsule07	57.4379	0.216	169.76	54.8914	-261.4039	-0.7957	-1.2862
Capsule07	57.4379	0.224	172.0135	56.1215	-262.6338	-0.7678	-1.404
Capsule07	57.4379	0.232	175.5294	58.5417	-266.8866	-0.7438	-1.1678
Capsule07	57.4379	0.24	177.6464	59.1151	-269.143	-0.6148	-1.1368
Capsule07	57.4379	0.248	176.1296	57.8895	-268.3837	-0.6932	-1.2761
Capsule07	57.4379	0.256	177.8351	58.2803	-269.6677	-0.4904	-1.085
Capsule07	57.4379	0.264	180.4823	59.9512	-270.6065	-0.2698	-0.8206
Capsule07	57.4379	0.272	182.1699	61.1891	-272.31	-0.1066	-0.516
Capsule07	57.4379	0.28	182.6002	60.2733	-272.9459	0.0665	-0.2662
Capsule07	57.4379	0.288	183.9917	60.6413	-273.6904	0.1325	-0.1933
Capsule07	57.4379	0.296	185.7131	59.4517	-273.9218	0.0263	-0.1488
Capsule07	57.4379	0.304	188.2996	60.5023	-276.7646	0.0212	-0.3312
Capsule07	57.4379	0.312	190.0664	61.8015	-279.1433	-0.0311	-0.2868
Capsule07	57.4379	0.32	189.857	61.116	-280.3532	0.0495	-0.1458
Capsule07	57.4379	0.328	191.8553	61.8728	-282.3862	0.1129	-0.1771
Capsule07	57.4379	0.336	192.418	62.426	-283.4478	0.0243	-0.28
Capsule07	57.4379	0.344	193.4728	62.7819	-285.2448	0.0441	-0.2372
Capsule07	57.4379	0.352	193.191	62.8086	-287.2402	0.0992	-0.4237
Capsule07	57.4379	0.36	194.321	63.5483	-289.4822	0.1931	-0.3786
Capsule07	57.4379	0.368	194.0514	62.5888	-289.7149	0.2068	-0.3473

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Capsule07	57.4379	0.376	195.3889	63.3196	-292.1424	0.2203	-0.4324
Capsule07	57.4379	0.384	196.2147	63.9011	-292.4146	0.1926	-0.3584
Capsule07	57.4379	0.392	195.573	62.9594	-293.1344	0.2066	-0.3018
Capsule07	57.4379	0.4	196.627	62.9729	-294.2311	0.185	-0.4082
Capsule07	57.4379	0.408	199.67	64.291	-294.9953	0.2445	-0.5323
Capsule07	57.4379	0.416	200.0673	63.3445	-296.3439	0.2936	-0.4163
Capsule07	57.4379	0.424	200.8589	63.5641	-297.5549	0.2748	-0.5429
Capsule07	57.4379	0.432	201.4994	63.6579	-298.1779	0.3372	-0.4777
Capsule07	57.4379	0.44	200.6494	63.8526	-300.4166	0.517	-0.5088
Capsule07	57.4379	0.448	202.2423	63.728	-300.271	0.4768	-0.4872
Capsule07	57.4379	0.456	202.5931	63.8665	-302.155	0.4098	-0.4851
Capsule07	57.4379	0.464	202.3112	63.5221	-303.6997	0.441	-0.4795
Capsule07	57.4379	0.472	202.1421	63.3009	-304.9334	0.4053	-0.4695
Capsule07	57.4379	0.48	203.3078	62.1708	-308.0561	0.3281	-0.3262
Shell01	29.156	0	0	0	0	1.3977	1.7374
Shell01	29.156	0.008	-0.1353	4.4557	-16.5674	1.1488	1.7177
Shell01	29.156	0.016	-0.9148	10.4581	-30.0822	0.5019	2.0806
Shell01	29.156	0.024	-0.9148	14.462	-38.2337	0.0967	2.2972
Shell01	29.156	0.032	-2.007	19.3961	-44.5259	-0.1037	2.0675
Shell01	29.156	0.04	-5.8418	21.9341	-49.8671	-0.2471	1.4446
Shell01	29.156	0.048	-8.2257	25.1288	-55.7244	-0.4422	1.2586
Shell01	29.156	0.056	-7.9536	27.5895	-61.0323	-0.2851	1.3291
Shell01	29.156	0.064	-9.2137	29.3979	-63.0175	-0.2798	1.1519
Shell01	29.156	0.072	-9.4107	31.6624	-67.3181	-0.2262	1.3003
Shell01	29.156	0.08	-10.2133	33.4026	-70.1205	-0.2312	1.4171
Shell01	29.156	0.088	-11.7377	34.4266	-71.3755	-0.1172	1.428
Shell01	29.156	0.096	-14.5275	37.5707	-74.7862	0.0151	1.3834
Shell01	29.156	0.104	-15.767	36.3896	-79.8444	-0.1739	1.3351
Shell01	29.156	0.112	-16.3348	37.5854	-82.2122	-0.1108	1.1141
Shell01	29.156	0.12	-17.2051	37.6188	-84.954	-0.1205	1.0376
Shell01	29.156	0.128	-18.551	37.6729	-87.6419	-0.071	0.819
Shell01	29.156	0.136	-19.0581	38.063	-88.5287	-0.0618	0.6866
Shell01	29.156	0.144	-19.4373	38.1588	-90.0787	-0.1064	0.7089
Shell01	29.156	0.152	-19.5611	38.6596	-91.7105	0.0673	0.8005
Shell01	29.156	0.16	-16.7219	38.7187	-94.9071	-0.2068	0.8641
Shell01	29.156	0.168	-16.9763	39.2623	-96.0779	-0.2988	0.9842
Shell01	29.156	0.176	-16.7746	39.8324	-97.9014	-0.1439	1.1098
Shell01	29.156	0.184	-16.6404	40.5367	-99.5721	-0.0662	0.7207
Shell01	29.156	0.192	-17.5613	41.003	-100.9465	-0.1337	0.7855
Shell01	29.156	0.2	-17.2021	40.6332	-102.5755	-0.1924	0.7861
Shell01	29.156	0.208	-16.8063	40.3222	-104.0514	-0.1796	0.719
Shell01	29.156	0.216	-16.6149	40.1765	-105.2127	-0.1438	0.7877
Shell01	29.156	0.224	-16.9397	40.0791	-106.2546	-0.06	0.6888
Shell01	29.156	0.232	-16.4953	40.9355	-107.0988	-0.0575	0.7915
Shell01	29.156	0.24	-16.6461	40.8861	-108.209	-0.0259	0.7353
Shell01	29.156	0.248	-17.0761	40.75	-110.4997	-0.2003	0.7307
Shell01	29.156	0.256	-17.4221	41.1481	-111.6392	-0.2839	0.728
Shell01	29.156	0.264	-16.6756	41.341	-111.886	-0.3264	0.6347
Shell01	29.156	0.272	-16.5904	41.5631	-113.1449	-0.3797	0.7934
Shell01	29.156	0.28	-17.3777	41.3545	-113.6486	-0.3379	0.9127
Shell01	29.156	0.288	-16.6118	40.7889	-114.9758	-0.4505	1.0255
Shell01	29.156	0.296	-13.7203	40.1169	-115.5967	-0.2881	0.9319
Shell01	29.156	0.304	-13.025	40.2066	-116.5579	-0.3544	0.8678

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell01	29.156	0.312	-12.4171	39.8327	-117.8061	-0.2811	0.9034
Shell01	29.156	0.32	-12.1301	39.6943	-117.5743	-0.2497	0.7285
Shell01	29.156	0.328	-12.2804	40.4973	-118.2748	-0.2793	0.8239
Shell01	29.156	0.336	-12.2704	40.7388	-118.3244	-0.3314	0.7124
Shell01	29.156	0.344	-12.1066	40.9947	-119.2933	-0.3435	0.6305
Shell01	29.156	0.352	-10.7099	40.7392	-119.8417	-0.3101	0.5686
Shell01	29.156	0.36	-10.16	40.7565	-120.7342	-0.2732	0.6979
Shell01	29.156	0.368	-9.1773	40.488	-121.0586	-0.3436	0.7243
Shell01	29.156	0.376	-8.2098	40.4023	-122.0776	-0.3146	0.6884
Shell01	29.156	0.384	-9.0903	40.7506	-122.8622	-0.3199	0.6179
Shell01	29.156	0.392	-7.8234	40.8797	-123.8472	-0.1656	0.596
Shell01	29.156	0.4	-8.5592	40.6662	-123.8161	-0.235	0.6425
Shell01	29.156	0.408	-7.806	41.1211	-125.8237	-0.1152	0.5932
Shell01	29.156	0.416	-7.8016	41.113	-126.1967	-0.0894	0.5971
Shell01	29.156	0.424	-7.4513	41.3068	-127.5436	-0.1016	0.5517
Shell01	29.156	0.432	-7.4673	41.4323	-128.4247	-0.0346	0.5753
Shell01	29.156	0.44	-7.4585	41.5339	-128.4914	-0.026	0.5853
Shell01	29.156	0.448	-6.8829	40.8685	-129.2503	-0.0378	0.5768
Shell01	29.156	0.456	-6.7231	41.0441	-130.5548	0.0076	0.6229
Shell01	29.156	0.464	-6.5206	40.8174	-130.8431	0.022	0.6264
Shell01	29.156	0.472	-6.5195	40.6699	-131.4289	-0.0059	0.604
Shell01	29.156	0.48	-6.5158	40.3769	-132.0155	0.0289	0.5781
Shell01	29.156	0.488	-6.5144	40.3826	-132.5838	0.0292	0.5807
Shell01	29.156	0.496	-6.7213	40.3652	-133.4728	0.0459	0.549
Shell01	29.156	0.504	-7.4973	40.526	-134.6049	-0.0156	0.4555
Shell01	29.156	0.512	-7.905	40.7109	-135.4955	-0.005	0.4231
Shell01	29.156	0.52	-7.9082	40.7494	-136.0671	0.0236	0.4353
Shell01	29.156	0.528	-7.9038	40.7418	-136.7243	0.0128	0.4398
Shell01	29.156	0.536	-8.1379	40.9661	-137.5626	0.0353	0.4629
Shell01	29.156	0.544	-8.1347	40.9533	-138.0454	0.0178	0.455
Shell01	29.156	0.552	-8.3649	41.1737	-139.6588	0.0149	0.4827
Shell01	29.156	0.56	-8.357	41.1616	-141.1752	-0.0107	0.4874
Shell01	29.156	0.568	-8.9554	41.3465	-142.1854	-0.0639	0.4358
Shell01	29.156	0.576	-9.1649	41.4612	-142.5839	-0.0341	0.4318
Shell01	29.156	0.584	-9.5556	41.6937	-144.0211	-0.0491	0.4182
Shell01	29.156	0.592	-9.562	41.7407	-144.5985	-0.0222	0.4275
Shell01	29.156	0.6	-9.5863	41.7286	-145.0733	-0.0399	0.4254
Shell01	29.156	0.608	-9.5787	41.5611	-146.0946	-0.0683	0.4164
Shell01	29.156	0.616	-9.648	42.6099	-147.492	-0.104	0.3622
Shell01	29.156	0.624	-9.667	42.7134	-148.2452	-0.1368	0.3708
Shell01	29.156	0.632	-9.6823	42.8144	-149.7502	-0.2346	0.376
Shell01	29.156	0.64	-9.6957	42.9093	-150.7978	-0.2333	0.3878
Shell01	29.156	0.648	-10.3871	43.5644	-151.872	-0.1588	0.4321
Shell01	29.156	0.656	-10.597	43.3743	-153.0815	-0.1867	0.424
Shell01	29.156	0.664	-10.6333	43.7484	-153.9658	-0.2574	0.3715
Shell01	29.156	0.672	-10.8944	43.8259	-154.9975	-0.2069	0.2933
Shell01	29.156	0.68	-11.0762	44.8393	-155.9513	-0.1477	0.4264
Shell01	29.156	0.688	-10.9201	45.468	-157.3877	-0.1303	0.4259
Shell01	29.156	0.696	-10.7035	45.7976	-157.884	-0.148	0.4521
Shell01	29.156	0.704	-11.3595	46.1252	-158.9875	-0.1882	0.3702
Shell01	29.156	0.712	-11.3855	46.5887	-160.089	-0.1532	0.3889
Shell01	29.156	0.72	-11.4102	46.7753	-160.5106	-0.1257	0.3791
Shell01	29.156	0.728	-11.5189	47.9351	-162.0803	-0.1826	0.3221

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell01	29.156	0.736	-11.5542	48.3783	-162.6691	-0.1357	0.3091
Shell01	29.156	0.744	-11.3826	48.6602	-163.7072	-0.1808	0.2933
Shell01	29.156	0.752	-11.3995	48.8263	-165.1309	-0.246	0.2824
Shell01	29.156	0.76	-11.4716	49.3673	-166.766	-0.2011	0.2429
Shell01	29.156	0.768	-11.4956	49.7726	-167.8223	-0.2148	0.2283
Shell01	29.156	0.776	-12.3687	50.0971	-169.0943	-0.2749	0.1793
Shell01	29.156	0.784	-12.5902	50.1786	-169.5233	-0.2544	0.1911
Shell01	29.156	0.792	-12.5891	50.1888	-170.2993	-0.2093	0.1893
Shell01	29.156	0.8	-13.9303	50.7745	-171.5062	-0.2098	0.1339
Shell01	29.156	0.808	-15.3126	51.6371	-172.4765	-0.2028	0.0804
Shell01	29.156	0.816	-15.853	52.3309	-173.7553	-0.178	0.0222
Shell01	29.156	0.824	-15.9467	53.1834	-174.6038	-0.1074	-0.0015
Shell01	29.156	0.832	-15.9914	53.4646	-174.8759	-0.0853	-0.0261
Shell01	29.156	0.84	-16.0172	53.8554	-175.9746	-0.0931	-0.0269
Shell01	29.156	0.848	-16.2501	54.0254	-177.1127	-0.0714	-0.0341
Shell01	29.156	0.856	-16.9426	54.3721	-177.9153	-0.0713	-0.059
Shell01	29.156	0.864	-17.7049	55.0484	-178.7423	-0.0801	-0.1095
Shell01	29.156	0.872	-17.7252	55.3162	-179.7649	-0.1227	-0.1054
Shell01	29.156	0.88	-18.6823	55.8304	-180.7568	-0.0788	-0.1241
Shell01	29.156	0.888	-19.61	56.3023	-181.3536	-0.0464	-0.123
Shell01	29.156	0.896	-20.3535	56.8617	-182.447	-0.0473	-0.1352
Shell01	29.156	0.904	-21.0664	57.1976	-183.4796	-0.0056	-0.1456
Shell01	29.156	0.912	-21.7691	57.5611	-184.567	0.0354	-0.15
Shell01	29.156	0.92	-23.4749	59.3139	-186.8808	-0.029	-0.277
Shell01	29.156	0.928	-24.7452	59.9318	-187.6554	-0.0456	-0.3045
Shell01	29.156	0.936	-25.5142	60.4541	-187.9731	-0.0463	-0.3117
Shell01	29.156	0.944	-26.8748	61.2725	-188.5933	-0.0597	-0.3332
Shell01	29.156	0.952	-27.1324	61.0106	-188.9486	-0.0746	-0.3757
Shell01	29.156	0.96	-27.86	61.1102	-189.6515	-0.1042	-0.3633
Shell01	29.156	0.968	-28.883	61.4116	-190.0585	-0.1215	-0.3585
Shell01	29.156	0.976	-28.62	61.6347	-191.0369	-0.1346	-0.3874
Shell01	29.156	0.984	-29.76	62.4174	-191.345	-0.1294	-0.4119
Shell01	29.156	0.992	-30.6576	62.5866	-192.556	-0.137	-0.3964
Shell01	29.156	1	-31.3013	62.4261	-192.9978	-0.1429	-0.4183
Shell01	29.156	1.008	-32.1919	62.6815	-193.9477	-0.1469	-0.4412
Shell01	29.156	1.016	-32.2468	62.8991	-194.8591	-0.1356	-0.4382
Shell01	29.156	1.024	-33.9256	62.7619	-194.8595	-0.1311	-0.4536
Shell01	29.156	1.032	-34.4508	63.2666	-195.4478	-0.112	-0.4553
Shell01	29.156	1.04	-35.9236	63.6608	-196.3862	-0.0677	-0.4519
Shell01	29.156	1.048	-36.1153	63.4045	-196.8028	-0.0534	-0.4734
Shell01	29.156	1.056	-36.6893	63.6135	-197.4989	-0.056	-0.4688
Shell01	29.156	1.064	-36.6782	63.6468	-197.7958	-0.0737	-0.4709
Shell01	29.156	1.072	-37.2858	64.1632	-198.7183	-0.1026	-0.478
Shell01	29.156	1.08	-37.7786	64.3342	-199.0094	-0.1099	-0.4863
Shell01	29.156	1.088	-37.8216	64.4465	-199.7823	-0.0877	-0.4977
Shell01	29.156	1.096	-38.933	64.3493	-200.5596	-0.0775	-0.5068
Shell01	29.156	1.104	-39.5655	64.2931	-200.9109	-0.0684	-0.5179
Shell01	29.156	1.112	-40.0471	64.4208	-201.3324	-0.0671	-0.5298
Shell01	29.156	1.12	-40.9847	64.5052	-202.2842	-0.0971	-0.5253
Shell01	29.156	1.128	-41.8386	64.528	-203.3448	-0.0821	-0.544
Shell01	29.156	1.136	-41.9876	65.0993	-204.0372	-0.0842	-0.5708
Shell01	29.156	1.144	-42.4928	65.1255	-204.73	-0.0814	-0.5615
Shell01	29.156	1.152	-43.4266	65.6629	-205.0837	-0.0756	-0.5552

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell01	29.156	1.16	-44.1081	65.6994	-205.3762	-0.0769	-0.5589
Shell01	29.156	1.168	-45.3762	65.8719	-206.1131	-0.0894	-0.5403
Shell01	29.156	1.176	-45.5253	65.6218	-206.4771	-0.0689	-0.5568
Shell01	29.156	1.184	-45.6902	65.5501	-206.8557	-0.0805	-0.5557
Shell01	29.156	1.192	-46.1166	65.4921	-207.7926	-0.1086	-0.5514
Shell01	29.156	1.2	-46.8464	65.6562	-208.421	-0.1035	-0.5627
Shell01	29.156	1.208	-47.7622	66.8079	-209.654	-0.1046	-0.5913
Shell01	29.156	1.216	-48.0414	66.9696	-210.0408	-0.0854	-0.5925
Shell01	29.156	1.224	-48.5491	66.9661	-211.0714	-0.101	-0.5832
Shell01	29.156	1.232	-48.8367	67.0122	-212.0465	-0.1043	-0.5811
Shell01	29.156	1.24	-50.0741	67.1873	-212.7596	-0.0898	-0.5909
Shell01	29.156	1.248	-50.3185	67.1203	-213.1722	-0.0832	-0.5855
Shell01	29.156	1.256	-51.5897	67.3762	-213.592	-0.1049	-0.6073
Shell01	29.156	1.264	-52.2182	67.2338	-213.8778	-0.1216	-0.612
Shell01	29.156	1.272	-53.4678	69.2345	-215.2099	-0.1158	-0.538
Shell01	29.156	1.28	-54.7457	69.5561	-216.0424	-0.125	-0.5217
Shell01	29.156	1.288	-55.36	69.4547	-216.4879	-0.1506	-0.5167
Shell01	29.156	1.296	-55.6159	69.4178	-217.6186	-0.181	-0.5178
Shell01	29.156	1.304	-55.9782	69.1091	-217.8387	-0.1706	-0.5429
Shell01	29.156	1.312	-56.9818	69.225	-218.6818	-0.1992	-0.5428
Shell01	29.156	1.32	-57.3735	69.0141	-219.2257	-0.1968	-0.5319
Shell01	29.156	1.328	-57.7821	68.7824	-220.3881	-0.193	-0.5573
Shell01	29.156	1.336	-57.878	68.5681	-220.7889	-0.204	-0.559
Shell01	29.156	1.344	-58.7066	68.5911	-221.8491	-0.1998	-0.5539
Shell01	29.156	1.352	-59.5662	68.4283	-223.0611	-0.2226	-0.5564
Shell01	29.156	1.36	-59.9851	67.9215	-224.2338	-0.2245	-0.5481
Shell01	29.156	1.368	-60.2767	66.8896	-225.6527	-0.2416	-0.5189
Shell01	29.156	1.376	-61.8644	66.8828	-226.2066	-0.2174	-0.5456
Shell01	29.156	1.384	-62.2978	66.8727	-226.6613	-0.1951	-0.5601
Shell01	29.156	1.392	-62.4861	67.167	-227.3789	-0.2226	-0.5665
Shell01	29.156	1.4	-62.2673	66.5504	-227.7588	-0.2528	-0.5527
Shell01	29.156	1.408	-62.7366	66.4369	-228.5947	-0.2748	-0.5258
Shell01	29.156	1.416	-62.6668	66.2815	-228.951	-0.2809	-0.5071
Shell01	29.156	1.424	-63.1901	65.8468	-230.3524	-0.2789	-0.5048
Shell01	29.156	1.432	-62.7737	65.3406	-230.4129	-0.2857	-0.4823
Shell01	29.156	1.44	-62.7742	65.2442	-230.7628	-0.3048	-0.4774
Shell01	29.156	1.448	-62.8563	65.657	-232.0744	-0.2772	-0.4243
Shell01	29.156	1.456	-63.3137	65.2505	-232.9101	-0.2615	-0.4346
Shell01	29.156	1.464	-63.3815	65.3787	-233.2192	-0.2456	-0.4292
Shell01	29.156	1.472	-64.0283	65.36	-233.5834	-0.2325	-0.4474
Shell01	29.156	1.48	-63.747	64.3093	-233.2247	-0.2041	-0.4024
Shell01	29.156	1.488	-63.821	64.0019	-233.7501	-0.2106	-0.4082
Shell01	29.156	1.496	-63.7348	64.0188	-234.703	-0.246	-0.3965
Shell01	29.156	1.504	-64.1618	63.9028	-235.2792	-0.2442	-0.3986
Shell01	29.156	1.512	-64.7434	63.3526	-236.1302	-0.2556	-0.3944
Shell01	29.156	1.52	-65.0962	63.5525	-237.198	-0.23	-0.4037
Shell01	29.156	1.528	-64.6695	63.5984	-237.1375	-0.2153	-0.4287
Shell01	29.156	1.536	-64.5905	63.4984	-238.3492	-0.2336	-0.4023
Shell01	29.156	1.544	-64.44	62.8283	-239.2178	-0.2196	-0.4256
Shell01	29.156	1.552	-64.482	62.909	-239.76	-0.2158	-0.4158
Shell01	29.156	1.56	-64.8121	62.6677	-240.4545	-0.2424	-0.402
Shell01	29.156	1.568	-64.8654	62.8059	-240.9452	-0.2153	-0.4217
Shell01	29.156	1.576	-65.1321	62.7989	-241.7976	-0.2314	-0.414

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell01	29.156	1.584	-65.1659	62.4371	-242.6793	-0.2573	-0.4119
Shell01	29.156	1.592	-64.9821	61.9187	-243.1295	-0.2639	-0.391
Shell01	29.156	1.6	-64.9169	61.343	-244.0352	-0.2699	-0.3693
Shell01	29.156	1.608	-64.8033	61.087	-244.4099	-0.2535	-0.3737
Shell01	29.156	1.616	-65.6243	60.5611	-245.5563	-0.211	-0.4244
Shell01	29.156	1.624	-65.6516	60.1582	-246.5841	-0.1953	-0.4176
Shell01	29.156	1.632	-65.349	59.9842	-246.9739	-0.1656	-0.42
Shell01	29.156	1.64	-65.1275	59.4801	-247.6215	-0.1927	-0.4112
Shell01	29.156	1.648	-64.9562	59.1825	-248.0229	-0.1799	-0.4149
Shell01	29.156	1.656	-64.9043	59.0361	-248.7356	-0.1715	-0.4355
Shell01	29.156	1.664	-65.1882	59.0043	-250.0861	-0.2141	-0.4273
Shell01	29.156	1.672	-65.122	58.9432	-250.7653	-0.2056	-0.4222
Shell01	29.156	1.68	-64.8375	58.452	-251.7956	-0.209	-0.4235
Shell01	29.156	1.688	-64.782	58.3109	-252.5222	-0.228	-0.4381
Shell01	29.156	1.696	-64.5269	57.8777	-253.3289	-0.2049	-0.4376
Shell01	29.156	1.704	-64.1439	57.5055	-254.1891	-0.2149	-0.4648
Shell01	29.156	1.712	-64.0303	57.3092	-254.8019	-0.1907	-0.4638
Shell01	29.156	1.72	-63.7334	56.8018	-256.1424	-0.2021	-0.4603
Shell01	29.156	1.728	-63.6085	56.5515	-256.9645	-0.2073	-0.4722
Shell01	29.156	1.736	-62.131	55.8022	-257.8418	-0.175	-0.5062
Shell01	29.156	1.744	-61.4907	55.5171	-258.4462	-0.2064	-0.5059
Shell01	29.156	1.752	-60.8641	54.7234	-259.7555	-0.2138	-0.5307
Shell01	29.156	1.76	-60.6104	54.2921	-260.2186	-0.2104	-0.5296
Shell01	29.156	1.768	-60.5419	54.0459	-261.0963	-0.2219	-0.5354
Shell01	29.156	1.776	-60.872	54.5464	-262.5643	-0.2513	-0.5605
Shell01	29.156	1.784	-60.8512	54.472	-263.0607	-0.2451	-0.57
Shell01	29.156	1.792	-60.5932	54.3598	-263.8973	-0.257	-0.563
Shell01	29.156	1.8	-60.3387	54.2493	-265.19	-0.2447	-0.5432
Shell01	29.156	1.808	-59.9139	54.2236	-266.0335	-0.2216	-0.5369
Shell01	29.156	1.816	-59.6433	54.0499	-267.0366	-0.2108	-0.5401
Shell01	29.156	1.824	-59.2271	53.595	-267.775	-0.2256	-0.5529
Shell01	29.156	1.832	-54.3476	50.1504	-269.8506	-0.4053	-0.5299
Shell01	29.156	1.84	-53.7898	49.5719	-271.3093	-0.3983	-0.5187
Shell01	29.156	1.848	-52.6347	48.3914	-271.9101	-0.4314	-0.5043
Shell01	29.156	1.856	-52.1747	47.8689	-272.8081	-0.416	-0.5092
Shell01	29.156	1.864	-51.3163	47.8271	-273.6149	-0.4213	-0.4948
Shell01	29.156	1.872	-49.7622	47.8688	-274.0829	-0.4113	-0.4789
Shell01	29.156	1.88	-48.3171	47.2495	-274.7756	-0.4433	-0.4482
Shell01	29.156	1.888	-47.6694	47.7284	-275.7664	-0.4741	-0.4986
Shell01	29.156	1.896	-47.2604	47.7262	-276.4761	-0.476	-0.5233
Shell01	29.156	1.904	-45.6693	47.4603	-277.0959	-0.484	-0.5485
Shell01	29.156	1.912	-45.2588	46.9896	-278.3152	-0.4726	-0.5355
Shell01	29.156	1.92	-43.8285	45.849	-279.2315	-0.4949	-0.5305
Shell01	29.156	1.928	-42.4799	46.6963	-283.8593	-0.2747	-0.4976
Shell02	48.5448	0	0	0	0	1.4973	0.3769
Shell02	48.5448	0.008	0.3143	1.5942	-25.2314	1.2538	-0.9959
Shell02	48.5448	0.016	6.6844	-1.9283	-52.4402	1.0864	-0.7784
Shell02	48.5448	0.024	14.42	-6.856	-71.2368	0.8351	-0.8773
Shell02	48.5448	0.032	22.6068	-10.9918	-82.3433	0.5845	-1.0899
Shell02	48.5448	0.04	31.9857	-19.5018	-90.1911	-0.4478	-1.1049
Shell02	48.5448	0.048	34.9197	-26.9728	-91.6027	-0.825	0.0553
Shell02	48.5448	0.056	38.6769	-29.7443	-89.139	-0.6729	0.2049
Shell02	48.5448	0.064	42.2835	-29.858	-87.0113	-0.5438	0.1635

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell02	48.5448	0.072	44.0579	-29.4363	-83.4371	-0.3723	0.0052
Shell02	48.5448	0.08	48.7043	-29.5279	-80.915	-0.2762	-0.1801
Shell02	48.5448	0.088	50.7469	-30.3945	-79.6072	0.1138	-0.4879
Shell02	48.5448	0.096	54.0342	-29.5316	-77.8601	0.2804	-0.6769
Shell02	48.5448	0.104	55.6154	-31.5924	-78.7773	0.191	-0.969
Shell02	48.5448	0.112	57.4985	-32.0927	-78.3787	-0.143	-1.095
Shell02	48.5448	0.12	58.2595	-33.7661	-79.4917	-0.456	-1.4088
Shell02	48.5448	0.128	58.5615	-34.8458	-79.2158	-0.6777	-1.2651
Shell02	48.5448	0.136	59.0362	-35.8653	-79.0612	-0.9357	-0.776
Shell02	48.5448	0.144	58.8042	-36.622	-78.7044	-1.0306	-0.5402
Shell02	48.5448	0.152	58.9602	-37.388	-78.7594	-0.9695	-0.215
Shell02	48.5448	0.16	59.0071	-37.8766	-78.7579	-0.9747	-0.003
Shell02	48.5448	0.168	59.3049	-38.2342	-78.2769	-0.9093	0.0592
Shell02	48.5448	0.176	60.3761	-38.4279	-77.6019	-0.8507	0.0622
Shell02	48.5448	0.184	61.443	-38.7132	-76.9576	-0.6873	0.0509
Shell02	48.5448	0.192	62.7695	-38.1834	-74.2839	-0.5511	-0.0267
Shell02	48.5448	0.2	62.8861	-38.1574	-72.5673	-0.5161	-0.1283
Shell02	48.5448	0.208	63.2226	-38.328	-72.499	-0.3677	-0.2974
Shell02	48.5448	0.216	63.9756	-38.0662	-71.3683	-0.1948	-0.263
Shell02	48.5448	0.224	63.6937	-38.8463	-70.9694	0.0699	-0.4805
Shell02	48.5448	0.232	65.0054	-39.0315	-70.5508	0.1739	-0.5245
Shell02	48.5448	0.24	65.5575	-39.1979	-70.5358	0.2784	-0.668
Shell02	48.5448	0.248	65.0692	-40.0055	-71.0862	0.4631	-1.0669
Shell02	48.5448	0.256	66.4216	-40.2064	-70.9664	0.563	-1.2016
Shell02	48.5448	0.264	67.1613	-40.5848	-71.2418	0.709	-1.4826
Shell02	48.5448	0.272	67.4837	-40.677	-70.9252	0.7634	-1.4062
Shell02	48.5448	0.28	67.2876	-41.0718	-71.2185	0.7631	-1.4377
Shell02	48.5448	0.288	67.085	-41.3282	-71.5681	0.7833	-1.5486
Shell02	48.5448	0.296	67.6111	-41.3511	-71.6059	0.7815	-1.5806
Shell02	48.5448	0.304	67.503	-41.3746	-71.7803	0.7597	-1.6558
Shell02	48.5448	0.312	66.2569	-42.2116	-72.3014	0.7465	-1.7123
Shell02	48.5448	0.32	68.0753	-41.7844	-72.0419	0.6788	-1.9127
Shell02	48.5448	0.328	67.1852	-42.5826	-72.7907	0.7	-1.8252
Shell02	48.5448	0.336	66.8786	-42.9647	-72.8635	0.6705	-1.8262
Shell02	48.5448	0.344	67.1324	-43.0989	-73.0808	0.6109	-1.868
Shell02	48.5448	0.352	67.6073	-43.1671	-73.2186	0.5974	-1.8436
Shell02	48.5448	0.36	67.207	-43.5895	-73.5604	0.5955	-1.7925
Shell02	48.5448	0.368	66.1431	-44.4716	-74.6188	0.1994	-1.5875
Shell03	49.7667	0	0	0	0	1.5447	0.3062
Shell03	49.7667	0.008	0.5424	0.4333	-15.2431	1.5071	-1.5014
Shell03	49.7667	0.016	-5.296	1.9948	-64.3837	1.0107	2.8701
Shell03	49.7667	0.024	-24.4406	7.6769	-87.7348	0.0632	2.7355
Shell03	49.7667	0.032	-37.8325	14.4383	-89.7898	-0.7057	-3.1057
Shell03	49.7667	0.04	-47.2924	17.2431	-82.7074	-1.1604	-2.8065
Shell03	49.7667	0.048	-51.7623	18.3365	-80.2827	-1.0508	-0.7815
Shell03	49.7667	0.056	-53.6621	18.6318	-78.0183	-0.9179	-1.1529
Shell03	49.7667	0.064	-54.052	18.7876	-76.587	-1.0421	-1.2243
Shell03	49.7667	0.072	-57.5268	20.2909	-73.964	-0.8146	-1.3911
Shell03	49.7667	0.08	-55.9749	19.7067	-73.3292	-0.8664	-1.4525
Shell03	49.7667	0.088	-55.3644	19.5235	-72.6565	-0.8973	-1.9034
Shell03	49.7667	0.096	-54.2703	18.5624	-72.5652	-0.9161	-2.1919
Shell03	49.7667	0.104	-54.0773	18.0873	-72.7743	-0.8397	-2.2303
Shell03	49.7667	0.112	-54.7028	17.9901	-71.6592	-0.6867	-2.2131

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell03	49.7667	0.12	-56.329	18.6792	-70.3323	-0.7042	-2.2364
Shell03	49.7667	0.128	-57.7008	18.696	-70.2893	-0.7605	-2.0422
Shell03	49.7667	0.136	-58.1909	18.4651	-70.6577	-0.8091	-2.2415
Shell03	49.7667	0.144	-58.5944	17.8119	-70.0612	-0.8067	-2.355
Shell03	49.7667	0.152	-59.7988	18.3639	-70.294	-0.8194	-2.2897
Shell03	49.7667	0.16	-60.4043	18.5446	-70.4634	-0.754	-2.4069
Shell03	49.7667	0.168	-60.5385	18.7368	-70.5535	-0.7591	-2.3689
Shell03	49.7667	0.176	-62.9032	18.3676	-70.1143	-0.8445	-1.9916
Shell03	49.7667	0.184	-62.1198	18.624	-70.3895	-0.8101	-2.1095
Shell03	49.7667	0.192	-62.4483	18.6613	-70.357	-0.7993	-2.1661
Shell03	49.7667	0.2	-62.2837	18.6426	-70.3733	-0.8049	-2.1381
Shell03	49.7667	0.208	-63.1653	19.0028	-69.9697	-0.8715	-2.0614
Shell03	49.7667	0.216	-62.8161	18.3881	-70.1857	-0.8117	-1.947
Shell03	49.7667	0.224	-63.4368	18.3342	-69.9268	-0.8902	-2.1514
Shell03	49.7667	0.232	-63.836	18.5179	-69.7995	-0.892	-2.2337
Shell03	49.7667	0.24	-64.0549	18.3219	-70.0769	-0.8131	-2.1874
Shell03	49.7667	0.248	-64.1116	17.8092	-69.7804	-0.8283	-2.2345
Shell03	49.7667	0.256	-64.3688	17.6803	-69.8426	-0.8295	-2.3153
Shell03	49.7667	0.264	-64.6388	17.3947	-69.8247	-0.8238	-2.374
Shell03	49.7667	0.272	-64.6388	17.3947	-69.8247	-0.8238	-2.374
Shell03	49.7667	0.28	-64.4087	16.997	-70.2114	-0.7801	-2.297
Shell03	49.7667	0.288	-63.8328	16.6326	-70.3837	-0.7768	-2.4487
Shell03	49.7667	0.296	-64.6921	17.2582	-70.2427	-0.7399	-2.5578
Shell03	49.7667	0.304	-64.6921	17.2582	-70.2427	-0.7399	-2.5578
Shell03	49.7667	0.312	-64.6921	17.2582	-70.2427	-0.7399	-2.5578
Shell03	49.7667	0.32	-64.6678	17.1734	-70.216	-0.7401	-2.5446
Shell03	49.7667	0.328	-64.7983	17.5669	-69.8918	-0.702	-2.4832
Shell03	49.7667	0.336	-65.5322	17.2952	-69.6347	-0.7052	-2.5194
Shell03	49.7667	0.344	-65.1371	16.7201	-70.1318	-0.7651	-2.5574
Shell03	49.7667	0.352	-65.7729	16.912	-70.0792	-0.7502	-2.5405
Shell03	49.7667	0.36	-65.9674	17.2858	-70.0731	-0.68	-2.3788
Shell03	49.7667	0.368	-65.9912	17.3239	-70.2348	-0.6708	-2.3479
Shell03	49.7667	0.376	-66.1855	17.0154	-70.3928	-0.7068	-2.4842
Shell03	49.7667	0.384	-66.1132	17.0939	-70.6914	-0.6372	-2.3853
Shell03	49.7667	0.392	-66.2129	17.1339	-70.8544	-0.7009	-2.4193
Shell03	49.7667	0.4	-66.4155	17.1667	-70.9172	-0.6858	-2.4424
Shell03	49.7667	0.408	-67.3014	18.3308	-70.7428	-0.6274	-2.2444
Shell03	49.7667	0.416	-68.0678	19.3308	-70.7596	-0.5705	-2.202
Shell03	49.7667	0.424	-68.5308	19.3233	-70.574	-0.624	-2.1985
Shell03	49.7667	0.432	-68.432	19.4053	-70.6971	-0.6206	-2.1936
Shell03	49.7667	0.44	-68.7948	19.4405	-71.0938	-0.5832	-2.1422
Shell03	49.7667	0.448	-68.7047	19.3208	-71.3256	-0.612	-2.1645
Shell03	49.7667	0.456	-69.5694	19.1167	-71.7092	-0.6711	-2.1827
Shell03	49.7667	0.464	-69.7461	19.4031	-71.4446	-0.7059	-2.2322
Shell03	49.7667	0.472	-69.7743	19.3168	-71.874	-0.6959	-2.1994
Shell03	49.7667	0.48	-69.9207	19.6251	-71.9481	-0.6878	-2.1893
Shell03	49.7667	0.488	-70.0718	19.7733	-72.2802	-0.7079	-2.2681
Shell03	49.7667	0.496	-70.2266	20.0971	-72.0819	-0.6741	-2.2545
Shell03	49.7667	0.504	-69.8472	19.652	-72.5292	-0.6725	-2.2107
Shell03	49.7667	0.512	-70.2113	19.6964	-72.4962	-0.6827	-2.16
Shell03	49.7667	0.52	-70.3008	19.5981	-72.7116	-0.7134	-2.1568
Shell03	49.7667	0.528	-70.8958	20.3129	-72.1569	-0.6281	-2.1616
Shell03	49.7667	0.536	-70.9879	20.433	-71.9254	-0.5994	-2.1386

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell03	49.7667	0.544	-71.1627	20.2608	-72.7341	-0.6856	-2.1158
Shell03	49.7667	0.552	-70.8709	19.8954	-73.4376	-0.7134	-2.1386
Shell03	49.7667	0.56	-71.0305	20.0181	-73.6934	-0.7368	-2.1032
Shell03	49.7667	0.568	-71.0305	20.0181	-73.6934	-0.7368	-2.1032
Shell03	49.7667	0.576	-72.1193	20.907	-73.2964	-0.6244	-1.9166
Shell03	49.7667	0.584	-72.1193	20.907	-73.2964	-0.6244	-1.9166
Shell03	49.7667	0.592	-72.1915	20.9822	-73.6067	-0.6561	-1.937
Shell03	49.7667	0.6	-72.7151	21.6165	-73.3043	-0.5906	-1.8889
Shell03	49.7667	0.608	-72.6299	21.4436	-73.3996	-0.6123	-1.912
Shell03	49.7667	0.616	-73.0299	21.5207	-73.8043	-0.6272	-1.8196
Shell03	49.7667	0.624	-72.8324	21.1946	-74.3978	-0.7155	-1.9052
Shell03	49.7667	0.632	-72.9934	21.3743	-74.472	-0.718	-1.9442
Shell03	49.7667	0.64	-73.2359	21.5737	-73.9673	-0.6749	-1.9151
Shell03	49.7667	0.648	-73.3589	21.7755	-74.0362	-0.678	-1.9059
Shell03	49.7667	0.656	-73.801	22.1012	-74.1471	-0.6772	-1.8486
Shell03	49.7667	0.664	-73.8873	22.2488	-74.7068	-0.6802	-1.8618
Shell03	49.7667	0.672	-74.2386	22.7454	-74.7529	-0.6524	-1.7826
Shell03	49.7667	0.68	-73.8382	22.7889	-75.0649	-0.65	-1.8424
Shell03	49.7667	0.688	-74.232	23.4865	-75.0454	-0.6267	-1.807
Shell03	49.7667	0.696	-74.6311	23.6146	-75.3594	-0.5318	-1.7689
Shell03	49.7667	0.704	-74.3512	23.6402	-75.8336	-0.5695	-1.8738
Shell03	49.7667	0.712	-75.2101	24.1205	-75.9401	-0.5727	-1.8338
Shell03	49.7667	0.72	-75.064	24.1538	-75.9082	-0.6198	-1.9145
Shell03	49.7667	0.728	-75.1887	24.5417	-75.4608	-0.5695	-1.9326
Shell03	49.7667	0.736	-75.0324	24.6763	-75.6344	-0.5809	-1.9688
Shell03	49.7667	0.744	-74.9958	24.9177	-75.5082	-0.5721	-1.9316
Shell03	49.7667	0.752	-75.1211	25.1883	-75.7133	-0.585	-1.921
Shell03	49.7667	0.76	-75.8994	26.7539	-76.5784	-0.62	-1.7404
Shell03	49.7667	0.768	-75.7977	26.9203	-76.9949	-0.6528	-1.8975
Shell03	49.7667	0.776	-75.7525	27.1803	-77.2172	-0.6658	-1.8569
Shell03	49.7667	0.784	-75.69	27.2423	-77.8853	-0.6344	-1.7999
Shell03	49.7667	0.792	-76.0056	27.8196	-78.0258	-0.5879	-1.779
Shell03	49.7667	0.8	-76.4592	28.4099	-78.1172	-0.6083	-1.7964
Shell03	49.7667	0.808	-76.924	29.1488	-78.4394	-0.5861	-1.7106
Shell03	49.7667	0.816	-76.3914	28.5047	-79.4806	-0.6798	-1.7298
Shell03	49.7667	0.824	-76.6474	28.8429	-80.0204	-0.7032	-1.7778
Shell03	49.7667	0.832	-76.889	29.6777	-80.2791	-0.6992	-1.7215
Shell03	49.7667	0.84	-77.0677	29.9134	-80.7249	-0.7199	-1.7205
Shell03	49.7667	0.848	-77.5191	30.4819	-81.0512	-0.7136	-1.7024
Shell03	49.7667	0.856	-78.1238	31.129	-81.5718	-0.6571	-1.5761
Shell03	49.7667	0.864	-78.4074	31.6736	-82.0009	-0.652	-1.6233
Shell03	49.7667	0.872	-77.9371	31.729	-82.1658	-0.6412	-1.555
Shell03	49.7667	0.88	-77.5979	32.0298	-82.1351	-0.6676	-1.5386
Shell03	49.7667	0.888	-77.8843	32.7004	-82.1162	-0.666	-1.5219
Shell03	49.7667	0.896	-78.2081	33.1101	-82.5019	-0.7064	-1.5405
Shell03	49.7667	0.904	-78.3935	33.9075	-82.7308	-0.7019	-1.6097
Shell03	49.7667	0.912	-78.5743	34.635	-83.6708	-0.7263	-1.6761
Shell03	49.7667	0.92	-79.387	35.696	-83.7504	-0.6272	-1.654
Shell03	49.7667	0.928	-79.4526	35.8453	-84.1418	-0.5677	-1.6221
Shell03	49.7667	0.936	-79.3741	36.2976	-84.4524	-0.5253	-1.5877
Shell03	49.7667	0.944	-79.4594	37.4545	-84.9394	-0.5602	-1.5131
Shell03	49.7667	0.952	-79.8507	38.0093	-85.6542	-0.6401	-1.539
Shell03	49.7667	0.96	-79.9108	39.1967	-86.1629	-0.636	-1.4898

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell03	49.7667	0.968	-79.5033	39.2457	-86.4993	-0.7029	-1.511
Shell03	49.7667	0.976	-78.5935	39.7468	-87.5226	-0.841	-1.6439
Shell03	49.7667	0.984	-79.1755	41.2351	-87.6466	-0.7367	-1.7517
Shell03	49.7667	0.992	-79.5754	42.1399	-88.7008	-0.7893	-1.7205
Shell03	49.7667	1	-79.812	43.2896	-89.2611	-0.8128	-1.6498
Shell03	49.7667	1.008	-80.4262	44.6592	-89.9015	-0.7322	-1.5087
Shell03	49.7667	1.016	-80.3214	46.1345	-91.2457	-0.6998	-1.518
Shell03	49.7667	1.024	-80.2359	47.5093	-92.0697	-0.7486	-1.5126
Shell03	49.7667	1.032	-80.8017	48.7458	-92.2944	-0.6688	-1.4411
Shell03	49.7667	1.04	-80.7427	48.7978	-93.0579	-0.6451	-1.406
Shell03	49.7667	1.048	-80.8567	49.6306	-94.1289	-0.68	-1.4472
Shell03	49.7667	1.056	-80.5461	50.0614	-94.7677	-0.6757	-1.4699
Shell03	49.7667	1.064	-80.6784	50.7873	-95.3967	-0.6406	-1.4445
Shell03	49.7667	1.072	-81.0086	51.9237	-96.1591	-0.6147	-1.3648
Shell03	49.7667	1.08	-80.7752	52.099	-97.8776	-0.6204	-1.3362
Shell03	49.7667	1.088	-80.503	52.0929	-99.2772	-0.611	-1.3539
Shell03	49.7667	1.096	-80.5548	52.499	-100.1985	-0.5847	-1.3665
Shell03	49.7667	1.104	-81.1302	53.3202	-101.0223	-0.6156	-1.3821
Shell03	49.7667	1.112	-81.2261	54.0061	-101.8313	-0.5585	-1.3386
Shell03	49.7667	1.12	-81.1316	54.1954	-103.1676	-0.7093	-1.3619
Shell03	49.7667	1.128	-80.8049	55.2282	-103.1463	-0.7242	-1.44
Shell03	49.7667	1.136	-81.4454	56.7693	-103.1012	-0.6973	-1.411
Shell03	49.7667	1.144	-81.4199	57.3477	-103.4332	-0.7074	-1.3663
Shell03	49.7667	1.152	-81.4248	58.1866	-104.1657	-0.7767	-1.4598
Shell03	49.7667	1.16	-82.1841	60.3825	-104.3437	-0.6711	-1.4875
Shell03	49.7667	1.168	-82.3501	61.1094	-105.1628	-0.666	-1.506
Shell03	49.7667	1.176	-81.9174	61.701	-106.2002	-0.8129	-1.5678
Shell03	49.7667	1.184	-81.7559	62.2385	-106.8133	-0.81	-1.5364
Shell03	49.7667	1.192	-81.4013	61.9924	-107.6345	-0.8713	-1.6366
Shell03	49.7667	1.2	-81.3158	62.5791	-108.8721	-0.9135	-1.65
Shell03	49.7667	1.208	-81.1631	62.7011	-109.7356	-0.9467	-1.7323
Shell03	49.7667	1.216	-81.4344	63.5686	-111.7383	-0.9229	-1.8042
Shell03	49.7667	1.224	-80.5504	63.3854	-113.1806	-0.9	-1.9245
Shell03	49.7667	1.232	-80.5685	64.5638	-114.1812	-0.8745	-1.857
Shell03	49.7667	1.24	-79.7626	65.1303	-115.3671	-0.8466	-2.1397
Shell03	49.7667	1.248	-79.9629	66.2943	-115.8098	-0.8032	-2.1615
Shell03	49.7667	1.256	-80.3466	66.6056	-116.4432	-0.7867	-2.0163
Shell03	49.7667	1.264	-79.7591	66.8307	-117.2809	-0.8132	-1.8658
Shell03	49.7667	1.272	-79.2165	67.5388	-118.0612	-0.8241	-1.9517
Shell03	49.7667	1.28	-78.6667	67.7299	-119.4552	-0.8322	-2.0065
Shell03	49.7667	1.288	-78.7484	68.3596	-120.0808	-0.7976	-1.8856
Shell03	49.7667	1.296	-79.1924	68.7015	-121.1673	-0.8025	-1.8473
Shell03	49.7667	1.304	-79.9971	69.3496	-121.6128	-0.823	-1.8279
Shell03	49.7667	1.312	-81.8095	70.7617	-122.6834	-0.8849	-1.7204
Shell03	49.7667	1.32	-80.8646	71.2031	-124.0263	-0.9273	-1.9073
Shell03	49.7667	1.328	-80.8687	72.0637	-125.3943	-0.9509	-1.8539
Shell03	49.7667	1.336	-78.621	72.5048	-126.574	-0.9559	-2.0465
Shell03	49.7667	1.344	-78.6624	73.1629	-127.6907	-0.9209	-1.8442
Shell03	49.7667	1.352	-77.7269	72.9207	-131.2237	-1.0034	-1.8535
Shell03	49.7667	1.36	-77.2867	73.4381	-133.0738	-0.9427	-1.8399
Shell03	49.7667	1.368	-77.5488	75.2099	-134.6731	-0.8912	-1.931
Shell03	49.7667	1.376	-77.5835	76.1834	-135.3451	-0.861	-2.0221
Shell03	49.7667	1.384	-75.5623	76.6221	-137.3574	-0.8828	-1.8045

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell03	49.7667	1.392	-76.1997	77.9359	-138.8809	-0.8465	-1.9353
Shell03	49.7667	1.4	-76.2851	77.413	-141.6237	-0.9786	-2.1298
Shell03	49.7667	1.408	-76.2867	78.5162	-142.8089	-0.9532	-2.1027
Shell03	49.7667	1.416	-76.538	80.0854	-143.6934	-0.9165	-2.1319
Shell03	49.7667	1.424	-77.1949	83.0222	-146.6507	-0.8585	-2.4642
Shell03	49.7667	1.432	-77.0396	84.438	-148.3097	-0.7925	-2.4641
Shell03	49.7667	1.44	-77.7874	86.0101	-150.446	-0.7722	-2.4739
Shell03	49.7667	1.448	-77.0392	86.6281	-151.9849	-0.855	-2.5164
Shell03	49.7667	1.456	-75.2751	87.9884	-155.4781	-0.84	-2.5876
Shell03	49.7667	1.464	-74.2144	88.5707	-156.4091	-0.8849	-2.539
Shell03	49.7667	1.472	-72.4363	88.7358	-158.5618	-0.8967	-2.5631
Shell03	49.7667	1.48	-71.6231	89.6149	-159.3555	-0.8395	-2.4767
Shell03	49.7667	1.488	-71.1069	89.607	-160.7003	-0.8584	-2.4908
Shell03	49.7667	1.496	-70.8066	89.9813	-161.9597	-0.9012	-2.5654
Shell03	49.7667	1.504	-70.6762	90.2564	-162.9311	-0.9211	-2.5998
Shell03	49.7667	1.512	-70.6516	90.8237	-163.8597	-0.9018	-2.7465
Shell03	49.7667	1.52	-70.3678	91.4665	-165.6809	-0.931	-2.6401
Shell03	49.7667	1.528	-69.503	91.9988	-167.3278	-0.9583	-2.6401
Shell03	49.7667	1.536	-68.4206	91.0302	-168.5082	-0.9901	-2.8664
Shell03	49.7667	1.544	-66.8773	90.4949	-170.9073	-0.9989	-2.9153
Shell03	49.7667	1.552	-66.4603	90.758	-171.7184	-1.0209	-2.9336
Shell03	49.7667	1.56	-66.2048	91.49	-172.4853	-1.0402	-3.0212
Shell03	49.7667	1.568	-63.2116	89.9624	-174.9095	-1.0034	3.1318
Shell03	49.7667	1.576	-61.0176	91.2251	-177.8145	-1.1296	2.934
Shell03	49.7667	1.584	-60.303	91.4774	-179.2967	-1.155	2.8636
Shell03	49.7667	1.592	-59.2811	91.7785	-180.8246	-1.1815	2.8576
Shell03	49.7667	1.6	-57.8662	91.5986	-182.5028	-1.1918	2.8183
Shell03	49.7667	1.608	-56.9114	91.9965	-186.0634	-1.1894	2.8194
Shell03	49.7667	1.616	-56.9444	93.8084	-188.2784	-1.2232	2.8041
Shell03	49.7667	1.624	-56.3542	93.6974	-189.2961	-1.211	2.792
Shell03	49.7667	1.632	-54.7708	92.1881	-191.3672	-1.2186	2.7866
Shell03	49.7667	1.64	-53.9856	91.1494	-194.0613	-1.2294	2.6374
Shell03	49.7667	1.648	-53.326	90.8959	-195.071	-1.2705	2.5909
Shell03	49.7667	1.656	-52.0849	90.5333	-197.508	-1.3362	2.4387
Shell03	49.7667	1.664	-51.8403	90.5712	-199.3519	-1.3175	2.3675
Shell03	49.7667	1.672	-48.6216	89.9663	-204.6881	-1.3817	1.5843
Shell03	49.7667	1.68	-49.3171	89.7237	-206.7684	-1.3904	0.9304
Shell03	49.7667	1.688	-50.0561	89.4185	-208.4574	-1.3937	0.5641
Shell03	49.7667	1.696	-48.7624	88.6268	-209.3138	-1.4433	0.4777
Shell03	49.7667	1.704	-48.24	88.7432	-209.9362	-1.5325	0.4038
Shell03	49.7667	1.712	-48.0381	89.1194	-211.6629	-1.5492	-0.6333
Shell03	49.7667	1.72	-47.6406	88.826	-213.4962	-1.5332	-1.6615
Shell03	49.7667	1.728	-47.6155	88.8285	-215.0986	-1.5323	-1.7199
Shell03	49.7667	1.736	-47.4479	88.1416	-216.2735	-1.4985	-1.5555
Shell03	49.7667	1.744	-46.9964	87.6054	-217.487	-1.4914	-1.9226
Shell03	49.7667	1.752	-45.3568	87.5651	-218.299	-1.3193	-3.1235
Shell03	49.7667	1.76	-48.9415	88.5953	-219.4323	-1.2518	-3.1254
Shell03	49.7667	1.768	-49.8259	88.8463	-220.7963	-1.1069	3.0902
Shell03	49.7667	1.776	-49.3952	89.2824	-221.8498	-1.0304	3.088
Shell03	49.7667	1.784	-49.0673	89.0973	-222.8776	-0.985	-3.1141
Shell03	49.7667	1.792	-47.7574	88.6711	-225.8095	-0.8455	3.0481
Shell03	49.7667	1.8	-48.1379	89.0281	-226.618	-0.8638	3.0119
Shell03	49.7667	1.808	-46.957	88.7964	-227.7718	-0.7828	3.036

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell03	49.7667	1.816	-45.1361	88.5855	-229.2609	-0.7607	2.9648
Shell03	49.7667	1.824	-45.0362	88.3727	-230.2411	-0.7478	2.9816
Shell03	49.7667	1.832	-45.4462	89.0736	-231.5108	-0.7722	2.9601
Shell03	49.7667	1.84	-47.7026	90.2023	-233.994	-0.6539	2.8993
Shell03	49.7667	1.848	-46.2559	91.0196	-236.4721	-0.6138	2.9291
Shell03	49.7667	1.856	-46.1283	90.7157	-237.2543	-0.6633	2.897
Shell03	49.7667	1.864	-46.2403	91.2565	-238.0102	-0.6519	2.8618
Shell03	49.7667	1.872	-46.1195	91.7093	-239.2479	-0.708	2.9065
Shell03	49.7667	1.88	-46.1859	91.9259	-239.556	-0.7058	2.9193
Shell03	49.7667	1.888	-46.279	92.4613	-241.2137	-0.6523	2.9422
Shell03	49.7667	1.896	-42.6613	91.79	-242.7658	-0.7881	3.0161
Shell03	49.7667	1.904	-38.7082	89.5336	-246.1192	-0.9173	2.765
Shell03	49.7667	1.912	-35.1944	88.6432	-247.4744	-0.7697	2.7275
Shell03	49.7667	1.92	-33.8064	88.4501	-251.6181	-0.7018	2.6386
Shell03	49.7667	1.928	-33.9223	89.0005	-252.5136	-0.6762	2.6128
Shell03	49.7667	1.936	-33.1186	88.9576	-253.9968	-0.7158	2.5858
Shell03	49.7667	1.944	-29.9035	86.3374	-257.878	-0.8002	2.5326
Shell03	49.7667	1.952	-29.3954	85.3098	-258.4534	-0.7474	2.432
Shell03	49.7667	1.96	-29.5887	85.3369	-259.5896	-0.6872	2.3542
Shell03	49.7667	1.968	-29.9468	85.7376	-262.5951	-0.7891	2.3041
Shell03	49.7667	1.976	-28.6212	84.5677	-264.2374	-0.7804	2.2462
Shell03	49.7667	1.984	-28.4336	83.6979	-266.0059	-0.7928	2.2176
Shell03	49.7667	1.992	-29.7264	83.4834	-266.946	-0.8828	2.0867
Shell03	49.7667	2	-29.1209	82.9895	-269.0053	-0.9114	2.1316
Shell03	49.7667	2.008	-27.7845	81.0622	-270.7213	-0.8774	2.0283
Shell03	49.7667	2.016	-28.066	81.8056	-271.9585	-0.8738	1.8744
Shell03	49.7667	2.024	-26.4792	80.8239	-273.2336	-0.9189	1.8519
Shell03	49.7667	2.032	-26.2977	80.4997	-273.526	-0.9036	1.8513
Shell03	49.7667	2.04	-25.0533	78.7647	-274.9055	-0.9511	1.7418
Shell03	49.7667	2.048	-23.2991	77.4842	-276.4997	-0.9537	1.5196
Shell03	49.7667	2.056	-23.2971	78.1258	-276.4692	-0.9966	1.5299
Shell03	49.7667	2.064	-22.9514	78.0256	-277.4651	-1.06	1.4401
Shell03	49.7667	2.072	-24.5925	78.0281	-278.7924	-1.0606	1.1155
Shell03	49.7667	2.08	-24.4609	77.5422	-279.8328	-1.0375	0.924
Shell03	49.7667	2.088	-24.1442	77.3233	-280.2874	-1.0449	0.7958
Shell03	49.7667	2.096	-24.2644	76.5738	-281.4507	-0.9986	0.4289
Shell03	49.7667	2.104	-23.1918	75.7048	-282.5767	-1.0011	0.5627
Shell03	49.7667	2.112	-23.1348	75.5102	-283.6984	-1.0354	0.5126
Shell03	49.7667	2.12	-23.9885	75.8103	-285.7234	-0.9795	0.487
Shell03	49.7667	2.128	-24.3689	74.1198	-286.9169	-0.9547	0.6222
Shell03	49.7667	2.136	-23.5786	72.9827	-287.4608	-0.9492	0.5829
Shell03	49.7667	2.144	-24.261	72.6736	-288.549	-0.9343	0.4697
Shell03	49.7667	2.152	-24.6236	73.1516	-289.9517	-0.8619	0.4512
Shell03	49.7667	2.16	-24.6423	72.2176	-291.7695	-0.8437	0.2597
Shell03	49.7667	2.168	-25.1594	71.416	-293.2777	-0.833	0.3011
Shell03	49.7667	2.176	-25.1535	71.5208	-295.0195	-0.7903	0.126
Shell03	49.7667	2.184	-24.9249	71.0908	-295.9434	-0.756	0.1406
Shell03	49.7667	2.192	-26.3122	70.1551	-298.1595	-0.7019	0.0098
Shell03	49.7667	2.2	-27.3754	69.9162	-299.1815	-0.6802	-0.0346
Shell03	49.7667	2.208	-27.7389	69.1191	-300.3876	-0.7008	-0.0659
Shell03	49.7667	2.216	-28.1952	68.9468	-302.179	-0.7061	-0.1773
Shell03	49.7667	2.224	-30.0507	66.4117	-306.1601	-0.8881	-0.3765
Shell04	84.0531	0	0	0	0	1.511	1.1448

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell04	84.0531	0.008	6.8852	-2.6347	-49.6658	1.4536	-0.76
Shell04	84.0531	0.016	19.4132	-6.7484	-84.8192	0.5913	-0.8567
Shell04	84.0531	0.024	28.7494	-14.8103	-102.2568	-0.8733	-0.8132
Shell04	84.0531	0.032	32.1587	-22.9858	-111.7587	-1.3912	-0.4368
Shell04	84.0531	0.04	35.2258	-25.7004	-115.728	-1.5004	-0.4706
Shell04	84.0531	0.048	35.1359	-29.9096	-120.9711	-1.3969	0.9671
Shell04	84.0531	0.056	34.4867	-33.8122	-124.6927	-1.3874	0.9113
Shell04	84.0531	0.064	34.3993	-37.289	-128.8595	-1.3543	1.0161
Shell04	84.0531	0.072	32.6746	-40.6331	-133.3794	-1.4899	1.9043
Shell04	84.0531	0.08	30.6621	-43.1332	-136.6917	-1.5357	1.5753
Shell04	84.0531	0.088	28.9096	-45.8474	-140.0835	-1.5166	-2.4904
Shell04	84.0531	0.096	26.6219	-48.7405	-144.1368	-1.2682	-2.2771
Shell04	84.0531	0.104	24.1599	-51.3397	-147.2623	-1.0879	-2.289
Shell04	84.0531	0.112	22.8752	-52.2542	-149.0516	-1.0223	-2.3243
Shell04	84.0531	0.12	21.2819	-53.7566	-151.5797	-0.8569	-2.2393
Shell04	84.0531	0.128	20.2469	-54.7091	-152.8314	-0.7858	-2.2633
Shell04	84.0531	0.136	18.9827	-55.4906	-154.3713	-0.5654	-2.3081
Shell04	84.0531	0.144	18.3579	-56.1814	-155.8671	-0.4013	-2.307
Shell04	84.0531	0.152	17.6933	-56.7284	-156.6118	-0.3022	-2.3312
Shell04	84.0531	0.16	16.6049	-57.9186	-157.261	-0.35	-2.3477
Shell04	84.0531	0.168	15.8707	-58.2763	-157.8014	-0.3189	-2.3735
Shell04	84.0531	0.176	15.6189	-58.452	-158.5202	-0.3444	-2.4131
Shell04	84.0531	0.184	15.0706	-58.397	-158.302	-0.4694	-2.4479
Shell04	84.0531	0.192	14.9793	-57.8626	-157.7576	-0.5752	-2.5392
Shell04	84.0531	0.2	14.9673	-57.1147	-157.2018	-0.5654	-2.5319
Shell04	84.0531	0.208	14.7857	-56.4792	-156.4358	-0.6263	-2.6001
Shell04	84.0531	0.216	14.5684	-56.1076	-156.0649	-0.6655	-2.62
Shell04	84.0531	0.224	14.6514	-55.8972	-155.7458	-0.6651	-2.6298
Shell04	84.0531	0.232	14.3892	-55.4547	-155.0783	-0.67	-2.6234
Shell04	84.0531	0.24	14.6855	-54.9543	-154.186	-0.7553	-2.7687
Shell04	84.0531	0.248	15.3297	-53.4961	-152.5687	-0.9325	-2.9792
Shell04	84.0531	0.256	15.6183	-52.2361	-151.7551	-0.9905	-3.0741
Shell04	84.0531	0.264	15.5778	-52.1176	-151.6948	-0.9764	-3.0267
Shell04	84.0531	0.272	15.6658	-51.9411	-151.604	-0.9595	-3.0361
Shell04	84.0531	0.28	15.6254	-52.202	-151.3557	-0.8695	-2.8837
Shell04	84.0531	0.288	15.8825	-51.8639	-151.1267	-0.8098	-2.8068
Shell04	84.0531	0.296	16.4264	-51.1165	-150.8477	-0.7187	-2.7061
Shell04	84.0531	0.304	16.5427	-50.7938	-150.7192	-0.7054	-2.6991
Shell04	84.0531	0.312	16.3891	-50.5555	-150.4594	-0.7454	-2.699
Shell04	84.0531	0.32	16.5707	-49.9285	-150.2086	-0.6655	-2.6142
Shell04	84.0531	0.328	16.8971	-49.7557	-150.4196	-0.6495	-2.5902
Shell04	84.0531	0.336	16.5953	-49.9118	-150.883	-0.631	-2.5518
Shell04	84.0531	0.344	16.6892	-49.9743	-150.9926	-0.6217	-2.5331
Shell04	84.0531	0.352	16.6759	-49.7813	-151.0284	-0.5876	-2.4939
Shell04	84.0531	0.36	16.5844	-49.8547	-151.2585	-0.5611	-2.461
Shell04	84.0531	0.368	16.7166	-49.6353	-150.957	-0.6184	-2.4771
Shell04	84.0531	0.376	17.0099	-49.0318	-151.0685	-0.7581	-2.5753
Shell04	84.0531	0.384	17.2481	-48.6207	-151.4371	-0.8341	-2.6055
Shell04	84.0531	0.392	17.4812	-48.2903	-151.2932	-0.7794	-2.5679
Shell04	84.0531	0.4	17.3392	-48.3357	-151.5563	-0.7945	-2.5463
Shell04	84.0531	0.408	17.6159	-47.8466	-151.6626	-0.7477	-2.528
Shell04	84.0531	0.416	17.728	-47.8663	-151.6716	-0.7551	-2.5106
Shell04	84.0531	0.424	17.8482	-47.7591	-151.7252	-0.7514	-2.49

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell04	84.0531	0.432	17.8251	-47.8445	-151.9256	-0.7209	-2.4788
Shell04	84.0531	0.44	18.0417	-47.7864	-152.532	-0.6976	-2.4945
Shell04	84.0531	0.448	18.2764	-47.6268	-152.5764	-0.6752	-2.4972
Shell04	84.0531	0.456	18.3671	-47.6408	-153.2047	-0.7182	-2.5155
Shell04	84.0531	0.464	18.4993	-47.5441	-153.4991	-0.7264	-2.5106
Shell04	84.0531	0.472	18.5776	-47.4394	-154.1953	-0.7759	-2.5267
Shell04	84.0531	0.48	18.1523	-46.9382	-154.4617	-0.7938	-2.3952
Shell04	84.0531	0.488	18.3417	-47.143	-154.8364	-0.8196	-2.4579
Shell04	84.0531	0.496	18.5236	-46.8419	-155.2803	-0.8129	-2.4551
Shell04	84.0531	0.504	18.7668	-47.0077	-156.1479	-0.7579	-2.4755
Shell04	84.0531	0.512	19.1356	-47.01	-156.7526	-0.78	-2.5295
Shell04	84.0531	0.52	18.9231	-46.6366	-157.3016	-0.8323	-2.4636
Shell04	84.0531	0.528	19.1158	-46.2347	-157.3037	-0.8745	-2.4748
Shell04	84.0531	0.536	19.2634	-45.7702	-157.9933	-0.8551	-2.4218
Shell04	84.0531	0.544	19.3903	-45.8334	-158.3847	-0.8771	-2.4481
Shell04	84.0531	0.552	19.6318	-45.5715	-158.589	-0.8676	-2.5489
Shell04	84.0531	0.56	19.4247	-45.6978	-159.1536	-0.8598	-2.5332
Shell04	84.0531	0.568	19.6846	-45.4657	-159.5282	-0.9149	-2.6023
Shell04	84.0531	0.576	19.6372	-45.6074	-160.0733	-0.9367	-2.5829
Shell04	84.0531	0.584	19.9616	-44.8949	-160.7709	-1.0049	-2.6286
Shell04	84.0531	0.592	20.1945	-44.7206	-161.4063	-1.066	-2.7235
Shell04	84.0531	0.6	20.5109	-44.4474	-161.7435	-1.0043	-2.6691
Shell04	84.0531	0.608	20.6551	-44.5165	-162.3089	-0.9791	-2.6833
Shell04	84.0531	0.616	21.0591	-44.0303	-162.8541	-1.0311	-2.7787
Shell04	84.0531	0.624	21.3129	-44.008	-163.4713	-1.0297	-2.8382
Shell04	84.0531	0.632	21.4235	-43.839	-163.7372	-1.0261	-2.8105
Shell04	84.0531	0.64	21.5661	-43.1828	-164.515	-1.0677	-2.833
Shell04	84.0531	0.648	21.9122	-42.9439	-165.004	-1.0767	-2.9136
Shell04	84.0531	0.656	22.0535	-42.8309	-165.7727	-1.1233	-2.9787
Shell04	84.0531	0.664	22.2724	-42.6417	-166.2111	-1.1352	-3.0382
Shell04	84.0531	0.672	22.603	-42.2691	-166.798	-1.1706	3.105
Shell04	84.0531	0.68	23.0762	-41.9432	-167.7926	-1.2224	2.9436
Shell04	84.0531	0.688	23.5866	-41.8796	-168.4319	-1.2545	2.9443
Shell04	84.0531	0.696	23.8287	-41.9216	-169.7728	-1.2945	2.898
Shell04	84.0531	0.704	23.9459	-41.8571	-170.1866	-1.3177	2.8253
Shell04	84.0531	0.712	24.1887	-41.8592	-170.6582	-1.3429	2.7645
Shell04	84.0531	0.72	24.4889	-42.0452	-171.4141	-1.3611	2.7167
Shell04	84.0531	0.728	24.7015	-42.0003	-172.5018	-1.4044	2.7536
Shell04	84.0531	0.736	24.9636	-42.0046	-173.9002	-1.4005	2.6132
Shell04	84.0531	0.744	25.215	-41.7503	-174.365	-1.3817	2.9013
Shell04	84.0531	0.752	25.4582	-41.9476	-176.1201	-1.4195	2.8741
Shell04	84.0531	0.76	26.1261	-41.622	-176.7984	-1.438	3.1167
Shell04	84.0531	0.768	26.2377	-41.6187	-177.9564	-1.4551	3.0082
Shell04	84.0531	0.776	26.3537	-41.4629	-178.7746	-1.4482	3.1241
Shell04	84.0531	0.784	26.6752	-41.364	-179.821	-1.4366	-2.9316
Shell04	84.0531	0.792	26.8677	-41.4555	-180.4895	-1.4484	-2.824
Shell04	84.0531	0.8	26.9193	-41.5468	-181.5032	-1.4486	-2.7492
Shell04	84.0531	0.808	27.6728	-40.6279	-185.5127	-1.2965	-2.3344
Shell04	84.0531	0.816	27.3188	-41.2572	-186.3167	-1.3488	-2.3956
Shell04	84.0531	0.824	27.4029	-41.4678	-188.2155	-1.2652	-2.2767
Shell04	84.0531	0.832	27.426	-41.7292	-189.7132	-1.2503	-2.2565
Shell04	84.0531	0.84	27.509	-41.5039	-190.6786	-1.2059	-2.2554
Shell04	84.0531	0.848	27.9596	-40.7757	-191.7051	-1.1328	-2.2239

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell04	84.0531	0.856	28.1151	-40.6646	-192.7242	-1.1291	-2.2049
Shell04	84.0531	0.864	28.5168	-39.6903	-194.8212	-1.039	-2.2134
Shell04	84.0531	0.872	28.7299	-39.5026	-196.2408	-1.001	-2.1941
Shell04	84.0531	0.88	28.7912	-39.5604	-197.3523	-0.9633	-2.1802
Shell04	84.0531	0.888	29.5011	-39.5854	-198.687	-0.9007	-2.2644
Shell04	84.0531	0.896	29.6748	-39.4904	-200.2518	-0.8852	-2.2697
Shell04	84.0531	0.904	30.2366	-39.0288	-201.6152	-0.8829	-2.2996
Shell04	84.0531	0.912	31.7362	-37.2075	-204.6353	-0.8617	-2.3837
Shell04	84.0531	0.92	31.613	-36.8943	-205.7252	-0.8562	-2.4117
Shell04	84.0531	0.928	32.2189	-36.6561	-206.9396	-0.8261	-2.4593
Shell04	84.0531	0.936	32.0937	-36.895	-207.8888	-0.7803	-2.4406
Shell04	84.0531	0.944	32.0294	-36.6592	-208.8049	-0.7583	-2.4709
Shell04	84.0531	0.952	32.6264	-35.5917	-210.618	-0.7271	-2.4987
Shell04	84.0531	0.96	32.9155	-35.3161	-212.1177	-0.7183	-2.4962
Shell04	84.0531	0.968	32.4556	-35.0394	-212.7907	-0.7013	-2.5411
Shell04	84.0531	0.976	32.7809	-34.6265	-213.9415	-0.6854	-2.5436
Shell04	84.0531	0.984	33.287	-33.9642	-214.7833	-0.6791	-2.5429
Shell04	84.0531	0.992	34.4117	-33.4993	-215.766	-0.6885	-2.6282
Shell04	84.0531	1	35.4553	-32.1722	-217.3523	-0.728	-2.717
Shell04	84.0531	1.008	36.9022	-30.8572	-219.2058	-0.7267	-2.7161
Shell04	84.0531	1.016	37.3873	-29.7843	-220.0454	-0.7486	-2.8038
Shell04	84.0531	1.024	37.8787	-29.1032	-221.1266	-0.789	-2.8321
Shell04	84.0531	1.032	38.2399	-28.6951	-222.0339	-0.7735	-2.8225
Shell04	84.0531	1.04	38.7935	-28.3967	-223.0029	-0.8021	-2.8306
Shell04	84.0531	1.048	41.2884	-25.3907	-225.8056	-0.9238	3.1047
Shell04	84.0531	1.056	43.7242	-24.6588	-227.3834	-0.9674	3.1096
Shell04	84.0531	1.064	44.1575	-25.6592	-229.2664	-1.0837	2.8389
Shell04	84.0531	1.072	45.5343	-23.9805	-230.8567	-1.1003	2.758
Shell04	84.0531	1.08	46.7187	-23.5145	-233.2175	-1.1688	2.5545
Shell04	84.0531	1.088	47.1881	-23.3555	-234.6058	-1.2124	2.5729
Shell04	84.0531	1.096	47.6034	-23.2283	-235.8261	-1.2432	2.5477
Shell04	84.0531	1.104	49.4893	-23.3246	-237.097	-1.3932	1.9711
Shell04	84.0531	1.112	50.1129	-22.3165	-238.5425	-1.2797	1.7278
Shell04	84.0531	1.12	50.1148	-22.6066	-239.2763	-1.3366	1.8173
Shell04	84.0531	1.128	50.8131	-22.6997	-240.2107	-1.3768	1.5564
Shell04	84.0531	1.136	51.7207	-22.6765	-241.4607	-1.3671	1.0871
Shell04	84.0531	1.144	52.3193	-22.4832	-243.1948	-1.3635	0.8846
Shell04	84.0531	1.152	52.6946	-22.4416	-245.2058	-1.3718	1.0369
Shell04	84.0531	1.16	52.9739	-22.2178	-246.9251	-1.3207	0.5446
Shell04	84.0531	1.168	53.1997	-22.3588	-248.2784	-1.3793	0.5077
Shell04	84.0531	1.176	53.7571	-22.6414	-249.1975	-1.3503	0.3716
Shell04	84.0531	1.184	53.3998	-22.6851	-250.5032	-1.3312	0.1684
Shell04	84.0531	1.192	53.6056	-22.6374	-251.1104	-1.3557	-0.0185
Shell04	84.0531	1.2	54.106	-22.4136	-252.2267	-1.3634	-0.0706
Shell04	84.0531	1.208	54.4226	-22.1503	-253.7373	-1.4115	-0.3208
Shell04	84.0531	1.216	54.1046	-22.6349	-254.7539	-1.3657	-0.7388
Shell04	84.0531	1.224	55.1618	-22.8907	-255.729	-1.3268	-0.7754
Shell04	84.0531	1.232	55.2087	-22.9093	-256.825	-1.2647	-0.7312
Shell04	84.0531	1.24	55.1526	-22.9678	-257.7274	-1.2696	-0.8533
Shell04	84.0531	1.248	54.7318	-23.3673	-258.4976	-1.2895	-1.245
Shell04	84.0531	1.256	54.1395	-23.41	-259.7663	-1.2613	-1.4214
Shell04	84.0531	1.264	53.7222	-23.6956	-261.3255	-1.2251	-1.5307
Shell04	84.0531	1.272	53.0442	-23.4733	-262.5815	-1.2236	-1.6313

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell04	84.0531	1.28	53.2423	-23.3508	-263.9584	-1.1652	-1.7697
Shell04	84.0531	1.288	52.8548	-22.9656	-265.6457	-1.1254	-1.9258
Shell04	84.0531	1.296	52.9106	-22.6362	-266.7468	-1.1155	-1.9629
Shell04	84.0531	1.304	52.7249	-22.3799	-267.1703	-1.1009	-2.0392
Shell04	84.0531	1.312	52.5268	-22.225	-268.5508	-1.0213	-2.1044
Shell04	84.0531	1.32	52.7019	-21.8852	-269.7659	-1.0357	-2.1124
Shell04	84.0531	1.328	52.7141	-21.7474	-270.4772	-1.0063	-2.1299
Shell04	84.0531	1.336	52.041	-21.4629	-272.0318	-0.9958	-2.2748
Shell04	84.0531	1.344	51.7615	-21.2094	-273.4699	-0.925	-2.3231
Shell04	84.0531	1.352	51.8845	-21.0588	-274.1658	-0.9216	-2.3229
Shell04	84.0531	1.36	52.3069	-20.7362	-275.5859	-0.8678	-2.4167
Shell04	84.0531	1.368	52.392	-20.5351	-277.3936	-0.8346	-2.463
Shell04	84.0531	1.376	53.1048	-20.0888	-278.1704	-0.8097	-2.4888
Shell04	84.0531	1.384	53.0821	-20.2651	-278.6822	-0.7978	-2.5023
Shell04	84.0531	1.392	54.0229	-19.3591	-280.114	-0.8116	-2.5324
Shell04	84.0531	1.4	55.0664	-18.4169	-283.3933	-0.8421	-2.6629
Shell05	109.4761	0	0	0	0	1.4455	1.6417
Shell05	109.4761	0.008	-5.5839	-7.1827	-76.6644	1.0169	-2.4077
Shell05	109.4761	0.016	-12.7976	-19.5688	-98.4973	0.1366	-2.1049
Shell05	109.4761	0.024	-17.3936	-26.2212	-104.6137	-0.8982	-2.0955
Shell05	109.4761	0.032	-19.4604	-31.7341	-106.7868	-1.3202	-2.6368
Shell05	109.4761	0.04	-21.1186	-36.1692	-108.4175	-1.278	2.0473
Shell05	109.4761	0.048	-22.2528	-38.3634	-109.289	-1.0945	1.5139
Shell05	109.4761	0.056	-23.1943	-39.5331	-109.0546	-1.0919	1.3989
Shell05	109.4761	0.064	-22.7167	-41.7202	-111.1178	-1.0598	1.2867
Shell05	109.4761	0.072	-24.3712	-41.6473	-110.1945	-1.0562	1.2861
Shell05	109.4761	0.08	-26.5322	-40.4713	-108.5824	-1.0369	1.4241
Shell05	109.4761	0.088	-27.2964	-41.1735	-109.1307	-1.0319	1.4457
Shell05	109.4761	0.096	-27.6775	-41.5741	-108.6775	-1.0261	1.4105
Shell05	109.4761	0.104	-28.4565	-41.6863	-108.6725	-1.0162	1.4603
Shell05	109.4761	0.112	-28.5527	-42.2555	-109.2734	-1.0186	1.4536
Shell05	109.4761	0.12	-29.2956	-41.5164	-108.7672	-0.9891	1.4977
Shell05	109.4761	0.128	-29.9378	-41.4583	-108.7032	-0.9667	1.582
Shell05	109.4761	0.136	-29.7442	-41.5985	-108.9199	-0.9471	1.6056
Shell05	109.4761	0.144	-30.0028	-42.0892	-109.2591	-0.97	1.5672
Shell05	109.4761	0.152	-29.705	-42.9662	-110.3496	-0.9913	1.4432
Shell05	109.4761	0.16	-30.6246	-42.7385	-110.4673	-0.984	1.3878
Shell05	109.4761	0.168	-30.8353	-42.6982	-110.4729	-0.9841	1.3523
Shell05	109.4761	0.176	-32.0206	-42.88	-110.7723	-1.0002	1.1893
Shell05	109.4761	0.184	-33.2999	-43.0912	-110.9654	-0.9862	1.1949
Shell05	109.4761	0.192	-33.5906	-43.3938	-111.4232	-0.9865	1.2217
Shell05	109.4761	0.2	-33.8	-43.6128	-111.6919	-1.0033	1.1849
Shell05	109.4761	0.208	-34.119	-43.5767	-111.592	-1.0071	1.2444
Shell05	109.4761	0.216	-34.1548	-44.3208	-112.0498	-1.0317	1.1224
Shell05	109.4761	0.224	-34.4955	-44.3964	-112.1687	-1.0342	1.1597
Shell05	109.4761	0.232	-34.7518	-44.4328	-111.9357	-1.0535	1.1765
Shell05	109.4761	0.24	-34.8321	-44.9251	-112.4907	-1.0757	1.1877
Shell05	109.4761	0.248	-35.6624	-44.4782	-112.3869	-1.0846	1.0522
Shell05	109.4761	0.256	-35.836	-44.6481	-113.0167	-1.0914	1.0866
Shell05	109.4761	0.264	-36.4767	-44.511	-113.1146	-1.1094	1.1598
Shell05	109.4761	0.272	-36.9811	-44.4969	-113.521	-1.1059	1.0321
Shell05	109.4761	0.28	-37.6019	-44.3041	-113.4737	-1.1145	1.078
Shell05	109.4761	0.288	-37.7644	-44.3666	-113.7599	-1.1074	1.0713

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell05	109.4761	0.296	-38.3712	-44.4872	-114.2005	-1.114	1.1302
Shell05	109.4761	0.304	-38.6479	-44.5831	-114.6245	-1.1122	1.1457
Shell05	109.4761	0.312	-38.8472	-44.7595	-115.1742	-1.1178	1.1241
Shell05	109.4761	0.32	-39.2134	-45.0129	-115.9632	-1.1359	1.2586
Shell05	109.4761	0.328	-39.6556	-45.0253	-116.2608	-1.1346	1.2002
Shell05	109.4761	0.336	-39.8529	-45.1713	-116.8395	-1.1216	1.2086
Shell05	109.4761	0.344	-39.8468	-45.4674	-117.7081	-1.113	1.1323
Shell05	109.4761	0.352	-39.9068	-45.5367	-118.0623	-1.1182	1.1899
Shell05	109.4761	0.36	-39.9843	-45.9593	-119.0256	-1.1204	1.0149
Shell05	109.4761	0.368	-39.9117	-46.4774	-120.0217	-1.1305	0.983
Shell05	109.4761	0.376	-39.9069	-47.0944	-121.2368	-1.1272	0.8871
Shell05	109.4761	0.384	-39.8673	-47.3304	-122.0641	-1.094	0.8113
Shell05	109.4761	0.392	-39.8	-47.8176	-122.9424	-1.1138	0.9686
Shell05	109.4761	0.4	-40.7321	-47.7976	-123.4185	-1.0529	0.7288
Shell05	109.4761	0.408	-40.9967	-47.9743	-123.8961	-1.0953	0.874
Shell05	109.4761	0.416	-41.9225	-47.9022	-124.32	-1.0779	0.7546
Shell05	109.4761	0.424	-42.0567	-47.9643	-124.6971	-1.1074	0.8692
Shell05	109.4761	0.432	-42.1944	-48.3439	-125.4828	-1.0915	0.7682
Shell05	109.4761	0.44	-42.0261	-48.5916	-126.0405	-1.1434	0.9453
Shell05	109.4761	0.448	-41.5881	-49.0232	-126.694	-1.1517	0.9111
Shell05	109.4761	0.456	-41.6951	-49.17	-127.1263	-1.1639	0.9298
Shell05	109.4761	0.464	-42.181	-49.0461	-127.332	-1.1652	1.007
Shell05	109.4761	0.472	-42.3028	-49.2838	-128.0184	-1.1736	1.121
Shell05	109.4761	0.48	-42.6221	-49.2133	-128.0818	-1.1776	1.2466
Shell05	109.4761	0.488	-42.4299	-49.5794	-128.7818	-1.1818	1.4102
Shell05	109.4761	0.496	-42.5775	-49.6186	-128.999	-1.1707	1.4886
Shell05	109.4761	0.504	-42.4987	-49.8829	-129.473	-1.1286	1.6901
Shell05	109.4761	0.512	-43.6835	-49.3328	-129.9499	-1.2076	1.2009
Shell05	109.4761	0.52	-44.4513	-49.0548	-130.3061	-1.2291	0.8249
Shell05	109.4761	0.528	-45.4721	-48.5986	-130.5864	-1.1573	0.3291
Shell05	109.4761	0.536	-45.9441	-48.506	-131.1925	-1.0841	0.0753
Shell05	109.4761	0.544	-46.5287	-48.1229	-131.4219	-0.9166	-0.1588
Shell05	109.4761	0.552	-46.4134	-48.4401	-132.1209	-0.8785	-0.2231
Shell05	109.4761	0.56	-46.3413	-48.7798	-133.4354	-0.9112	-0.2669
Shell05	109.4761	0.568	-46.3778	-49.1775	-134.3312	-1.0296	-0.131
Shell05	109.4761	0.576	-46.2934	-49.5632	-134.965	-1.0057	-0.1854
Shell05	109.4761	0.584	-46.7752	-49.4876	-135.2304	-1.0809	-0.1839
Shell05	109.4761	0.592	-47.0196	-49.7015	-135.9649	-1.0831	-0.2095
Shell05	109.4761	0.6	-46.7933	-50.1028	-136.9184	-1.1754	-0.1563
Shell05	109.4761	0.608	-46.2864	-50.6424	-138.0975	-1.1767	-0.1291
Shell05	109.4761	0.616	-47.4724	-50.3972	-138.4129	-1.342	0.003
Shell05	109.4761	0.624	-47.9586	-50.3741	-138.8917	-1.3801	-0.0054
Shell05	109.4761	0.632	-48.1079	-50.4018	-139.5476	-1.306	-0.2338
Shell05	109.4761	0.64	-47.6191	-50.7565	-140.5421	-1.3342	-0.134
Shell05	109.4761	0.648	-48.0315	-50.8433	-141.0237	-1.437	0.0647
Shell05	109.4761	0.656	-48.1656	-50.9721	-141.531	-1.4612	0.3089
Shell05	109.4761	0.664	-47.8175	-51.307	-142.2987	-1.4867	0.7822
Shell05	109.4761	0.672	-48.5852	-51.493	-143.6863	-1.4184	0.2347
Shell05	109.4761	0.68	-49.1172	-51.5789	-144.2425	-1.3755	0.0974
Shell05	109.4761	0.688	-48.1874	-52.2466	-146.0897	-1.3076	-0.2177
Shell05	109.4761	0.696	-47.8272	-52.7181	-147.3349	-1.2966	-0.2263
Shell05	109.4761	0.704	-48.2174	-52.5834	-147.9412	-1.389	-0.0028
Shell05	109.4761	0.712	-48.2253	-52.9042	-148.8623	-1.2786	-0.19

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell05	109.4761	0.72	-47.669	-53.6141	-150.3957	-1.2398	-0.3217
Shell05	109.4761	0.728	-47.549	-53.8175	-151.2253	-1.244	-0.3385
Shell05	109.4761	0.736	-47.4921	-54.0817	-152.3407	-1.4188	0.0807
Shell05	109.4761	0.744	-47.6245	-54.2502	-153.4521	-1.4011	0.0957
Shell05	109.4761	0.752	-47.3521	-54.3877	-155.064	-1.4524	1.6539
Shell05	109.4761	0.76	-48.3905	-53.6711	-155.7805	-1.3494	-0.1661
Shell05	109.4761	0.768	-48.5213	-53.7528	-156.8294	-1.4346	0.0338
Shell05	109.4761	0.776	-48.4548	-53.8825	-158.4019	-1.4261	0.0421
Shell05	109.4761	0.784	-48.8306	-53.8017	-158.7501	-1.4076	-0.095
Shell05	109.4761	0.792	-47.5895	-54.7664	-160.3572	-1.4543	0.0016
Shell05	109.4761	0.8	-47.6459	-54.832	-161.2842	-1.5199	0.9391
Shell05	109.4761	0.808	-48.6058	-54.2374	-162.0076	-1.3953	-0.4812
Shell05	109.4761	0.816	-47.8879	-54.8694	-162.7651	-1.5473	0.5206
Shell05	109.4761	0.824	-47.7217	-54.9846	-163.6285	-1.5487	0.6481
Shell05	109.4761	0.832	-48.8639	-54.2111	-163.5675	-1.5454	-0.4146
Shell05	109.4761	0.84	-48.7952	-54.3425	-164.359	-1.5033	2.542
Shell05	109.4761	0.848	-49.0022	-54.422	-165.4304	-1.4566	2.2605
Shell05	109.4761	0.856	-48.3308	-54.9252	-166.4547	-1.4145	2.3159
Shell05	109.4761	0.864	-48.5741	-54.7649	-167.1277	-1.296	2.4102
Shell05	109.4761	0.872	-47.8213	-55.3369	-168.128	-1.2664	2.4209
Shell05	109.4761	0.88	-47.9197	-55.2978	-168.8732	-1.2764	2.4302
Shell05	109.4761	0.888	-48.4673	-54.8613	-169.2055	-1.1802	2.4412
Shell05	109.4761	0.896	-48.7894	-54.6086	-170.2351	-1.1927	2.4381
Shell05	109.4761	0.904	-48.2523	-55.0242	-170.9694	-1.0847	2.4813
Shell05	109.4761	0.912	-46.6512	-56.2215	-172.4536	-0.9378	2.4976
Shell05	109.4761	0.92	-45.3913	-57.3004	-174.6893	-0.9005	2.5151
Shell05	109.4761	0.928	-44.4147	-57.8261	-176.0969	-0.9458	2.4571
Shell05	109.4761	0.936	-45.7467	-56.7923	-176.4327	-0.8431	2.4618
Shell05	109.4761	0.944	-45.9024	-56.8871	-177.4405	-0.8437	2.43
Shell05	109.4761	0.952	-46.4153	-56.4447	-178.3951	-0.7945	2.4256
Shell05	109.4761	0.96	-46.1889	-56.655	-179.3391	-0.8309	2.4083
Shell05	109.4761	0.968	-47.4388	-55.7577	-179.9542	-0.725	2.4155
Shell05	109.4761	0.976	-46.1861	-56.6807	-180.7478	-0.7612	2.4041
Shell05	109.4761	0.984	-46.2454	-56.6319	-181.6631	-0.7219	2.4086
Shell05	109.4761	0.992	-45.8896	-56.8231	-183.4087	-0.6556	2.3974
Shell05	109.4761	1	-44.6092	-57.9203	-184.5484	-0.6996	2.3565
Shell05	109.4761	1.008	-43.8934	-58.3536	-185.6986	-0.6355	2.3385
Shell05	109.4761	1.016	-43.5555	-58.7743	-186.244	-0.721	2.2354
Shell05	109.4761	1.024	-42.7668	-59.423	-187.2665	-0.8071	2.1642
Shell05	109.4761	1.032	-42.6827	-59.5299	-188.0361	-0.8299	2.1186
Shell05	109.4761	1.04	-42.5302	-59.8833	-189.2242	-0.9844	2.0354
Shell05	109.4761	1.048	-42.8495	-60.0303	-189.9988	-1.0394	2.0092
Shell05	109.4761	1.056	-43.0409	-60.0134	-190.2951	-1.031	2.0563
Shell05	109.4761	1.064	-42.9743	-60.2182	-190.8244	-1.088	1.9427
Shell05	109.4761	1.072	-42.0756	-60.9828	-191.4953	-1.1933	1.7089
Shell05	109.4761	1.08	-41.7124	-61.2124	-191.9926	-1.2362	1.0833
Shell05	109.4761	1.088	-41.5215	-61.733	-192.8112	-1.2159	0.4737
Shell05	109.4761	1.096	-40.6311	-62.745	-193.38	-1.2199	0.435
Shell05	109.4761	1.104	-38.87	-64.0085	-194.5206	-1.1756	0.1658
Shell05	109.4761	1.112	-38.7421	-64.1661	-195.2184	-0.8432	-0.292
Shell05	109.4761	1.12	-36.8891	-65.6341	-195.608	-0.9154	-0.2441
Shell05	109.4761	1.128	-37.4179	-65.4917	-196.2826	-0.7111	-0.3826
Shell05	109.4761	1.136	-35.6636	-66.7649	-196.8872	-0.73	-0.3761

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell05	109.4761	1.144	-38.8331	-64.8608	-198.2005	-0.5692	-0.468
Shell05	109.4761	1.152	-39.8823	-64.5444	-198.8147	-0.4918	-0.5023
Shell05	109.4761	1.16	-40.4379	-64.4139	-199.6962	-0.3871	-0.5231
Shell05	109.4761	1.168	-39.821	-64.9981	-200.2	-0.3895	-0.5248
Shell05	109.4761	1.176	-40.1455	-64.8838	-200.9824	-0.3675	-0.5257
Shell05	109.4761	1.184	-41.8876	-63.9578	-201.6723	-0.3712	-0.5183
Shell05	109.4761	1.192	-43.0283	-63.3668	-202.5001	-0.3714	-0.5169
Shell05	109.4761	1.2	-43.278	-63.2816	-202.8767	-0.3697	-0.5206
Shell05	109.4761	1.208	-44.1954	-62.7724	-203.5106	-0.3621	-0.5206
Shell05	109.4761	1.216	-44.9022	-62.4448	-204.8234	-0.359	-0.521
Shell05	109.4761	1.224	-45.277	-62.2371	-205.6143	-0.3759	-0.5207
Shell05	109.4761	1.232	-45.8388	-62.0372	-206.2339	-0.3834	-0.5202
Shell05	109.4761	1.24	-44.7498	-62.868	-206.5379	-0.3524	-0.5286
Shell05	109.4761	1.248	-46.8785	-61.56	-207.1821	-0.4034	-0.5193
Shell05	109.4761	1.256	-47.6282	-61.2557	-208.1663	-0.4054	-0.527
Shell05	109.4761	1.264	-48.1664	-60.9697	-208.5831	-0.3874	-0.5311
Shell05	109.4761	1.272	-48.6373	-60.7653	-209.2254	-0.388	-0.5352
Shell05	109.4761	1.28	-49.076	-60.5588	-209.8177	-0.3958	-0.5378
Shell05	109.4761	1.288	-49.3561	-60.4439	-210.1961	-0.4041	-0.5404
Shell05	109.4761	1.296	-50.931	-59.4216	-210.6876	-0.4297	-0.5423
Shell05	109.4761	1.304	-51.5864	-58.9663	-211.2112	-0.4182	-0.5503
Shell05	109.4761	1.312	-51.4711	-58.7831	-211.5537	-0.4308	-0.5681
Shell05	109.4761	1.32	-52.4308	-58.2359	-212.2716	-0.434	-0.5712
Shell05	109.4761	1.328	-53.4511	-57.591	-212.9053	-0.4158	-0.5726
Shell05	109.4761	1.336	-55.0447	-56.5599	-214.0737	-0.437	-0.5751
Shell05	109.4761	1.344	-56.0799	-55.8918	-214.8058	-0.4259	-0.5801
Shell05	109.4761	1.352	-57.0615	-55.3169	-215.6528	-0.4667	-0.5806
Shell05	109.4761	1.36	-57.8058	-54.9231	-216.415	-0.4611	-0.585
Shell05	109.4761	1.368	-58.8356	-54.2536	-217.3736	-0.4491	-0.5831
Shell05	109.4761	1.376	-60.7432	-53.037	-218.6948	-0.4659	-0.5838
Shell05	109.4761	1.384	-62.5099	-51.8945	-219.3356	-0.4773	-0.584
Shell05	109.4761	1.392	-63.3324	-51.3878	-220.0443	-0.4903	-0.5845
Shell05	109.4761	1.4	-64.4173	-50.7142	-220.9779	-0.493	-0.5867
Shell05	109.4761	1.408	-64.8066	-50.496	-221.684	-0.5022	-0.5862
Shell05	109.4761	1.416	-65.4623	-49.9914	-222.7693	-0.4783	-0.5796
Shell05	109.4761	1.424	-66.4624	-49.2923	-223.9304	-0.4901	-0.5746
Shell05	109.4761	1.432	-66.7182	-49.1458	-224.2839	-0.484	-0.5762
Shell05	109.4761	1.44	-67.9206	-48.3866	-224.9781	-0.4869	-0.5766
Shell05	109.4761	1.448	-70.3569	-46.8875	-226.91	-0.5228	-0.5721
Shell05	109.4761	1.456	-71.6694	-46.0847	-227.6864	-0.5208	-0.5759
Shell05	109.4761	1.464	-72.4527	-45.734	-228.7831	-0.5461	-0.5903
Shell05	109.4761	1.472	-72.8794	-45.3824	-229.1685	-0.5288	-0.5856
Shell05	109.4761	1.48	-73.3699	-45.0875	-229.8595	-0.5358	-0.5858
Shell05	109.4761	1.488	-74.5339	-44.3005	-230.5311	-0.622	-0.6104
Shell05	109.4761	1.496	-75.3725	-43.6229	-231.0779	-0.7434	-0.6635
Shell05	109.4761	1.504	-76.6491	-42.7426	-232.2911	-0.7551	-0.6604
Shell05	109.4761	1.512	-78.772	-41.3691	-233.2637	-0.8566	-0.6879
Shell05	109.4761	1.52	-78.4386	-41.3226	-234.2591	-0.8353	-0.6914
Shell05	109.4761	1.528	-78.2031	-40.5659	-235.5997	-0.7573	-0.705
Shell05	109.4761	1.536	-79.2076	-39.8423	-236.7038	-0.8257	-0.7469
Shell05	109.4761	1.544	-80.3514	-38.9412	-237.6571	-0.8155	-0.7285
Shell05	109.4761	1.552	-82.1244	-37.7787	-238.7907	-0.9136	-0.761
Shell05	109.4761	1.56	-83.212	-36.6079	-240.1456	-1.1492	-0.9984

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell05	109.4761	1.568	-84.0262	-36.1134	-240.9766	-1.2808	-1.3915
Shell05	109.4761	1.576	-84.7747	-35.5509	-242.0767	-1.3115	-1.4071
Shell05	109.4761	1.584	-85.6959	-34.9506	-243.5903	-1.3256	-2.6392
Shell05	109.4761	1.592	-85.0867	-35.0949	-244.2319	-1.3573	-2.333
Shell05	109.4761	1.6	-83.3609	-35.714	-245.3102	-1.1598	-3.006
Shell05	109.4761	1.608	-83.5768	-35.1513	-246.4641	-1.0883	3.0699
Shell05	109.4761	1.616	-84.1736	-34.6483	-247.2231	-1.0218	2.9866
Shell05	109.4761	1.624	-84.2103	-34.511	-247.8275	-1.1976	2.9446
Shell05	109.4761	1.632	-84.9015	-34.0585	-249.1152	-1.3488	3.1027
Shell05	109.4761	1.64	-86.4118	-32.8626	-251.7861	-1.0505	2.7321
Shell05	109.4761	1.648	-85.7574	-33.2786	-252.6368	-0.9227	2.6984
Shell05	109.4761	1.656	-82.2496	-34.3833	-253.4379	-1.3214	1.8432
Shell05	109.4761	1.664	-83.9965	-33.7352	-255.2945	-1.2404	2.3764
Shell05	109.4761	1.672	-83.9989	-33.6635	-255.8454	-1.0942	2.4319
Shell05	109.4761	1.68	-84.1857	-33.8107	-258.708	-1.2051	2.3454
Shell07	91.7885	0	0	0	0	1.5477	0.1502
Shell07	91.7885	0.008	6.95	-1.7991	-58.5066	1.1962	0.0466
Shell07	91.7885	0.016	36.5417	0.9022	-88.3549	-0.3495	0.0867
Shell07	91.7885	0.024	53.6716	2.0204	-94.0498	-1.1538	-0.1341
Shell07	91.7885	0.032	67.6872	2.4848	-93.3863	-1.3227	-2.7899
Shell07	91.7885	0.04	72.8249	-0.5508	-93.5772	-1.005	-3.0737
Shell07	91.7885	0.048	76.3449	-1.5346	-94.2323	-0.7884	-2.9784
Shell07	91.7885	0.056	81.2238	-3.6468	-97.5215	-0.5561	-2.8955
Shell07	91.7885	0.064	80.3474	-5.3809	-100.7049	-0.379	-2.8615
Shell07	91.7885	0.072	84.4648	-5.6935	-102.7508	-0.225	-2.9115
Shell07	91.7885	0.08	86.286	-4.6046	-104.6669	-0.1172	-2.8742
Shell07	91.7885	0.088	86.4504	-4.8588	-106.0501	0.0369	-2.8214
Shell07	91.7885	0.096	86.6311	-5.5734	-106.5057	0.0849	-2.8111
Shell07	91.7885	0.104	88.145	-5.1519	-107.96	0.0972	-2.8351
Shell07	91.7885	0.112	89.007	-5.7491	-108.3344	0.195	-2.8654
Shell07	91.7885	0.12	89.5404	-6.2951	-109.6219	0.2387	-2.8505
Shell07	91.7885	0.128	90.5321	-5.6894	-110.321	0.2267	-2.8399
Shell07	91.7885	0.136	92.149	-4.7433	-110.1619	0.161	-2.8692
Shell07	91.7885	0.144	93.065	-4.333	-109.7573	0.1829	-2.88
Shell07	91.7885	0.152	93.5447	-5.4623	-110.6613	0.2097	-2.8241
Shell07	91.7885	0.16	93.5726	-5.2234	-110.3892	0.1835	-2.8236
Shell07	91.7885	0.168	93.9777	-5.3173	-108.737	0.3245	-2.8234
Shell07	91.7885	0.176	91.4825	-7.0291	-110.9033	0.291	-2.8347
Shell07	91.7885	0.184	91.5518	-7.6108	-111.5278	0.2571	-2.8929
Shell07	91.7885	0.192	92.823	-7.3974	-111.244	0.1783	-2.9488
Shell07	91.7885	0.2	93.9344	-6.9538	-110.9067	0.0228	-2.9765
Shell07	91.7885	0.208	94.3028	-6.6459	-111.0804	-0.0774	-2.9948
Shell07	91.7885	0.216	93.3954	-6.5087	-112.1572	0.0978	-2.9398
Shell07	91.7885	0.224	93.1908	-6.1828	-111.5614	-0.09	-3.0157
Shell07	91.7885	0.232	93.2077	-5.9017	-111.8784	-0.1412	-3.0749
Shell07	91.7885	0.24	93.3625	-5.7162	-113.0087	-0.2191	3.0803
Shell07	91.7885	0.248	92.6919	-6.3143	-113.8642	-0.3179	3.045
Shell07	91.7885	0.256	92.9183	-6.6919	-114.6479	-0.3478	3.0254
Shell07	91.7885	0.264	92.7961	-6.8217	-115.0147	-0.3938	3.0066
Shell07	91.7885	0.272	92.4402	-6.9228	-114.7522	-0.3923	3.0223
Shell07	91.7885	0.28	92.2207	-6.6568	-114.0564	-0.4047	3.082
Shell07	91.7885	0.288	91.2106	-7.5983	-115.1749	-0.5112	2.9891
Shell07	91.7885	0.296	91.0543	-7.7514	-115.3949	-0.4992	2.9873

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell07	91.7885	0.304	90.9632	-7.8477	-115.6687	-0.5275	2.9743
Shell07	91.7885	0.312	91.5354	-7.346	-115.6897	-0.5151	2.9813
Shell07	91.7885	0.32	91.8146	-7.3163	-116.1314	-0.534	2.9713
Shell07	91.7885	0.328	92.1793	-7.2054	-115.7858	-0.4866	2.9907
Shell07	91.7885	0.336	93.0867	-7.0037	-115.6543	-0.4521	3.0278
Shell07	91.7885	0.344	93.496	-7.0759	-115.6912	-0.4382	3.0252
Shell07	91.7885	0.352	93.9184	-7.1485	-115.7305	-0.4386	3.0251
Shell07	91.7885	0.36	93.7787	-7.1618	-115.8109	-0.4438	3.021
Shell07	91.7885	0.368	93.5911	-7.0865	-115.9994	-0.4376	3.0085
Shell07	91.7885	0.376	93.6697	-7.1398	-116.4033	-0.4672	3.0043
Shell07	91.7885	0.384	94.0098	-7.1228	-116.7994	-0.4114	3.0329
Shell07	91.7885	0.392	93.981	-6.8395	-116.9844	-0.413	3.0453
Shell07	91.7885	0.4	94.1961	-6.5313	-116.9364	-0.4538	3.0074
Shell07	91.7885	0.408	94.6445	-6.475	-116.9961	-0.4414	3.019
Shell07	91.7885	0.416	95.3678	-6.4035	-117.1337	-0.4762	2.9943
Shell07	91.7885	0.424	95.9258	-5.9208	-116.9451	-0.4871	2.9749
Shell07	91.7885	0.432	97.1772	-5.0432	-116.6783	-0.5107	2.9285
Shell07	91.7885	0.44	97.3988	-4.9758	-116.8114	-0.5133	2.9304
Shell07	91.7885	0.448	97.6776	-4.8468	-116.9159	-0.5025	2.9412
Shell07	91.7885	0.456	97.8057	-4.8691	-117.2382	-0.4892	2.9488
Shell07	91.7885	0.464	98.1723	-4.9055	-117.418	-0.4963	2.9519
Shell07	91.7885	0.472	98.2309	-4.8767	-117.637	-0.53	2.9553
Shell07	91.7885	0.48	98.1457	-5.0183	-117.5273	-0.533	2.9369
Shell07	91.7885	0.488	98.8165	-4.6007	-117.3034	-0.4857	2.9962
Shell07	91.7885	0.496	98.9209	-4.6194	-117.3125	-0.4818	2.9958
Shell07	91.7885	0.504	99.1648	-4.6272	-117.3947	-0.4781	2.9987
Shell07	91.7885	0.512	99.453	-4.8624	-117.8892	-0.4868	2.9958
Shell07	91.7885	0.52	99.5323	-4.9115	-118.141	-0.5034	2.9919
Shell07	91.7885	0.528	99.7327	-4.9894	-118.7161	-0.5064	3.0026
Shell07	91.7885	0.536	100.019	-4.7612	-118.938	-0.4978	3.0199
Shell07	91.7885	0.544	100.4463	-4.7365	-119.0904	-0.4923	3.027
Shell07	91.7885	0.552	100.5854	-4.6714	-119.3103	-0.4728	3.048
Shell07	91.7885	0.56	98.4326	-4.4427	-119.0064	-0.5425	3.051
Shell07	91.7885	0.568	98.8866	-4.2469	-119.0843	-0.5392	3.0199
Shell07	91.7885	0.576	99.2744	-3.8868	-119.0192	-0.5618	2.972
Shell07	91.7885	0.584	100.0582	-3.6519	-119.0923	-0.5581	2.9605
Shell07	91.7885	0.592	100.6379	-3.4585	-118.8673	-0.515	2.9749
Shell07	91.7885	0.6	101.5789	-2.9191	-119.3771	-0.5618	2.947
Shell07	91.7885	0.608	101.5958	-2.8107	-119.8063	-0.5365	2.9583
Shell07	91.7885	0.616	101.8239	-2.8506	-119.8272	-0.5466	2.958
Shell07	91.7885	0.624	101.5155	-3.3521	-120.9683	-0.4508	3.037
Shell07	91.7885	0.632	101.9655	-3.3576	-121.294	-0.502	3.0303
Shell07	91.7885	0.64	102.7596	-2.9403	-121.1538	-0.4262	3.0689
Shell07	91.7885	0.648	102.576	-3.2011	-121.4807	-0.4856	3.0427
Shell07	91.7885	0.656	103.0315	-3.1406	-121.6181	-0.4774	3.0537
Shell07	91.7885	0.664	103.0053	-3.1739	-121.71	-0.4688	3.0574
Shell07	91.7885	0.672	102.977	-3.2024	-121.7984	-0.4772	3.0542
Shell07	91.7885	0.68	103.0129	-3.1727	-121.8652	-0.4813	3.0576
Shell07	91.7885	0.688	102.8651	-3.0857	-121.9081	-0.4868	3.0542
Shell07	91.7885	0.696	103.5165	-2.5647	-122.1938	-0.4943	3.0539
Shell07	91.7885	0.704	103.9673	-2.4937	-122.7125	-0.5269	3.0094
Shell07	91.7885	0.712	104.1986	-2.3874	-122.7528	-0.5169	2.9857
Shell07	91.7885	0.72	105.1264	-2.2937	-122.9721	-0.5641	2.9656

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell07	91.7885	0.728	106.0314	-2.1983	-123.4965	-0.5745	2.9851
Shell07	91.7885	0.736	106.4279	-2.5644	-123.6476	-0.586	3.0216
Shell07	91.7885	0.744	106.8142	-2.7003	-123.9417	-0.5781	3.0446
Shell07	91.7885	0.752	107.5307	-3.0505	-124.7942	-0.6407	3.0542
Shell07	91.7885	0.76	107.5966	-3.129	-125.2134	-0.6676	3.031
Shell07	91.7885	0.768	108.0458	-2.8914	-125.757	-0.6909	3.0197
Shell07	91.7885	0.776	108.2914	-2.5737	-126.1103	-0.7523	2.9875
Shell07	91.7885	0.784	109.0783	-2.5827	-126.2035	-0.7638	2.9787
Shell07	91.7885	0.792	109.936	-2.4182	-126.3891	-0.8346	2.9356
Shell07	91.7885	0.8	110.1661	-2.3683	-126.9248	-0.8823	2.9381
Shell07	91.7885	0.808	109.8568	-2.5318	-127.2212	-0.8411	2.9903
Shell07	91.7885	0.816	109.6978	-2.8592	-127.7151	-0.8178	2.9603
Shell07	91.7885	0.824	110.1212	-2.6323	-128.5753	-0.8755	2.9129
Shell07	91.7885	0.832	110.0287	-2.2282	-128.5803	-0.8438	2.8545
Shell07	91.7885	0.84	111.2628	-2.2357	-128.8405	-0.8913	2.8204
Shell07	91.7885	0.848	111.0474	-1.8103	-129.0144	-0.9261	2.8497
Shell07	91.7885	0.856	111.5882	-1.3326	-128.8805	-0.8757	2.9489
Shell07	91.7885	0.864	112.7502	-1.1478	-129.2321	-0.827	2.9712
Shell07	91.7885	0.872	113.0853	-1.4253	-129.7971	-0.8577	2.9339
Shell07	91.7885	0.88	112.3544	-1.5978	-130.2351	-0.9016	2.9087
Shell07	91.7885	0.888	112.126	-2.0074	-130.679	-0.9548	2.8548
Shell07	91.7885	0.896	112.6113	-2.1927	-131.0653	-0.9626	2.8366
Shell07	91.7885	0.904	113.0794	-2.1549	-132.079	-0.9527	2.8596
Shell07	91.7885	0.912	113.6941	-2.4133	-132.2515	-0.9638	2.8443
Shell07	91.7885	0.92	114.2854	-2.1977	-133.0602	-0.9419	2.9077
Shell07	91.7885	0.928	114.8733	-2.0576	-134.5263	-0.9416	2.8881
Shell07	91.7885	0.936	115.1032	-2.1805	-134.7972	-0.9376	2.8791
Shell07	91.7885	0.944	116.2879	-1.8427	-135.3595	-0.9243	2.9689
Shell07	91.7885	0.952	117.2001	-1.6837	-135.6454	-0.9236	2.9844
Shell07	91.7885	0.96	117.3247	-1.5967	-136.3316	-0.9434	2.9795
Shell07	91.7885	0.968	117.9755	-1.5533	-136.3385	-0.9193	3.0084
Shell07	91.7885	0.976	118.5305	-1.4534	-136.7106	-0.928	2.998
Shell07	91.7885	0.984	118.7707	-1.4816	-137.1942	-0.919	2.9893
Shell07	91.7885	0.992	119.1811	-1.5118	-137.9228	-0.9134	2.9927
Shell07	91.7885	1	119.0286	-1.5317	-138.3955	-0.9306	2.9597
Shell07	91.7885	1.008	119.8402	-1.358	-138.9173	-0.9267	2.9548
Shell07	91.7885	1.016	120.3145	-1.2559	-139.6089	-0.9542	2.9492
Shell07	91.7885	1.024	120.754	-1.1429	-140.1397	-0.9561	2.9545
Shell07	91.7885	1.032	120.889	-1.1748	-140.9463	-0.9682	2.9477
Shell07	91.7885	1.04	121.0296	-1.1823	-140.7084	-0.951	2.9288
Shell07	91.7885	1.048	123.084	-1.0096	-142.3663	-0.9478	2.9917
Shell07	91.7885	1.056	123.6624	-1.0978	-143.0324	-0.939	2.9829
Shell07	91.7885	1.064	123.9867	-1.0684	-143.8234	-0.9462	2.9674
Shell07	91.7885	1.072	124.9458	-1.3617	-144.8512	-0.919	2.9515
Shell07	91.7885	1.08	124.937	-1.465	-145.5855	-0.9462	2.93
Shell07	91.7885	1.088	124.7512	-2.3396	-148.064	-1.0531	2.7994
Shell07	91.7885	1.096	125.4052	-2.1282	-148.8358	-1.0338	2.8789
Shell07	91.7885	1.104	126.1111	-1.7942	-149.5074	-1.0386	2.935
Shell07	91.7885	1.112	126.4734	-2.0394	-149.9701	-1.0257	2.9469
Shell07	91.7885	1.12	127.1216	-2.1007	-150.7142	-1.0325	2.961
Shell07	91.7885	1.128	127.9646	-1.609	-151.2415	-1.0784	2.8954
Shell07	91.7885	1.136	128.7137	-1.4882	-151.7826	-1.1324	2.8499
Shell07	91.7885	1.144	129.4537	-1.2894	-152.8462	-1.1295	2.8085

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell07	91.7885	1.152	130.1662	-1.4985	-153.7352	-1.1591	2.8056
Shell07	91.7885	1.16	131.0793	-1.5628	-155.2105	-1.1831	2.7966
Shell07	91.7885	1.168	131.3798	-1.575	-155.9319	-1.1912	2.7918
Shell07	91.7885	1.176	131.8551	-1.5732	-156.7451	-1.2112	2.8137
Shell07	91.7885	1.184	132.2314	-1.5383	-157.4705	-1.2146	2.841
Shell07	91.7885	1.192	133.2312	-1.5496	-158.4442	-1.2061	2.8654
Shell07	91.7885	1.2	133.8809	-1.8959	-161.1995	-1.1347	2.8029
Shell07	91.7885	1.208	134.4233	-1.8293	-162.6271	-1.1432	2.8215
Shell07	91.7885	1.216	134.9594	-1.8469	-163.2787	-1.1589	2.7941
Shell07	91.7885	1.224	135.1336	-2.1555	-164.6069	-1.1918	2.7431
Shell07	91.7885	1.232	134.8827	-2.6066	-165.8004	-1.1919	2.7319
Shell07	91.7885	1.24	135.0536	-2.73	-167.4295	-1.1809	2.7584
Shell07	91.7885	1.248	135.5026	-3.0177	-168.5986	-1.2201	2.7113
Shell07	91.7885	1.256	135.601	-3.2447	-169.6635	-1.2607	2.6095
Shell07	91.7885	1.264	136.0502	-3.4154	-170.4111	-1.3062	2.486
Shell07	91.7885	1.272	135.8979	-3.8133	-171.2709	-1.3042	2.5481
Shell07	91.7885	1.28	136.0638	-4.0012	-172.4978	-1.3019	2.6314
Shell07	91.7885	1.288	135.9808	-4.2186	-174.6878	-1.3404	2.5458
Shell07	91.7885	1.296	135.8898	-4.6035	-176.5898	-1.3724	2.5223
Shell07	91.7885	1.304	134.5822	-5.5653	-178.5574	-1.3753	1.8295
Shell07	91.7885	1.312	136.077	-4.9226	-179.4153	-1.3641	2.4315
Shell07	91.7885	1.32	137.669	-5.1367	-181.7347	-1.2878	2.6544
Shell07	91.7885	1.328	138.2602	-5.3131	-182.9579	-1.2945	2.6775
Shell07	91.7885	1.336	138.3894	-5.1869	-184.142	-1.3149	2.6163
Shell07	91.7885	1.344	138.9539	-5.1246	-185.5789	-1.3058	2.6602
Shell07	91.7885	1.352	139.4595	-5.1113	-186.9602	-1.3078	2.7066
Shell07	91.7885	1.36	139.8373	-5.2395	-187.6185	-1.318	2.7145
Shell07	91.7885	1.368	140.1118	-5.2745	-188.9118	-1.3173	2.7208
Shell07	91.7885	1.376	142.085	-5.4263	-191.5746	-1.4263	2.1813
Shell07	91.7885	1.384	141.9407	-5.4712	-192.8588	-1.4375	1.939
Shell07	91.7885	1.392	141.7036	-5.5052	-194.4023	-1.4484	1.969
Shell07	91.7885	1.4	141.2304	-5.8907	-195.0464	-1.4464	1.7033
Shell07	91.7885	1.408	139.6427	-7.0473	-196.2566	-1.4015	1.1709
Shell07	91.7885	1.416	139.9218	-6.9093	-197.3125	-1.436	1.3618
Shell07	91.7885	1.424	140.2556	-6.9891	-198.9214	-1.4258	1.147
Shell07	91.7885	1.432	140.2161	-7.0422	-199.9719	-1.4438	1.231
Shell07	91.7885	1.44	139.182	-7.755	-202.3342	-1.4804	1.7798
Shell07	91.7885	1.448	139.2744	-7.8109	-203.6836	-1.4904	1.8793
Shell07	91.7885	1.456	139.0926	-8.1049	-204.7125	-1.4786	1.3406
Shell07	91.7885	1.464	139.2258	-8.217	-205.9184	-1.4876	1.2836
Shell07	91.7885	1.472	140.6757	-8.3536	-208.791	-1.3973	3.0834
Shell07	91.7885	1.48	141.0041	-8.4332	-210.5609	-1.4195	2.9789
Shell07	91.7885	1.488	141.906	-7.9359	-212.0621	-1.3923	3.1216
Shell07	91.7885	1.496	142.2988	-7.971	-213.3517	-1.3941	3.1375
Shell07	91.7885	1.504	142.5351	-7.8746	-215.0575	-1.3871	-3.1227
Shell07	91.7885	1.512	142.342	-8.1002	-216.4343	-1.4048	-3.0176
Shell07	91.7885	1.52	142.4186	-8.2483	-217.977	-1.388	-2.9217
Shell07	91.7885	1.528	141.1756	-8.9331	-218.9813	-1.3552	-2.8955
Shell07	91.7885	1.536	141.2314	-8.8917	-221.5024	-1.2842	-2.8361
Shell07	91.7885	1.544	142.1944	-8.5192	-223.0946	-1.2225	-2.7675
Shell07	91.7885	1.552	144.0709	-7.459	-224.6252	-1.1089	-2.723
Shell07	91.7885	1.56	143.7289	-7.7262	-226.9345	-1.1747	-2.7451
Shell07	91.7885	1.568	143.344	-7.999	-228.9167	-1.0461	-2.6713

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell07	91.7885	1.576	142.2207	-8.6822	-229.8081	-1.0627	-2.6734
Shell07	91.7885	1.584	143.0924	-8.2095	-231.573	-1.0198	-2.6681
Shell07	91.7885	1.592	145.3008	-7.0454	-234.5205	-0.9717	-2.6646
Shell07	91.7885	1.6	144.3848	-7.5441	-235.3153	-1.0094	-2.6653
Shell07	91.7885	1.608	144.9151	-7.2805	-236.8531	-1.0002	-2.6648
Shell07	91.7885	1.616	145.626	-6.994	-238.5712	-0.9926	-2.6704
Shell07	91.7885	1.624	145.6514	-7.0359	-240.359	-1.0099	-2.6741
Shell07	91.7885	1.632	145.2008	-7.6138	-242.0344	-0.9081	-2.6787
Shell07	91.7885	1.64	145.6612	-7.7537	-246.1038	-0.8546	-2.6804
Shell07	91.7885	1.648	146.4961	-7.4638	-248.1231	-0.8717	-2.6739
Shell07	91.7885	1.656	147.2773	-6.968	-249.3833	-0.9092	-2.6941
Shell07	91.7885	1.664	148.186	-6.4081	-250.8443	-0.9307	-2.7017
Shell07	91.7885	1.672	148.8662	-5.4196	-253.891	-0.874	-2.7465
Shell07	91.7885	1.68	150.8447	-4.7782	-255.1722	-0.8487	-2.7929
Shell07	91.7885	1.688	151.6447	-4.3656	-255.8894	-0.7518	-2.8306
Shell07	91.7885	1.696	153.2388	-3.2318	-256.1116	-0.7952	-2.8457
Shell07	91.7885	1.704	154.5713	-2.3805	-257.3865	-0.8804	-2.8784
Shell07	91.7885	1.712	155.5319	-2.1619	-258.9247	-0.8566	-2.8856
Shell07	91.7885	1.72	156.7622	-1.6368	-260.1456	-0.8487	-2.8767
Shell07	91.7885	1.728	157.9052	-1.0791	-262.0526	-0.8891	-2.8935
Shell07	91.7885	1.736	158.0983	-1.2598	-263.4488	-0.8941	-2.9023
Shell07	91.7885	1.744	159.5952	-0.7583	-265.4397	-0.9578	-2.938
Shell07	91.7885	1.752	159.5873	-0.9313	-266.2126	-0.9856	-2.9834
Shell07	91.7885	1.76	161.3327	-0.0391	-268.5437	-0.9914	-2.9822
Shell07	91.7885	1.768	162.3525	0.5321	-269.3893	-1.0045	-2.9902
Shell07	91.7885	1.776	163.7403	1.1645	-270.7326	-1.0969	-3.0908
Shell07	91.7885	1.784	164.6542	1.5684	-272.149	-1.0825	-3.0807
Shell07	91.7885	1.792	165.1303	1.587	-273.8448	-1.1109	-3.1179
Shell07	91.7885	1.8	166.8114	2.244	-275.611	-1.1299	-3.1024
Shell07	91.7885	1.808	167.0598	2.1066	-277.0341	-1.1597	-3.1143
Shell07	91.7885	1.816	166.8236	1.6756	-277.9711	-1.1416	-3.0399
Shell07	91.7885	1.824	167.632	1.701	-278.8288	-1.1638	-3.0574
Shell07	91.7885	1.832	168.2861	1.8135	-279.4487	-1.1951	-3.1204
Shell07	91.7885	1.84	171.8074	3.4895	-285.5704	-1.3938	2.0451
Shell08	74.7778	0	0	0	0	1.4941	-1.4158
Shell08	74.7778	0.008	-1.6012	-0.6499	-38.683	1.424	-2.9558
Shell08	74.7778	0.016	-6.012	-1.565	-80.9615	0.8827	-2.7363
Shell08	74.7778	0.024	-29.7675	-6.7418	-111.6102	-0.5718	-2.9706
Shell08	74.7778	0.032	-40.3933	-4.5268	-115.3507	-0.9566	-2.406
Shell08	74.7778	0.04	-46.8993	-5.7526	-118.1492	-1.3011	-1.7885
Shell08	74.7778	0.048	-47.7478	-11.803	-128.8642	-0.8476	-1.4099
Shell08	74.7778	0.056	-50.6951	-13.3052	-132.4998	-0.4454	-0.8083
Shell08	74.7778	0.064	-53.5857	-13.8311	-134.8568	-0.7091	-0.8493
Shell08	74.7778	0.072	-56.638	-13.4353	-135.3763	-0.9329	-0.8983
Shell08	74.7778	0.08	-59.7858	-12.275	-135.8333	-1.1959	-0.8825
Shell08	74.7778	0.088	-60.9835	-12.9707	-138.6081	-1.4152	-1.3751
Shell08	74.7778	0.096	-62.4226	-14.0417	-141.7877	-1.1849	-0.9596
Shell08	74.7778	0.104	-63.4992	-14.5353	-146.2355	-1.0562	-1.0773
Shell08	74.7778	0.112	-64.1291	-15.9492	-150.5693	-1.3077	-1.7659
Shell08	74.7778	0.12	-63.9221	-16.848	-153.2499	-1.1303	-1.5056
Shell08	74.7778	0.128	-63.4967	-16.8351	-155.4333	-0.8679	-1.2979
Shell08	74.7778	0.136	-64.3445	-16.9605	-158.0359	-0.7653	-1.4217
Shell08	74.7778	0.144	-63.2177	-17.8142	-159.9281	-0.6829	-1.4797

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell08	74.7778	0.152	-61.9994	-19.1312	-163.0556	-0.4682	-1.3206
Shell08	74.7778	0.16	-61.1703	-19.2253	-165.3433	-0.3714	-1.3357
Shell08	74.7778	0.168	-60.3835	-20.4329	-166.5041	-0.4164	-1.3304
Shell08	74.7778	0.176	-59.3149	-19.7667	-168.5277	-0.256	-1.1818
Shell08	74.7778	0.184	-60.6358	-19.7463	-169.6837	-0.1959	-0.9288
Shell08	74.7778	0.192	-59.556	-20.0709	-171.6414	-0.1641	-0.8925
Shell08	74.7778	0.2	-58.5805	-19.5375	-172.918	-0.2128	-0.8992
Shell08	74.7778	0.208	-57.4089	-19.3762	-173.6418	-0.1561	-0.8104
Shell08	74.7778	0.216	-58.6089	-18.3209	-174.0853	-0.1169	-0.7611
Shell08	74.7778	0.224	-57.8018	-18.6718	-174.7835	-0.1056	-0.756
Shell08	74.7778	0.232	-58.6572	-15.9378	-174.264	-0.0123	-0.7892
Shell08	74.7778	0.24	-57.6262	-17.2284	-174.4952	0.0067	-0.7587
Shell08	74.7778	0.248	-58.4406	-16.1887	-175.1107	0.0373	-0.7435
Shell08	74.7778	0.256	-58.2493	-15.4205	-174.9625	0.0609	-0.7406
Shell08	74.7778	0.264	-58.2188	-14.6994	-174.9191	0.0539	-0.7284
Shell08	74.7778	0.272	-57.3274	-14.9967	-175.2727	0.1016	-0.7649
Shell08	74.7778	0.28	-56.8972	-14.9714	-174.7183	0.13	-0.762
Shell08	74.7778	0.288	-56.118	-14.7296	-175.3657	0.1316	-0.7694
Shell08	74.7778	0.296	-55.1186	-14.5798	-175.856	0.1657	-0.7618
Shell08	74.7778	0.304	-54.6256	-14.7415	-176.01	0.1916	-0.7683
Shell08	74.7778	0.312	-54.2612	-14.7136	-176.3905	0.2143	-0.7728
Shell08	74.7778	0.32	-53.7062	-15.2778	-176.6137	0.2192	-0.769
Shell08	74.7778	0.328	-54.0639	-15.5166	-177.0251	0.2352	-0.7743
Shell08	74.7778	0.336	-54.3107	-14.2235	-177.0699	0.2526	-0.728
Shell08	74.7778	0.344	-54.3433	-14.2186	-177.6111	0.277	-0.7393
Shell08	74.7778	0.352	-53.184	-14.1869	-177.7062	0.2841	-0.7312
Shell08	74.7778	0.36	-53.1267	-14.2589	-177.4733	0.3253	-0.7326
Shell08	74.7778	0.368	-52.2234	-14.749	-177.7091	0.3157	-0.7462
Shell08	74.7778	0.376	-50.2824	-14.9775	-178.2621	0.3349	-0.7821
Shell08	74.7778	0.384	-49.4668	-15.2128	-179.0723	0.3514	-0.7898
Shell08	74.7778	0.392	-48.9712	-15.1798	-179.1704	0.3491	-0.822
Shell08	74.7778	0.4	-49.84	-13.6037	-179.2397	0.372	-0.8
Shell08	74.7778	0.408	-49.9361	-13.4444	-179.4451	0.3656	-0.8616
Shell08	74.7778	0.416	-49.5683	-12.7882	-179.5976	0.3465	-0.8383
Shell08	74.7778	0.424	-49.5003	-12.905	-180.4343	0.3747	-0.8392
Shell08	74.7778	0.432	-49.1807	-12.8895	-180.6997	0.3573	-0.8207
Shell08	74.7778	0.44	-48.3929	-13.0097	-180.8591	0.3576	-0.8255
Shell08	74.7778	0.448	-47.5794	-13.8321	-181.3263	0.3953	-0.7907
Shell08	74.7778	0.456	-47.1281	-13.9083	-181.7582	0.412	-0.7715
Shell08	74.7778	0.464	-46.3715	-13.9494	-182.0093	0.4121	-0.7706
Shell08	74.7778	0.472	-45.9185	-14.0227	-182.1403	0.41	-0.7518
Shell08	74.7778	0.48	-45.465	-14.1109	-182.1534	0.4197	-0.7699
Shell08	74.7778	0.488	-44.3208	-14.2206	-182.5296	0.4245	-0.7842
Shell08	74.7778	0.496	-43.6647	-14.3806	-182.9571	0.4196	-0.8092
Shell08	74.7778	0.504	-43.3866	-14.5239	-183.9155	0.4004	-0.7995
Shell08	74.7778	0.512	-42.7952	-14.6877	-184.4333	0.4265	-0.8143
Shell08	74.7778	0.52	-41.568	-14.6517	-184.5907	0.4323	-0.7866
Shell08	74.7778	0.528	-41.155	-14.6522	-184.8364	0.4532	-0.7611
Shell08	74.7778	0.536	-40.8353	-14.6495	-185.1331	0.4395	-0.759
Shell08	74.7778	0.544	-40.4757	-14.8584	-185.3165	0.4625	-0.7747
Shell08	74.7778	0.552	-39.8484	-14.9719	-185.5117	0.472	-0.7729
Shell08	74.7778	0.56	-39.1814	-15.1034	-185.7359	0.4889	-0.7819
Shell08	74.7778	0.568	-38.4722	-15.0998	-186.2969	0.5165	-0.7825

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell08	74.7778	0.576	-38.0141	-15.6011	-186.3755	0.5142	-0.8089
Shell08	74.7778	0.584	-38.8118	-15.8573	-186.5759	0.5023	-0.839
Shell08	74.7778	0.592	-38.6491	-15.7112	-187.1463	0.5207	-0.837
Shell08	74.7778	0.6	-37.7249	-16.5975	-187.7328	0.5443	-0.8142
Shell08	74.7778	0.608	-35.7448	-16.9799	-188.6549	0.6056	-0.9214
Shell08	74.7778	0.616	-35.4534	-16.9738	-189.5138	0.6094	-0.8949
Shell08	74.7778	0.624	-34.4374	-17.3511	-189.7331	0.632	-0.9202
Shell08	74.7778	0.632	-33.1085	-17.9113	-190.4411	0.6632	-0.8895
Shell08	74.7778	0.64	-32.6329	-18.437	-191.0487	0.7078	-0.8939
Shell08	74.7778	0.648	-31.4547	-18.737	-192.3991	0.7412	-0.8669
Shell08	74.7778	0.656	-30.1572	-19.9343	-192.9697	0.7674	-0.8596
Shell08	74.7778	0.664	-29.9927	-19.9681	-193.5787	0.7348	-0.8109
Shell08	74.7778	0.672	-30.1255	-20.0619	-194.5642	0.7154	-0.795
Shell08	74.7778	0.68	-29.1897	-20.3806	-194.9918	0.7802	-0.8454
Shell08	74.7778	0.688	-28.4868	-21.046	-195.981	0.7513	-0.8527
Shell08	74.7778	0.696	-28.4718	-21.0312	-197.0857	0.7815	-0.8261
Shell08	74.7778	0.704	-28.0221	-21.6854	-197.7342	0.7755	-0.7843
Shell08	74.7778	0.712	-27.5016	-22.0826	-198.2968	0.8299	-0.7766
Shell08	74.7778	0.72	-26.6846	-22.8125	-199.328	0.8775	-0.7478
Shell08	74.7778	0.728	-26.1116	-23.3365	-199.2853	0.8414	-0.7831
Shell08	74.7778	0.736	-25.3667	-23.4083	-201.0095	0.8783	-0.7146
Shell08	74.7778	0.744	-25.1092	-23.9545	-201.4749	0.8939	-0.7795
Shell08	74.7778	0.752	-24.7053	-23.7775	-202.1093	0.9269	-0.6581
Shell08	74.7778	0.76	-24.1618	-24.3328	-202.61	0.8737	-0.6861
Shell08	74.7778	0.768	-23.922	-24.174	-204.0032	0.8067	-0.6715
Shell08	74.7778	0.776	-23.0742	-24.7927	-204.8904	0.8225	-0.7438
Shell08	74.7778	0.784	-23.0743	-24.3821	-206.1347	0.8601	-0.7035
Shell08	74.7778	0.792	-22.7902	-24.4818	-207.629	0.8585	-0.7579
Shell08	74.7778	0.8	-22.0945	-25.1361	-208.4227	0.8054	-0.7565
Shell08	74.7778	0.808	-21.4757	-25.0951	-209.3609	0.8142	-0.7164
Shell08	74.7778	0.816	-21.0709	-26.2105	-210.8452	0.8456	-0.6718
Shell08	74.7778	0.824	-20.6003	-26.1282	-211.7765	0.8744	-0.6412
Shell08	74.7778	0.832	-20.2442	-26.3231	-212.5711	0.864	-0.6216
Shell08	74.7778	0.84	-19.5915	-26.6036	-213.4037	0.868	-0.6228
Shell08	74.7778	0.848	-19.0697	-27.1853	-216.5725	0.7506	-0.6438
Shell08	74.7778	0.856	-18.9607	-27.2053	-217.2489	0.771	-0.6503
Shell08	74.7778	0.864	-18.4701	-27.2198	-217.7478	0.7791	-0.6433
Shell08	74.7778	0.872	-18.2079	-27.2003	-219.7706	0.7951	-0.6416
Shell08	74.7778	0.88	-16.9016	-27.3109	-220.6892	0.7845	-0.6673
Shell08	74.7778	0.888	-15.3284	-28.1243	-222.2495	0.8081	-0.7862
Shell08	74.7778	0.896	-15.2523	-28.3952	-223.6293	0.7577	-0.8065
Shell08	74.7778	0.904	-14.8923	-28.953	-224.5485	0.6765	-0.826
Shell08	74.7778	0.912	-14.4081	-30.0734	-226.1298	0.696	-0.7786
Shell08	74.7778	0.92	-12.4698	-30.7077	-227.9678	0.7394	-0.9153
Shell08	74.7778	0.928	-11.8836	-31.1993	-230.2975	0.7009	-1.0636
Shell08	74.7778	0.936	-11.5134	-31.9313	-231.1222	0.6779	-1.0592
Shell08	74.7778	0.944	-12.0757	-33.2225	-232.1516	0.7039	-1.1257
Shell08	74.7778	0.952	-11.3243	-34.023	-233.0073	0.6793	-1.1342
Shell08	74.7778	0.96	-10.3962	-34.7086	-233.9585	0.6682	-1.2004
Shell08	74.7778	0.968	-10.3603	-34.9952	-234.6662	0.6359	-1.2421
Shell08	74.7778	0.976	-10.2307	-35.4134	-236.0346	0.6816	-1.2433
Shell08	74.7778	0.984	-9.5836	-36.5896	-237.5318	0.7502	-1.2256
Shell08	74.7778	0.992	-8.659	-36.2585	-238.5042	0.7651	-1.264

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell08	74.7778	1	-7.5478	-36.1096	-239.5374	0.8428	-1.4211
Shell08	74.7778	1.008	-6.5614	-37.4285	-240.3647	0.8867	-1.5843
Shell08	74.7778	1.016	-6.2958	-37.2902	-241.5402	0.8864	-1.6375
Shell08	74.7778	1.024	-6.031	-37.3592	-242.7768	1.0208	-1.7887
Shell08	74.7778	1.032	-6.5	-37.2994	-243.9262	1.0446	-1.959
Shell08	74.7778	1.04	-6.3934	-37.9977	-244.8797	1.1402	-2.0881
Shell08	74.7778	1.048	-5.8224	-38.2309	-245.586	1.1751	-2.1266
Shell08	74.7778	1.056	-6.1382	-38.0171	-246.6403	1.2425	-2.3942
Shell08	74.7778	1.064	-6.1361	-39.1681	-247.355	1.3294	-2.9858
Shell08	74.7778	1.072	-6.0642	-40.018	-248.6242	1.345	2.9108
Shell08	74.7778	1.08	-6.3247	-40.5258	-250.6081	1.3383	2.43
Shell08	74.7778	1.088	-5.933	-41.6754	-250.7936	1.3167	2.1166
Shell08	74.7778	1.096	-5.8783	-42.2889	-251.3257	1.297	1.9223
Shell08	74.7778	1.104	-6.0776	-42.6127	-252.2991	1.2614	1.6926
Shell08	74.7778	1.112	-6.3273	-42.3389	-253.0454	1.2711	1.59
Shell08	74.7778	1.12	-6.5357	-42.4292	-256.3215	1.1891	1.6213
Shell09	64.7494	0	0	0	0	1.5277	2.55
Shell09	64.7494	0.008	0.9999	0.6018	-30.8521	1.4404	3.0479
Shell09	64.7494	0.016	-4.9665	8.6295	-72.7469	0.774	2.5649
Shell09	64.7494	0.024	-19.9195	20.9623	-87.0493	-0.793	2.5878
Shell09	64.7494	0.032	-28.5608	26.9417	-87.6685	-1.1119	2.9301
Shell09	64.7494	0.04	-40.8241	33.4923	-86.4371	-1.1102	-0.6327
Shell09	64.7494	0.048	-44.2353	35.803	-86.8004	-1.0514	-0.7118
Shell09	64.7494	0.056	-46.1252	34.3988	-84.1252	-0.8681	-0.5117
Shell09	64.7494	0.064	-49.165	34.6092	-82.6714	-0.7086	-0.4573
Shell09	64.7494	0.072	-52.9675	36.8248	-81.8065	-0.534	-0.4985
Shell09	64.7494	0.08	-59.096	39.537	-81.5721	-0.6076	-0.488
Shell09	64.7494	0.088	-61.7693	38.5588	-83.8577	-0.6239	-0.3585
Shell09	64.7494	0.096	-64.1829	38.8322	-83.2518	-0.623	-0.3276
Shell09	64.7494	0.104	-66.3759	39.4478	-82.5828	-0.5841	-0.3282
Shell09	64.7494	0.112	-70.7795	41.0637	-82.7226	-0.717	-0.3509
Shell09	64.7494	0.12	-76.9166	43.7159	-83.4019	-0.7745	-0.3478
Shell09	64.7494	0.128	-79.7012	45.0431	-83.9435	-0.8171	-0.407
Shell09	64.7494	0.136	-83.8163	46.3063	-84.0285	-0.9958	-0.3917
Shell09	64.7494	0.144	-84.3273	46.5264	-84.5568	-1.0483	-0.3465
Shell09	64.7494	0.152	-86.3822	47.2863	-84.5362	-1.1939	-0.2941
Shell09	64.7494	0.16	-89.858	47.902	-85.1533	-1.3641	-0.3294
Shell09	64.7494	0.168	-91.7645	48.9673	-85.7715	-1.5151	-0.3918
Shell09	64.7494	0.176	-94.5457	49.8111	-86.3561	-1.4813	-0.2847
Shell09	64.7494	0.184	-95.8049	50.9115	-86.4747	-1.5279	-0.0211
Shell09	64.7494	0.192	-97.952	51.777	-87.3481	-1.5052	-0.4784
Shell09	64.7494	0.2	-97.8914	51.6965	-88.1307	-1.5149	-0.4144
Shell09	64.7494	0.208	-101.205	52.8733	-88.3517	-1.5322	-1.0391
Shell09	64.7494	0.216	-101.4321	52.7135	-89.436	-1.477	-1.3548
Shell09	64.7494	0.224	-104.3432	54.2403	-89.359	-1.3547	2.9014
Shell09	64.7494	0.232	-105.0584	53.9159	-90.882	-1.3098	3.0174
Shell09	64.7494	0.24	-105.5404	54.379	-91.954	-1.3331	-3.1231
Shell09	64.7494	0.248	-106.4401	54.3402	-93.2209	-1.3106	-2.9335
Shell09	64.7494	0.256	-106.8465	54.724	-94.1237	-1.3264	-2.7705
Shell09	64.7494	0.264	-107.535	54.6892	-95.011	-1.3002	-2.6559
Shell09	64.7494	0.272	-109.0286	55.2904	-96.3343	-1.2111	-2.9099
Shell09	64.7494	0.28	-108.8753	56.1733	-97.456	-1.2459	-3.0137
Shell09	64.7494	0.288	-108.9457	57.1077	-98.81	-1.2613	-3.0458

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell09	64.7494	0.296	-109.0964	57.2828	-99.1204	-1.2925	-2.9278
Shell09	64.7494	0.304	-110.3097	57.7517	-103.4906	-1.2339	-2.878
Shell09	64.7494	0.312	-110.7033	57.7899	-105.0551	-1.2268	-2.8002
Shell09	64.7494	0.32	-112.2815	59.025	-106.2658	-1.2473	-2.379
Shell09	64.7494	0.328	-112.4615	60.7789	-108.0624	-1.1824	-2.8272
Shell09	64.7494	0.336	-113.6738	60.6045	-108.0033	-1.1159	-3.112
Shell09	64.7494	0.344	-113.7324	60.7358	-110.008	-1.1721	-3.0166
Shell09	64.7494	0.352	-114.1672	61.1679	-111.1729	-1.0622	-3.1334
Shell09	64.7494	0.36	-110.0903	59.4634	-111.0334	-1.1832	-2.8781
Shell09	64.7494	0.368	-110.2061	61.3307	-113.9614	-0.9184	2.9283
Shell09	64.7494	0.376	-111.6596	61.4559	-114.4599	-0.8334	2.9896
Shell09	64.7494	0.384	-110.7135	60.7918	-115.8607	-0.8343	2.9665
Shell09	64.7494	0.392	-111.6845	60.4905	-116.2183	-0.7913	2.9408
Shell09	64.7494	0.4	-111.244	60.1528	-117.4912	-0.7897	2.9187
Shell09	64.7494	0.408	-111.1625	60.0022	-118.2815	-0.808	2.9289
Shell09	64.7494	0.416	-109.8721	59.8157	-119.5313	-0.8785	2.9129
Shell09	64.7494	0.424	-110.5647	60.6315	-120.7434	-0.9151	2.9743
Shell09	64.7494	0.432	-110.9346	60.742	-122.0688	-0.9358	2.9629
Shell09	64.7494	0.44	-111.0929	60.8137	-123.4506	-0.8963	2.9356
Shell09	64.7494	0.448	-110.8135	60.6863	-124.4013	-0.8646	2.9222
Shell09	64.7494	0.456	-109.9373	60.3762	-125.1196	-0.7886	2.8999
Shell09	64.7494	0.464	-111.068	61.1631	-126.6611	-0.8568	2.9206
Shell09	64.7494	0.472	-110.705	61.135	-127.6108	-0.8154	2.8618
Shell09	64.7494	0.48	-107.8378	59.7212	-129.6697	-0.8398	2.9007
Shell09	64.7494	0.488	-107.2258	59.1392	-133.9651	-0.754	2.9629
Shell09	64.7494	0.496	-107.4778	58.5534	-133.0409	-0.8286	2.9292
Shell09	64.7494	0.504	-107.4627	58.5518	-134.2257	-0.7308	2.8778
Shell09	64.7494	0.512	-105.5357	55.8705	-135.7368	-0.6366	2.7782
Shell09	64.7494	0.52	-104.0606	55.2103	-137.4938	-0.6476	2.8625
Shell09	64.7494	0.528	-103.3629	55.022	-137.6695	-0.6113	2.8667
Shell09	64.7494	0.536	-101.9864	54.6427	-139.1111	-0.5385	2.8006
Shell09	64.7494	0.544	-101.9894	54.9301	-139.5199	-0.5725	2.8001
Shell09	64.7494	0.552	-101.8352	54.9624	-140.5937	-0.6056	2.7976
Shell09	64.7494	0.56	-101.4728	54.7665	-141.7693	-0.5955	2.7862
Shell09	64.7494	0.568	-101.3404	54.717	-142.9938	-0.5803	2.7601
Shell09	64.7494	0.576	-99.8772	55.1668	-146.2679	-0.4401	2.636
Shell09	64.7494	0.584	-99.7961	55.238	-147.0464	-0.4146	2.6279
Shell09	64.7494	0.592	-99.6966	55.294	-148.2324	-0.3813	2.63
Shell09	64.7494	0.6	-99.3534	54.7193	-149.1985	-0.3865	2.6297
Shell09	64.7494	0.608	-100.0376	55.8856	-149.4506	-0.331	2.5696
Shell09	64.7494	0.616	-100.4961	56.5387	-149.8848	-0.3266	2.5523
Shell09	64.7494	0.624	-100.4669	56.4019	-150.2718	-0.3108	2.5401
Shell09	64.7494	0.632	-99.1093	55.3875	-151.0894	-0.2839	2.5386
Shell09	64.7494	0.64	-99.1385	55.3262	-152.4996	-0.2474	2.5343
Shell09	64.7494	0.648	-96.8209	52.2011	-153.5034	-0.2468	2.554
Shell09	64.7494	0.656	-95.7484	51.1478	-154.143	-0.2452	2.5481
Shell09	64.7494	0.664	-95.6912	50.9946	-154.5269	-0.2337	2.5439
Shell09	64.7494	0.672	-94.4145	50.3026	-155.2797	-0.2339	2.5351
Shell09	64.7494	0.68	-93.2624	48.8327	-156.0824	-0.2206	2.5081
Shell09	64.7494	0.688	-92.7156	47.8903	-156.4533	-0.2195	2.4867
Shell09	64.7494	0.696	-92.0102	47.4457	-157.1578	-0.2394	2.4935
Shell09	64.7494	0.704	-90.5206	45.8126	-158.5134	-0.2592	2.4878
Shell09	64.7494	0.712	-89.042	45.1796	-158.8814	-0.2668	2.4783

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell09	64.7494	0.72	-88.6797	44.6515	-159.4291	-0.2574	2.4836
Shell09	64.7494	0.728	-88.3968	44.1707	-160.2149	-0.2951	2.4845
Shell09	64.7494	0.736	-87.8943	43.4433	-160.7409	-0.3072	2.5038
Shell09	64.7494	0.744	-87.7043	43.0979	-161.5138	-0.3081	2.5041
Shell09	64.7494	0.752	-87.0788	42.0926	-162.5603	-0.2961	2.5025
Shell09	64.7494	0.76	-87.4872	42.2289	-163.1507	-0.2974	2.4725
Shell09	64.7494	0.768	-85.4544	41.9653	-164.1978	-0.2876	2.3964
Shell09	64.7494	0.776	-85.6105	41.5444	-165.4475	-0.4224	2.2873
Shell09	64.7494	0.784	-82.902	40.3183	-165.9204	-0.4862	2.1917
Shell09	64.7494	0.792	-82.9326	40.3454	-166.2104	-0.4645	2.193
Shell09	64.7494	0.8	-81.3606	39.5901	-166.959	-0.5593	2.0556
Shell09	64.7494	0.808	-79.5936	38.975	-167.6349	-0.587	2.0291
Shell09	64.7494	0.816	-78.9346	38.2413	-167.8931	-0.6167	2.0042
Shell09	64.7494	0.824	-76.7505	37.2188	-168.2918	-0.6479	1.9921
Shell09	64.7494	0.832	-75.062	36.3345	-169.2603	-0.726	1.8819
Shell09	64.7494	0.84	-77.5253	36.4733	-169.7065	-0.7053	1.8944
Shell09	64.7494	0.848	-78.1912	36.2713	-169.7828	-0.6705	1.9494
Shell09	64.7494	0.856	-76.2222	35.7676	-170.8721	-0.6155	1.977
Shell09	64.7494	0.864	-75.062	34.1714	-172.5711	-0.657	1.7934
Shell09	64.7494	0.872	-76.6922	34.2096	-172.5909	-0.7801	1.6376
Shell09	64.7494	0.88	-75.0557	33.5039	-172.0073	-0.8516	1.3676
Shell09	64.7494	0.888	-76.3859	34.9664	-172.9241	-0.8216	1.6636
Shell09	64.7494	0.896	-75.2397	34.2609	-172.5044	-0.7859	1.788
Shell09	64.7494	0.904	-72.4551	31.6715	-173.1035	-0.7948	1.8428
Shell09	64.7494	0.912	-72.6792	31.7457	-174.045	-0.823	1.7218
Shell09	64.7494	0.92	-71.6323	30.5818	-175.2719	-0.85	1.7431
Shell09	64.7494	0.928	-72.6596	30.0751	-176.0572	-0.8881	1.7525
Shell09	64.7494	0.936	-73.2639	29.978	-177.0386	-0.9436	1.9047
Shell09	64.7494	0.944	-72.3588	29.6114	-178.0112	-0.9818	1.9386
Shell09	64.7494	0.952	-72.3304	29.4837	-179.3486	-0.9412	1.9482
Shell09	64.7494	0.96	-72.3736	28.8992	-180.2356	-0.9372	1.997
Shell09	64.7494	0.968	-72.3736	28.897	-180.3246	-0.9414	1.9968
Shell09	64.7494	0.976	-72.0154	28.2722	-181.3004	-0.9563	1.9969
Shell09	64.7494	0.984	-71.963	27.5822	-181.9313	-1.0043	1.9378
Shell09	64.7494	0.992	-71.4088	26.6096	-182.7116	-0.9875	1.9421
Shell09	64.7494	1	-72.3849	26.3934	-183.3048	-1.001	1.9976
Shell09	64.7494	1.008	-71.9162	25.5597	-184.7285	-1.0031	1.9967
Shell09	64.7494	1.016	-71.7423	24.4088	-186.2588	-0.9953	1.9399
Shell09	64.7494	1.024	-71.937	24.4467	-186.4588	-1.011	1.9146
Shell09	64.7494	1.032	-72.2986	24.3696	-187.6751	-0.9372	1.9844
Shell09	64.7494	1.04	-73.3873	25.1789	-188.4477	-0.9398	2.0456
Shell09	64.7494	1.048	-72.4057	24.9197	-190.4369	-0.9058	2.1446
Shell09	64.7494	1.056	-72.1245	23.9127	-192.1636	-0.9538	2.1073
Shell09	64.7494	1.064	-70.9229	21.6923	-191.8369	-0.9099	2.0916
Shell09	64.7494	1.072	-70.7306	21.6454	-192.1191	-0.9707	2.1052
Shell09	64.7494	1.08	-71.018	21.7922	-193.1146	-0.9711	2.0875
Shell09	64.7494	1.088	-71.3286	21.7309	-194.2058	-1.0174	2.0467
Shell09	64.7494	1.096	-70.668	20.6301	-195.6109	-1.0895	2.0307
Shell09	64.7494	1.104	-70.2622	19.9493	-197.1785	-1.1353	2.0196
Shell09	64.7494	1.112	-70.025	19.8332	-197.8284	-1.1312	2.05
Shell09	64.7494	1.12	-69.4864	19.1811	-199.4648	-1.0853	2.0809
Shell09	64.7494	1.128	-69.5995	18.7719	-200.3662	-1.0356	2.1286
Shell09	64.7494	1.136	-68.9857	18.2586	-201.5662	-1.0044	2.1609

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell09	64.7494	1.144	-68.87	18.0712	-201.8275	-1.0013	2.1599
Shell09	64.7494	1.152	-68.7203	17.8188	-203.1348	-1.0046	2.1587
Shell09	64.7494	1.16	-67.9644	15.5329	-205.8814	-1.1469	2.0794
Shell09	64.7494	1.168	-68.1578	15.5705	-206.5686	-1.1541	2.0501
Shell09	64.7494	1.176	-67.9859	15.2721	-207.3895	-1.1395	2.0525
Shell09	64.7494	1.184	-68.0244	15.0593	-208.3995	-1.1135	2.0847
Shell09	64.7494	1.192	-67.5751	14.5985	-209.281	-1.0913	2.1104
Shell09	64.7494	1.2	-67.4453	14.4011	-210.7573	-1.0777	2.1141
Shell09	64.7494	1.208	-66.335	12.7855	-212.5759	-1.0566	2.1329
Shell09	64.7494	1.216	-66.1366	11.0878	-214.5903	-1.131	2.0332
Shell09	64.7494	1.224	-66.0546	10.3106	-216.9668	-1.0799	2.1319
Shell09	64.7494	1.232	-66.3312	10.4922	-216.8229	-1.1058	2.0516
Shell09	64.7494	1.24	-65.2946	10.1167	-219.852	-1.0999	2.1815
Shell09	64.7494	1.248	-64.3428	8.8373	-221.3343	-1.0519	2.1142
Shell09	64.7494	1.256	-65.4654	9.3298	-222.548	-1.123	1.9983
Shell09	64.7494	1.264	-64.9506	8.9847	-223.5877	-1.1262	2.0427
Shell09	64.7494	1.272	-63.8455	7.6178	-225.2282	-1.1746	2.0868
Shell09	64.7494	1.28	-62.7428	6.786	-226.0604	-1.0832	2.1673
Shell09	64.7494	1.288	-62.1579	6.321	-227.448	-1.0302	2.2078
Shell09	64.7494	1.296	-63.9917	6.3922	-229.5379	-1.0626	2.1355
Shell09	64.7494	1.304	-63.1176	5.7169	-231.2344	-1.1051	2.1095
Shell09	64.7494	1.312	-62.6437	4.8861	-233.0337	-1.0737	2.124
Shell09	64.7494	1.32	-62.3015	4.5094	-234.7921	-1.1075	2.0914
Shell09	64.7494	1.328	-61.894	3.6334	-236.847	-1.0614	2.1239
Shell09	64.7494	1.336	-61.0467	2.6919	-238.0726	-1.097	2.1641
Shell09	64.7494	1.344	-60.392	2.0487	-239.3363	-1.0834	2.2008
Shell09	64.7494	1.352	-59.6125	0.769	-240.8722	-1.0582	2.1882
Shell09	64.7494	1.36	-59.3024	0.2606	-242.9232	-1.0599	2.1885
Shell09	64.7494	1.368	-59.4198	0.2869	-244.9866	-0.9193	2.1846
Shell09	64.7494	1.376	-58.4108	-0.7938	-245.7931	-0.8796	2.254
Shell09	64.7494	1.384	-57.8261	-1.4638	-247.7475	-0.875	2.3173
Shell09	64.7494	1.392	-58.3556	-1.245	-249.8234	-0.8233	2.335
Shell09	64.7494	1.4	-57.9591	-2.053	-250.1555	-0.8746	2.3499
Shell09	64.7494	1.408	-57.4912	-1.8501	-251.8448	-0.758	2.2937
Shell09	64.7494	1.416	-55.6103	-3.6814	-253.7353	-0.6436	2.2737
Shell09	64.7494	1.424	-55.3422	-4.1803	-255.5367	-0.6085	2.3171
Shell09	64.7494	1.432	-55.8059	-5.5846	-256.6581	-0.6334	2.2912
Shell09	64.7494	1.44	-54.9862	-6.3562	-258.0403	-0.6152	2.3302
Shell09	64.7494	1.448	-54.2419	-6.3667	-259.763	-0.5302	2.366
Shell09	64.7494	1.456	-53.8684	-6.8654	-260.7881	-0.4749	2.3653
Shell09	64.7494	1.464	-52.8923	-7.5041	-261.8137	-0.4136	2.4057
Shell09	64.7494	1.472	-52.8509	-7.7984	-263.0573	-0.3466	2.387
Shell09	64.7494	1.48	-52.528	-8.2055	-263.9836	-0.3159	2.3907
Shell09	64.7494	1.488	-52.6727	-8.3978	-264.6075	-0.3038	2.3838
Shell09	64.7494	1.496	-52.447	-8.9074	-266.212	-0.2403	2.3843
Shell09	64.7494	1.504	-51.1628	-9.9881	-267.0367	-0.2058	2.4054
Shell09	64.7494	1.512	-50.6228	-10.5576	-267.7994	-0.1925	2.4166
Shell09	64.7494	1.52	-49.1707	-11.8609	-268.7007	-0.222	2.3686
Shell09	64.7494	1.528	-48.6275	-12.2948	-269.3256	-0.2341	2.3929
Shell09	64.7494	1.536	-47.8357	-13.5176	-270.0078	-0.1334	2.4085
Shell09	64.7494	1.544	-47.316	-13.9014	-270.8524	-0.1634	2.4729
Shell09	64.7494	1.552	-46.9835	-14.536	-271.2335	-0.1034	2.4673
Shell09	64.7494	1.56	-46.2128	-15.4959	-272.166	-0.0921	2.4356

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell09	64.7494	1.568	-45.1309	-16.3853	-272.8329	-0.0075	2.4268
Shell09	64.7494	1.576	-44.1455	-17.3865	-273.1952	0.0509	2.4618
Shell09	64.7494	1.584	-42.9143	-17.8604	-273.877	0.1118	2.4631
Shell09	64.7494	1.592	-42.0087	-18.3474	-274.4749	0.1908	2.4611
Shell09	64.7494	1.6	-42.0975	-18.7994	-275.0994	0.2648	2.4472
Shell09	64.7494	1.608	-41.2398	-18.9103	-274.98	0.2802	2.4531
Shell09	64.7494	1.616	-40.6082	-19.0746	-275.3854	0.254	2.4806
Shell09	64.7494	1.624	-40.2415	-19.8494	-275.4702	0.2543	2.4842
Shell09	64.7494	1.632	-39.5477	-20.4442	-275.6076	0.2305	2.4911
Shell09	64.7494	1.64	-38.778	-20.8186	-275.9161	0.2757	2.4849
Shell09	64.7494	1.648	-37.9399	-21.0981	-276.0776	0.254	2.4613
Shell09	64.7494	1.656	-37.4741	-21.2634	-276.521	0.272	2.493
Shell09	64.7494	1.664	-37.0728	-21.7355	-276.9022	0.286	2.5023
Shell09	64.7494	1.672	-36.3904	-22.36	-277.4231	0.294	2.5076
Shell09	64.7494	1.68	-35.5333	-22.8945	-278.3612	0.2918	2.4977
Shell10	84.3337	0	0	0	0	1.5461	-2.5271
Shell10	84.3337	0.008	1.896	-0.4698	-53.1169	1.2131	0.9756
Shell10	84.3337	0.016	13.8447	10.1067	-81.817	0.1224	0.9236
Shell10	84.3337	0.024	26.3416	27.9723	-86.4948	-0.9993	0.396
Shell10	84.3337	0.032	35.2198	33.915	-84.2809	-1.3024	-1.7341
Shell10	84.3337	0.04	39.7803	37.3932	-79.7948	-0.9846	-2.2284
Shell10	84.3337	0.048	45.556	40.7626	-76.7797	-0.6717	-2.4382
Shell10	84.3337	0.056	50.1512	42.5595	-76.1323	-0.6323	-2.5461
Shell10	84.3337	0.064	52.8536	43.17	-74.2339	-0.5394	-2.6736
Shell10	84.3337	0.072	52.056	41.641	-71.7934	-0.5541	-2.7797
Shell10	84.3337	0.08	52.3827	41.7578	-69.8262	-0.576	-2.9146
Shell10	84.3337	0.088	52.364	42.2776	-68.8601	-0.6745	-3.0235
Shell10	84.3337	0.096	52.9216	41.9948	-69.1062	-0.713	-3.1361
Shell10	84.3337	0.104	52.9962	42.0814	-69.6323	-0.7406	3.0894
Shell10	84.3337	0.112	53.0145	41.8856	-69.8263	-0.737	3.0203
Shell10	84.3337	0.12	53.2065	42.0206	-70.2547	-0.706	3.0033
Shell10	84.3337	0.128	54.1828	42.0084	-70.2193	-0.7465	2.9293
Shell10	84.3337	0.136	51.3783	41.1915	-69.4713	-0.808	2.7142
Shell10	84.3337	0.144	52.1616	41.0601	-69.7411	-0.7697	2.6962
Shell10	84.3337	0.152	52.7205	41.5922	-70.0106	-0.7398	2.7469
Shell10	84.3337	0.16	52.9489	41.4753	-70.2067	-0.7362	2.6988
Shell10	84.3337	0.168	53.8192	41.1919	-71.0947	-0.7214	2.7171
Shell10	84.3337	0.176	55.2928	41.122	-71.2427	-0.8089	2.711
Shell10	84.3337	0.184	56.1117	41.1089	-71.4939	-0.812	2.6872
Shell10	84.3337	0.192	57.4817	42.1547	-71.6037	-0.83	2.7446
Shell10	84.3337	0.2	58.1871	41.6315	-72.2076	-0.833	2.69
Shell10	84.3337	0.208	58.9993	41.899	-72.9164	-0.8866	2.5991
Shell10	84.3337	0.216	59.9513	41.6936	-73.9212	-0.9263	2.5687
Shell10	84.3337	0.224	60.6069	41.5073	-74.3856	-0.9656	2.5887
Shell10	84.3337	0.232	61.7169	41.8869	-75.1902	-0.995	2.6476
Shell10	84.3337	0.24	63.0321	42.2309	-75.7262	-1.0069	2.6951
Shell10	84.3337	0.248	64.7075	42.4709	-77.2273	-1.1413	2.7027
Shell10	84.3337	0.256	64.8243	42.3455	-77.6696	-1.1656	2.6725
Shell10	84.3337	0.264	65.6587	42.114	-78.2957	-1.2285	2.5458
Shell10	84.3337	0.272	65.9238	41.937	-78.8746	-1.2419	2.5123
Shell10	84.3337	0.28	66.8217	42.3096	-79.4296	-1.2801	2.4172
Shell10	84.3337	0.288	66.756	42.5145	-79.6182	-1.2955	2.4444
Shell10	84.3337	0.296	67.2353	42.6306	-79.5938	-1.3168	2.4455

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell10	84.3337	0.304	67.6509	42.6777	-79.9026	-1.344	2.4189
Shell10	84.3337	0.312	67.6753	42.3839	-80.2873	-1.3357	2.3612
Shell10	84.3337	0.32	67.6405	41.3214	-79.6226	-1.3158	1.9546
Shell10	84.3337	0.328	68.5653	41.6809	-80.1066	-1.3225	2.3979
Shell10	84.3337	0.336	68.3753	41.3617	-80.5174	-1.3263	2.3907
Shell10	84.3337	0.344	69.1159	41.2866	-80.7377	-1.3282	2.6421
Shell10	84.3337	0.352	69.994	41.1769	-81.0545	-1.378	2.5222
Shell10	84.3337	0.36	70.0096	40.8299	-81.6123	-1.3808	2.8489
Shell10	84.3337	0.368	70.3866	40.8763	-82.1015	-1.4053	2.7834
Shell10	84.3337	0.376	69.7826	39.7948	-83.0499	-1.4026	2.8435
Shell10	84.3337	0.384	69.8615	39.3036	-83.7349	-1.4294	2.7697
Shell10	84.3337	0.392	69.9199	39.123	-84.3649	-1.4457	2.436
Shell10	84.3337	0.4	69.8926	38.3783	-85.0315	-1.4899	2.3182
Shell10	84.3337	0.408	69.0018	38.1298	-85.4226	-1.4975	1.502
Shell10	84.3337	0.416	68.8586	37.8123	-85.6106	-1.4594	0.6218
Shell10	84.3337	0.424	68.97	37.6555	-85.8346	-1.4414	0.6101
Shell10	84.3337	0.432	68.6785	36.7434	-86.0302	-1.4045	0.5007
Shell10	84.3337	0.44	69.1621	37.0413	-86.7577	-1.4094	0.2791
Shell10	84.3337	0.448	69.1075	36.9279	-87.1589	-1.418	0.2335
Shell10	84.3337	0.456	68.2113	36.7439	-88.1283	-1.4715	0.4223
Shell10	84.3337	0.464	68.4893	36.981	-88.8195	-1.4822	0.5498
Shell10	84.3337	0.472	68.7744	36.7782	-89.3332	-1.5005	0.8157
Shell10	84.3337	0.48	68.4218	36.333	-90.3008	-1.5024	1.6787
Shell10	84.3337	0.488	67.8327	35.9408	-90.9269	-1.4601	1.6862
Shell10	84.3337	0.496	67.2885	35.9824	-91.8725	-1.438	1.9268
Shell10	84.3337	0.504	66.6217	35.4699	-92.9253	-1.3996	1.8703
Shell10	84.3337	0.512	66.1447	35.3831	-94.2951	-1.4056	2.2287
Shell10	84.3337	0.52	65.595	35.4443	-95.1001	-1.4286	2.0679
Shell10	84.3337	0.528	65.5481	35.3953	-95.95	-1.42	2.0357
Shell10	84.3337	0.536	65.4213	35.4936	-97.1569	-1.4076	1.8626
Shell10	84.3337	0.544	64.8687	35.4753	-98.0308	-1.4053	1.5532
Shell10	84.3337	0.552	65.0836	35.3058	-98.9443	-1.335	1.5564
Shell10	84.3337	0.56	64.9025	35.3612	-99.6036	-1.3166	1.2442
Shell10	84.3337	0.568	65.7114	35.7144	-101.6372	-1.3187	1.3522
Shell10	84.3337	0.576	65.6037	35.1415	-102.3563	-1.3012	1.2827
Shell10	84.3337	0.584	65.5499	35.1573	-103.0549	-1.2827	1.2743
Shell10	84.3337	0.592	65.5219	34.7552	-103.8211	-1.2618	1.2237
Shell10	84.3337	0.6	65.6703	34.7402	-104.9608	-1.2749	1.2713
Shell10	84.3337	0.608	65.7424	34.5045	-106.1891	-1.2455	1.2986
Shell10	84.3337	0.616	66.1693	34.2103	-106.8037	-1.2465	1.3308
Shell10	84.3337	0.624	65.719	33.3743	-108.2948	-1.2056	1.2801
Shell10	84.3337	0.632	65.4368	32.8234	-109.7777	-1.1854	1.2651
Shell10	84.3337	0.64	65.3317	32.7314	-110.5268	-1.2114	1.2843
Shell10	84.3337	0.648	65.0583	32.2412	-111.0449	-1.2217	1.2892
Shell10	84.3337	0.656	64.8494	31.7893	-111.6875	-1.2389	1.3051
Shell10	84.3337	0.664	64.8292	31.7443	-112.6031	-1.2437	1.301
Shell10	84.3337	0.672	64.959	31.6485	-113.3556	-1.2316	1.3276
Shell10	84.3337	0.68	63.8131	30.7025	-113.5169	-1.1572	1.1931
Shell10	84.3337	0.688	65.4617	30.7041	-115.1608	-1.0867	0.7345
Shell10	84.3337	0.696	65.1054	30.4377	-116.1478	-1.0914	0.8127
Shell10	84.3337	0.704	65.1613	30.2453	-118.0593	-1.0962	0.7726
Shell10	84.3337	0.712	64.9297	29.9264	-119.5879	-1.085	0.7469
Shell10	84.3337	0.72	65.018	30.1021	-120.5717	-1.0938	0.6873

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell10	84.3337	0.728	64.4402	29.7405	-121.1448	-1.098	0.6435
Shell10	84.3337	0.736	64.3949	29.1302	-122.6485	-1.1524	0.7054
Shell10	84.3337	0.744	63.939	28.9504	-123.4233	-1.1232	0.6713
Shell10	84.3337	0.752	62.3911	29.2406	-125.6652	-1.1182	0.4601
Shell10	84.3337	0.76	61.9544	28.1216	-126.9559	-1.1121	0.4876
Shell10	84.3337	0.768	61.7432	27.7056	-128.4102	-1.0912	0.546
Shell10	84.3337	0.776	60.9489	27.2881	-129.7923	-1.1428	0.5624
Shell10	84.3337	0.784	60.2825	27.0801	-131.216	-1.1701	0.5291
Shell10	84.3337	0.792	59.6813	26.3165	-132.5914	-1.2285	0.4712
Shell10	84.3337	0.8	59.4739	25.8727	-134.1152	-1.224	0.4867
Shell10	84.3337	0.808	58.6587	26.0678	-135.6351	-1.2559	0.5258
Shell10	84.3337	0.816	58.4217	26.1188	-136.4626	-1.2796	0.5183
Shell10	84.3337	0.824	58.7183	26.4558	-138.0479	-1.3615	0.4957
Shell10	84.3337	0.832	58.3441	26.3669	-139.0999	-1.3741	0.6244
Shell10	84.3337	0.84	57.8135	26.0254	-140.1789	-1.4291	0.6108
Shell10	84.3337	0.848	57.505	25.8331	-141.1864	-1.466	0.5613
Shell10	84.3337	0.856	57.3006	25.7293	-142.434	-1.5108	1.2586
Shell10	84.3337	0.864	56.8921	25.6019	-143.448	-1.5211	1.8537
Shell10	84.3337	0.872	56.7776	25.2632	-145.4526	-1.5316	2.2266
Shell10	84.3337	0.88	56.6697	25.1276	-146.842	-1.5291	-3.0912
Shell10	84.3337	0.888	56.7502	24.907	-148.3048	-1.5165	2.4876
Shell10	84.3337	0.896	56.4767	24.3214	-149.6663	-1.5122	3.0664
Shell10	84.3337	0.904	56.4961	24.2937	-151.1927	-1.504	-2.965
Shell10	84.3337	0.912	56.6617	24.1894	-152.7932	-1.5193	-2.9154
Shell10	84.3337	0.92	56.7243	24.3285	-153.7957	-1.5209	-2.9634
Shell10	84.3337	0.928	55.9525	24.5248	-155.5797	-1.4502	3.1272
Shell10	84.3337	0.936	55.826	24.3297	-156.7794	-1.4013	-3.0107
Shell10	84.3337	0.944	55.4292	23.5232	-158.3808	-1.4358	2.5282
Shell10	84.3337	0.952	54.2655	23.3155	-159.4695	-1.3552	2.4809
Shell10	84.3337	0.96	54.4831	23.3919	-160.7586	-1.3753	2.4893
Shell10	84.3337	0.968	56.697	23.3658	-163.3131	-1.3279	2.7479
Shell10	84.3337	0.976	55.858	23.3987	-164.5177	-1.383	2.764
Shell10	84.3337	0.984	57.8262	23.1925	-166.479	-1.2747	2.8759
Shell10	84.3337	0.992	58.022	22.8772	-167.9259	-1.266	2.8277
Shell10	84.3337	1	57.8339	22.9199	-169.4726	-1.1837	2.8199
Shell10	84.3337	1.008	57.608	22.398	-171.41	-1.1753	2.8374
Shell10	84.3337	1.016	57.1143	22.529	-173.1885	-1.165	2.7487
Shell10	84.3337	1.024	57.3699	22.6702	-174.3691	-1.1808	2.7144
Shell10	84.3337	1.032	58.4441	22.5768	-177.1763	-1.1118	2.6147
Shell10	84.3337	1.04	59.0874	22.8643	-179.1797	-1.0761	2.4491
Shell10	84.3337	1.048	59.3224	22.6174	-180.2212	-1.0913	2.4141
Shell10	84.3337	1.056	60.1874	22.3648	-182.1149	-1.064	2.2623
Shell10	84.3337	1.064	59.9079	21.8363	-183.2468	-1.0578	2.1864
Shell10	84.3337	1.072	59.8943	21.8026	-184.8436	-1.0227	2.1571
Shell10	84.3337	1.08	60.0143	21.6517	-187.0867	-0.999	2.1584
Shell10	84.3337	1.088	60.2792	21.1617	-188.9273	-0.9687	2.1218
Shell10	84.3337	1.096	60.6588	20.8446	-190.3098	-0.9896	2.0264
Shell10	84.3337	1.104	60.9984	20.5447	-191.4028	-0.9804	2.0066
Shell10	84.3337	1.112	60.061	20.9173	-192.0188	-1.0026	1.8132
Shell10	84.3337	1.12	61.6139	19.5744	-193.4262	-0.9614	1.9995
Shell10	84.3337	1.128	63.8422	18.5764	-195.6007	-1.0234	1.6404
Shell10	84.3337	1.136	64.6768	18.1846	-196.7373	-1.0074	1.4684
Shell10	84.3337	1.144	64.4787	16.9333	-198.7056	-1.0048	1.3626

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell10	84.3337	1.152	65.633	16.8059	-199.1713	-0.9356	1.1685
Shell10	84.3337	1.16	65.5262	16.613	-200.1372	-0.9285	1.1734
Shell10	84.3337	1.168	64.673	16.58	-201.2291	-1.0009	1.2772
Shell10	84.3337	1.176	65.1538	16.7938	-202.3027	-0.9922	1.2751
Shell10	84.3337	1.184	65.1161	16.6922	-203.4498	-0.9997	1.2917
Shell10	84.3337	1.192	65.0107	16.2169	-204.3607	-1.037	1.2766
Shell10	84.3337	1.2	65.5567	15.399	-205.2615	-1.0653	1.1101
Shell10	84.3337	1.208	66.013	14.9171	-206.1575	-1.0914	0.8401
Shell10	84.3337	1.216	65.2267	14.1357	-207.2464	-1.0628	0.8047
Shell10	84.3337	1.224	64.816	13.7112	-208.299	-1.061	0.7734
Shell10	84.3337	1.232	65.0871	13.5733	-209.6369	-1.0411	0.6782
Shell10	84.3337	1.24	64.6683	13.148	-210.4487	-1.0485	0.6441
Shell10	84.3337	1.248	64.1711	12.1441	-211.1345	-1.1164	0.5458
Shell10	84.3337	1.256	63.5	11.8239	-212.8347	-1.1523	0.5076
Shell10	84.3337	1.264	62.6439	11.6397	-214.9023	-1.059	0.4472
Shell10	84.3337	1.272	60.9185	11.2054	-216.1103	-1.1863	0.378
Shell10	84.3337	1.28	60.8095	10.2421	-217.4286	-1.151	0.3325
Shell10	84.3337	1.288	59.9565	10.0556	-218.7076	-1.1194	0.2758
Shell10	84.3337	1.296	59.5916	9.7151	-219.6015	-1.1415	0.192
Shell10	84.3337	1.304	58.9949	9.2538	-221.0766	-1.188	0.0891
Shell10	84.3337	1.312	59.3415	8.8165	-222.1172	-1.1925	-0.0795
Shell10	84.3337	1.32	59.8799	9.1672	-223.3527	-1.1786	-0.2358
Shell10	84.3337	1.328	58.8239	9.1475	-224.4892	-1.2567	-0.1265
Shell10	84.3337	1.336	59.1716	8.5616	-225.3172	-1.2297	-0.3459
Shell10	84.3337	1.344	58.5009	7.99	-227.2198	-1.1968	-0.5638
Shell10	84.3337	1.352	58.4548	8.1839	-227.5169	-1.225	-0.676
Shell10	84.3337	1.36	58.6964	8.0432	-228.8336	-1.2348	-0.8246
Shell10	84.3337	1.368	59.0597	8.6684	-229.742	-1.2048	-1.0822
Shell10	84.3337	1.376	58.4891	8.6541	-232.8463	-1.2129	-0.9613
Shell10	84.3337	1.384	57.5802	8.6032	-233.9218	-1.2139	-0.8722
Shell10	84.3337	1.392	57.2027	8.4475	-234.7919	-1.2393	-0.9095
Shell10	84.3337	1.4	56.6478	8.7137	-235.9279	-1.263	-1.104
Shell10	84.3337	1.408	56.6622	8.7006	-237.3716	-1.2451	-1.1727
Shell10	84.3337	1.416	56.5419	8.6713	-238.8265	-1.2712	-1.3249
Shell10	84.3337	1.424	56.1381	8.221	-239.8449	-1.2458	-1.4603
Shell10	84.3337	1.432	55.717	7.5148	-241.0169	-1.1408	-1.6431
Shell10	84.3337	1.44	55.629	8.1707	-242.9265	-1.0887	-1.5732
Shell10	84.3337	1.448	55.5114	8.239	-243.935	-1.0918	-1.5528
Shell10	84.3337	1.456	55.1628	8.9246	-245.5711	-1.0578	-1.5787
Shell10	84.3337	1.464	54.7132	9.2759	-247.4459	-1.0638	-1.5887
Shell10	84.3337	1.472	54.5519	9.4195	-248.6022	-1.0478	-1.5999
Shell10	84.3337	1.48	54.3056	9.2462	-250.2475	-1.077	-1.5203
Shell10	84.3337	1.488	53.8858	9.8425	-251.5928	-1.0162	-1.6563
Shell10	84.3337	1.496	53.4753	9.8493	-253.2975	-0.9844	-1.657
Shell10	84.3337	1.504	54.2893	10.8933	-254.8097	-1.0287	-1.628
Shell10	84.3337	1.512	54.1942	11.3825	-256.1514	-1.0403	-1.8241
Shell10	84.3337	1.52	55.1638	12.1528	-257.5948	-1.048	-1.7672
Shell10	84.3337	1.528	54.7499	11.9317	-258.9489	-1.0609	-1.7775
Shell10	84.3337	1.536	54.394	12.1523	-259.774	-1.0614	-1.7045
Shell10	84.3337	1.544	53.4106	12.7474	-260.5626	-1.0675	-1.6716
Shell10	84.3337	1.552	52.7768	12.6142	-261.3899	-1.079	-1.7141
Shell10	84.3337	1.56	53.3356	12.9031	-262.3787	-1.1042	-1.8049
Shell10	84.3337	1.568	53.2464	13.1567	-263.8018	-1.0895	-1.8174

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell10	84.3337	1.576	52.3011	13.3545	-264.7076	-1.0949	-2.0098
Shell10	84.3337	1.584	52.4761	13.6913	-265.805	-1.1212	-2.008
Shell10	84.3337	1.592	52.1317	13.5028	-266.7	-1.1242	-2.0757
Shell10	84.3337	1.6	52.9544	14.6027	-268.1346	-0.9915	-2.104
Shell10	84.3337	1.608	53.126	14.472	-269.3265	-1.0026	-2.1317
Shell10	84.3337	1.616	53.3537	14.6121	-271.2335	-1.0498	-2.1506
Shell10	84.3337	1.624	53.2984	14.7599	-271.8322	-1.0571	-2.2253
Shell10	84.3337	1.632	54.3521	15.564	-271.991	-0.9477	-2.3698
Shell10	84.3337	1.64	54.398	15.8429	-273.0075	-0.8591	-2.4653
Shell10	84.3337	1.648	55.3796	16.6745	-274.0572	-0.7442	-2.5658
Shell10	84.3337	1.656	55.5435	17.4551	-274.2491	-0.7109	-2.5172
Shell10	84.3337	1.664	56.843	17.8123	-275.6073	-0.597	-2.3766
Shell10	84.3337	1.672	57.2665	18.2147	-276.1967	-0.5931	-2.4214
Shell10	84.3337	1.68	56.5061	18.5464	-277.5171	-0.4848	-2.4925
Shell10	84.3337	1.688	56.9931	19.1227	-278.0329	-0.3975	-2.4595
Shell10	84.3337	1.696	56.7964	19.205	-278.8874	-0.3928	-2.4799
Shell10	84.3337	1.704	57.1876	19.5607	-279.4981	-0.3979	-2.5006
Shell10	84.3337	1.712	57.4377	19.8644	-280.2915	-0.3688	-2.5184
Shell10	84.3337	1.72	57.5496	19.984	-280.8325	-0.3626	-2.5241
Shell10	84.3337	1.728	58.4253	20.2907	-281.5089	-0.3416	-2.5713
Shell10	84.3337	1.736	59.6931	21.3017	-282.7028	-0.3561	-2.5471
Shell10	84.3337	1.744	60.187	22.1795	-284.1427	-0.3394	-2.5594
Shell10	84.3337	1.752	60.6283	23.1443	-284.9827	-0.3275	-2.5941
Shell10	84.3337	1.76	60.8079	23.1744	-285.8733	-0.3571	-2.5508
Shell10	84.3337	1.768	61.3078	23.511	-286.8628	-0.3853	-2.5737
Shell10	84.3337	1.776	61.8197	24.1003	-287.6327	-0.3793	-2.5847
Shell10	84.3337	1.784	62.2917	24.5538	-288.096	-0.3681	-2.5915
Shell10	84.3337	1.792	63.1293	24.8368	-289.0238	-0.3497	-2.5858
Shell10	84.3337	1.8	63.8179	25.1231	-289.6619	-0.3346	-2.5739
Shell10	84.3337	1.808	64.591	26.1116	-290.7275	-0.3085	-2.6144
Shell10	84.3337	1.816	65.3016	27.3967	-291.1383	-0.2306	-2.6132
Shell10	84.3337	1.824	65.8905	27.7201	-291.8835	-0.2447	-2.6335
Shell10	84.3337	1.832	66.6453	28.3592	-292.2174	-0.2257	-2.6688
Shell10	84.3337	1.84	67.6049	28.6869	-292.9765	-0.205	-2.6951
Shell10	84.3337	1.848	69.1683	29.6813	-293.6181	-0.1737	-2.724
Shell10	84.3337	1.856	69.6151	30.1879	-294.1718	-0.1842	-2.7327
Shell10	84.3337	1.864	69.9956	30.517	-294.4764	-0.179	-2.7459
Shell10	84.3337	1.872	70.9676	32.319	-296.0728	-0.2364	-2.6682
Shell10	84.3337	1.88	71.2744	32.9735	-297.0176	-0.2533	-2.6651
Shell10	84.3337	1.888	72.1115	33.5101	-298.0885	-0.2892	-2.7341
Shell10	84.3337	1.896	72.21	32.8488	-298.4874	-0.2924	-2.7155
Shell10	84.3337	1.904	72.5072	32.696	-299.1918	-0.3145	-2.6824
Shell10	84.3337	1.912	73.0202	32.8544	-299.9644	-0.312	-2.714
Shell10	84.3337	1.92	75.2769	34.532	-301.9741	-0.3597	-2.754
Shell11	90.6474	0	0	0	0	1.5512	1.6358
Shell11	90.6474	0.008	-10.7167	-2.5186	-61.9228	0.9461	-2.919
Shell11	90.6474	0.016	-24.9379	-9.6029	-83.1131	0.2768	-2.6362
Shell11	90.6474	0.024	-35.9815	-13.5824	-92.8406	-1.1666	-2.6944
Shell11	90.6474	0.032	-43.0246	-16.0012	-94.4678	-1.4441	-0.2825
Shell11	90.6474	0.04	-47.1788	-17.0595	-94.1174	-1.3007	0.5149
Shell11	90.6474	0.048	-48.2761	-19.7286	-94.3386	-1.1512	0.8378
Shell11	90.6474	0.056	-50.6782	-21.7314	-96.2943	-1.2093	0.9045
Shell11	90.6474	0.064	-51.3257	-23.1417	-95.965	-1.2055	1.3048

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell11	90.6474	0.072	-53.9789	-24.3288	-99.1481	-1.2235	1.0467
Shell11	90.6474	0.08	-55.1303	-25.5106	-99.9438	-1.2386	1.1593
Shell11	90.6474	0.088	-55.9316	-26.8721	-101.5563	-1.2311	0.9695
Shell11	90.6474	0.096	-58.1758	-27.3543	-102.7605	-1.326	0.8105
Shell11	90.6474	0.104	-55.7588	-30.9838	-105.7316	-1.2815	1.1921
Shell11	90.6474	0.112	-55.8731	-31.4222	-106.4802	-1.3541	0.7364
Shell11	90.6474	0.12	-56.0547	-32.3019	-107.765	-1.4065	1.2988
Shell11	90.6474	0.128	-56.0747	-33.0868	-109.7902	-1.3871	0.2235
Shell11	90.6474	0.136	-54.8628	-33.9645	-111.3394	-1.2567	-0.4223
Shell11	90.6474	0.144	-54.2587	-35.236	-113.9937	-1.0152	-0.6177
Shell11	90.6474	0.152	-53.8573	-35.6679	-115.4328	-1.1491	-0.5801
Shell11	90.6474	0.16	-53.3638	-36.2582	-116.7405	-1.1059	-0.6179
Shell11	90.6474	0.168	-53.0062	-36.6265	-117.6167	-1.0419	-0.6475
Shell11	90.6474	0.176	-52.6154	-37.0619	-118.2415	-0.9001	-0.7039
Shell11	90.6474	0.184	-52.3989	-37.306	-119.4302	-0.8323	-0.7101
Shell11	90.6474	0.192	-51.8772	-37.5529	-120.4837	-0.4989	-0.7185
Shell11	90.6474	0.2	-51.2024	-37.9071	-121.6425	-0.4117	-0.7023
Shell11	90.6474	0.208	-50.297	-37.8713	-123.0181	-0.4084	-0.7471
Shell11	90.6474	0.216	-51.0032	-37.3603	-123.0117	-0.3533	-0.6594
Shell11	90.6474	0.224	-51.3666	-36.8754	-122.994	-0.3724	-0.6859
Shell11	90.6474	0.232	-51.467	-36.3752	-122.9286	-0.4215	-0.6463
Shell11	90.6474	0.24	-51.3643	-36.4366	-123.1104	-0.4818	-0.577
Shell11	90.6474	0.248	-51.7602	-36.2506	-123.3652	-0.5206	-0.5415
Shell11	90.6474	0.256	-52.2589	-35.5843	-123.2874	-0.5903	-0.4978
Shell11	90.6474	0.264	-51.9055	-35.7761	-123.7234	-0.5887	-0.4813
Shell11	90.6474	0.272	-51.646	-35.7811	-124.0361	-0.607	-0.4474
Shell11	90.6474	0.28	-51.6604	-35.8815	-124.4879	-0.5526	-0.4641
Shell11	90.6474	0.288	-51.5902	-35.7096	-124.4538	-0.5132	-0.4418
Shell11	90.6474	0.296	-51.7656	-35.2895	-124.3536	-0.494	-0.4634
Shell11	90.6474	0.304	-52.022	-34.829	-124.0471	-0.4707	-0.4941
Shell11	90.6474	0.312	-52.8982	-34.3005	-123.9182	-0.5496	-0.4897
Shell11	90.6474	0.32	-53.4306	-34.1475	-123.759	-0.5949	-0.5031
Shell11	90.6474	0.328	-54.0695	-33.8322	-124.154	-0.6261	-0.529
Shell11	90.6474	0.336	-53.9768	-33.923	-124.4533	-0.6589	-0.5194
Shell11	90.6474	0.344	-53.7983	-33.9167	-124.715	-0.6662	-0.5132
Shell11	90.6474	0.352	-53.502	-33.8535	-124.9219	-0.6734	-0.5242
Shell11	90.6474	0.36	-53.6005	-33.8183	-125.1659	-0.6454	-0.5232
Shell11	90.6474	0.368	-53.5202	-33.9029	-125.6591	-0.6325	-0.5342
Shell11	90.6474	0.376	-53.257	-34.1466	-126.407	-0.6003	-0.5299
Shell11	90.6474	0.384	-53.9552	-33.6456	-126.4739	-0.7013	-0.5204
Shell11	90.6474	0.392	-54.1185	-33.2004	-126.8566	-0.7785	-0.5061
Shell11	90.6474	0.4	-54.2508	-32.4588	-126.6482	-0.6459	-0.5197
Shell11	90.6474	0.408	-53.6464	-32.5639	-126.8952	-0.7351	-0.5309
Shell11	90.6474	0.416	-54.4317	-32.568	-127.6114	-0.673	-0.5473
Shell11	90.6474	0.424	-54.0478	-32.8797	-128.4211	-0.7117	-0.5454
Shell11	90.6474	0.432	-54.5176	-32.293	-128.4435	-0.7392	-0.5417
Shell11	90.6474	0.44	-54.8534	-31.953	-128.2498	-0.6993	-0.5727
Shell11	90.6474	0.448	-55.0882	-31.4132	-128.288	-0.6455	-0.6016
Shell11	90.6474	0.456	-55.2002	-31.5066	-128.4768	-0.6636	-0.6196
Shell11	90.6474	0.464	-55.1588	-31.5826	-128.3893	-0.6612	-0.614
Shell11	90.6474	0.472	-55.5562	-31.3166	-128.7465	-0.621	-0.5838
Shell11	90.6474	0.48	-55.246	-31.4773	-129.6377	-0.5918	-0.5772
Shell11	90.6474	0.488	-55.5766	-30.9831	-129.8769	-0.58	-0.6076

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell11	90.6474	0.496	-55.3953	-31.1648	-130.2046	-0.6251	-0.6015
Shell11	90.6474	0.504	-55.9914	-30.6741	-130.246	-0.6164	-0.616
Shell11	90.6474	0.512	-56.2853	-30.5219	-130.7915	-0.6255	-0.6299
Shell11	90.6474	0.52	-57.079	-29.8274	-131.0944	-0.6456	-0.6072
Shell11	90.6474	0.528	-56.7771	-30.1336	-131.5087	-0.7307	-0.5767
Shell11	90.6474	0.536	-57.1966	-29.9824	-131.1837	-0.7554	-0.5713
Shell11	90.6474	0.544	-56.2179	-30.3034	-132.2026	-0.7436	-0.5912
Shell11	90.6474	0.552	-56.9745	-29.7546	-132.2609	-0.8584	-0.5589
Shell11	90.6474	0.56	-57.0092	-29.8341	-132.9321	-0.8268	-0.5295
Shell11	90.6474	0.568	-57.1508	-29.6541	-133.3631	-0.7719	-0.5433
Shell11	90.6474	0.576	-57.8577	-28.8165	-133.6283	-0.716	-0.5858
Shell11	90.6474	0.584	-58.689	-28.3453	-134.8136	-0.7172	-0.5331
Shell11	90.6474	0.592	-58.2616	-28.6382	-135.439	-0.6869	-0.5297
Shell11	90.6474	0.6	-58.4504	-28.3366	-135.4626	-0.7982	-0.4729
Shell11	90.6474	0.608	-58.4269	-28.3228	-135.8519	-0.8243	-0.457
Shell11	90.6474	0.616	-58.3456	-28.1877	-136.4571	-0.8615	-0.4125
Shell11	90.6474	0.624	-58.2022	-28.3547	-137.3661	-0.8582	-0.4159
Shell11	90.6474	0.632	-58.3037	-28.3874	-137.83	-0.8739	-0.3779
Shell11	90.6474	0.64	-59.0009	-27.6426	-137.9775	-0.9773	-0.2697
Shell11	90.6474	0.648	-59.1348	-27.646	-138.8733	-0.9415	-0.3052
Shell11	90.6474	0.656	-59.6805	-27.2317	-139.2402	-0.9301	-0.3247
Shell11	90.6474	0.664	-59.9814	-27.2138	-140.0444	-0.9622	-0.3604
Shell11	90.6474	0.672	-61.0971	-26.5796	-140.0054	-0.9384	-0.4475
Shell11	90.6474	0.68	-61.7583	-26.4688	-140.6732	-0.9645	-0.5051
Shell11	90.6474	0.688	-62.1035	-25.9732	-141.0854	-0.9985	-0.4656
Shell11	90.6474	0.696	-62.4257	-26.0109	-141.7709	-1.0544	-0.4953
Shell11	90.6474	0.704	-62.6805	-25.9425	-142.6442	-0.9086	-0.5298
Shell11	90.6474	0.712	-62.7919	-25.7967	-143.2966	-0.9143	-0.5291
Shell11	90.6474	0.72	-63.0486	-25.4322	-144.8345	-0.871	-0.5259
Shell11	90.6474	0.728	-63.0424	-25.4772	-145.3182	-0.8435	-0.5487
Shell11	90.6474	0.736	-63.293	-25.0246	-146.3605	-0.9342	-0.5382
Shell11	90.6474	0.744	-63.3836	-24.9709	-146.6441	-0.9125	-0.5511
Shell11	90.6474	0.752	-63.65	-24.6607	-147.2553	-0.8729	-0.5624
Shell11	90.6474	0.76	-65.0865	-23.9578	-148.7632	-0.772	-0.5507
Shell11	90.6474	0.768	-66.1717	-23.1196	-149.0113	-0.7923	-0.4902
Shell11	90.6474	0.776	-66.6678	-22.6337	-149.5357	-0.7349	-0.5204
Shell11	90.6474	0.784	-66.0035	-23.1488	-150.4108	-0.8644	-0.4537
Shell11	90.6474	0.792	-67.1017	-22.7509	-150.9495	-0.9197	-0.4836
Shell11	90.6474	0.8	-67.1045	-22.8443	-151.5792	-0.9049	-0.5092
Shell11	90.6474	0.808	-69.5131	-21.5045	-152.3295	-0.7585	-0.4635
Shell11	90.6474	0.816	-70.6853	-20.6317	-152.9735	-0.7223	-0.4426
Shell11	90.6474	0.824	-71.1464	-20.3705	-154.5632	-0.7763	-0.4515
Shell11	90.6474	0.832	-71.3131	-20.1328	-155.1801	-0.8716	-0.4327
Shell11	90.6474	0.84	-71.3404	-19.9809	-155.8935	-0.8606	-0.4279
Shell11	90.6474	0.848	-71.2401	-19.8791	-157.0101	-0.8694	-0.386
Shell11	90.6474	0.856	-71.1982	-19.9291	-157.9636	-0.8524	-0.3932
Shell11	90.6474	0.864	-73.5384	-19.0778	-159.7447	-1.0344	-0.4144
Shell11	90.6474	0.872	-73.8959	-18.8391	-160.1764	-1.062	-0.3725
Shell11	90.6474	0.88	-74.4205	-18.6681	-161.478	-1.0827	-0.3343
Shell11	90.6474	0.888	-74.6602	-18.5387	-162.4236	-1.086	-0.3539
Shell11	90.6474	0.896	-75.0955	-18.68	-163.4313	-0.9552	-0.3291
Shell11	90.6474	0.904	-75.6874	-18.0697	-163.6106	-1.008	-0.2759
Shell11	90.6474	0.912	-76.6138	-16.8847	-164.2085	-1.0881	-0.2235

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell11	90.6474	0.92	-76.6101	-17.0268	-165.741	-1.1182	-0.2353
Shell11	90.6474	0.928	-76.9697	-16.8988	-166.7213	-1.1681	-0.1993
Shell11	90.6474	0.936	-78.3282	-16.5057	-167.8084	-1.1114	-0.2543
Shell11	90.6474	0.944	-79.7183	-15.4907	-168.7989	-1.1168	-0.2058
Shell11	90.6474	0.952	-80.3049	-15.2766	-170.3632	-1.0868	-0.1639
Shell11	90.6474	0.96	-81.1407	-14.4521	-170.3445	-1.1832	-0.032
Shell11	90.6474	0.968	-81.6657	-14.4334	-171.4741	-1.1239	-0.0739
Shell11	90.6474	0.976	-81.6251	-14.456	-172.8433	-1.1435	-0.0184
Shell11	90.6474	0.984	-81.2704	-15.1324	-174.0203	-1.2273	0.1723
Shell11	90.6474	0.992	-81.1121	-15.2564	-174.8167	-1.2436	0.2939
Shell11	90.6474	1	-81.6054	-15.2598	-175.5197	-1.2157	0.2382
Shell11	90.6474	1.008	-81.8029	-15.5305	-176.6515	-1.2993	0.4512
Shell11	90.6474	1.016	-82.8524	-15.3318	-178.056	-1.345	0.9732
Shell11	90.6474	1.024	-82.8664	-15.5723	-178.6362	-1.3494	0.772
Shell11	90.6474	1.032	-83.834	-15.3471	-178.825	-1.3699	0.8646
Shell11	90.6474	1.04	-85.5678	-14.536	-179.5558	-1.3808	0.7768
Shell11	90.6474	1.048	-86.445	-14.0092	-180.9806	-1.3258	0.1244
Shell11	90.6474	1.056	-86.5946	-13.935	-182.7948	-1.3867	0.1231
Shell11	90.6474	1.064	-86.9963	-14.3743	-184.0531	-1.3985	0.0081
Shell11	90.6474	1.072	-87.0493	-14.4811	-185.6205	-1.4404	0.1927
Shell11	90.6474	1.08	-89.0691	-13.355	-187.4941	-1.5101	0.6716
Shell11	90.6474	1.088	-88.8964	-13.4453	-189.0371	-1.5312	1.8545
Shell11	90.6474	1.096	-88.6404	-13.816	-190.1928	-1.4367	2.4428
Shell11	90.6474	1.104	-89.0278	-13.5035	-191.5803	-1.4438	2.6962
Shell11	90.6474	1.112	-91.29	-12.7776	-192.6246	-1.4309	-2.722
Shell11	90.6474	1.12	-89.5502	-13.3041	-194.191	-1.4978	-2.1381
Shell11	90.6474	1.128	-88.2357	-14.8238	-195.5076	-1.4073	-1.3525
Shell11	90.6474	1.136	-89.3376	-13.8528	-196.499	-1.3999	-1.3792
Shell11	90.6474	1.144	-89.0831	-13.9005	-197.4232	-1.3844	-1.1886
Shell11	90.6474	1.152	-89.1127	-13.8159	-199.4613	-1.3581	-1.1883
Shell11	90.6474	1.16	-89.5333	-13.4741	-201.0978	-1.2454	-1.0297
Shell11	90.6474	1.168	-89.3351	-13.5635	-202.1857	-1.1209	-0.9325
Shell11	90.6474	1.176	-89.6126	-13.4609	-203.3661	-1.1216	-0.9497
Shell11	90.6474	1.184	-90.2482	-12.9141	-204.4953	-1.0536	-0.9127
Shell11	90.6474	1.192	-90.2756	-12.7083	-205.5383	-1.0326	-0.8996
Shell11	90.6474	1.2	-90.5374	-12.3791	-206.4899	-1.0076	-0.9043
Shell11	90.6474	1.208	-91.9105	-11.5813	-207.8232	-0.9692	-0.9456
Shell11	90.6474	1.216	-91.7325	-11.547	-208.767	-0.972	-0.9845
Shell11	90.6474	1.224	-91.9609	-11.243	-209.7945	-0.9424	-0.9894
Shell11	90.6474	1.232	-92.4385	-10.7132	-211.2983	-0.9178	-1.0207
Shell11	90.6474	1.24	-92.2512	-10.7903	-212.2051	-0.8723	-0.9919
Shell11	90.6474	1.248	-90.0041	-12.0789	-213.3085	-0.6866	-0.8985
Shell11	90.6474	1.256	-90.0867	-11.1925	-214.869	-0.6557	-0.8692
Shell11	90.6474	1.264	-89.5504	-11.409	-216.2491	-0.6692	-0.85
Shell11	90.6474	1.272	-91.0359	-10.9038	-217.1753	-0.7065	-0.8251
Shell11	90.6474	1.28	-92.3054	-10.4367	-218.0396	-0.6805	-0.7534
Shell11	90.6474	1.288	-91.8402	-10.2504	-218.782	-0.71	-0.7792
Shell11	90.6474	1.296	-94.8867	-8.8177	-219.8034	-0.7369	-0.6949
Shell11	90.6474	1.304	-96.7567	-6.6766	-221.5829	-0.6848	-0.706
Shell11	90.6474	1.312	-93.5316	-7.4524	-223.6108	-0.552	-0.6349
Shell11	90.6474	1.32	-94.8879	-6.4286	-224.9395	-0.6155	-0.6313
Shell11	90.6474	1.328	-95.0987	-6.1165	-226.2749	-0.6587	-0.617
Shell11	90.6474	1.336	-95.6274	-5.9353	-227.6624	-0.6814	-0.6262

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell11	90.6474	1.344	-95.5643	-6.0551	-228.8097	-0.7311	-0.6205
Shell11	90.6474	1.352	-96.6074	-5.08	-230.1959	-0.8494	-0.589
Shell11	90.6474	1.36	-96.7264	-4.998	-232.6977	-0.8478	-0.5827
Shell11	90.6474	1.368	-98.8649	-4.3633	-233.7498	-0.8206	-0.5007
Shell11	90.6474	1.376	-99.8988	-3.4034	-235.0765	-0.9003	-0.4562
Shell11	90.6474	1.384	-101.4356	-2.2606	-236.2901	-0.9494	-0.3868
Shell11	90.6474	1.392	-101.7921	-1.9231	-237.037	-1.0203	-0.3196
Shell11	90.6474	1.4	-101.5529	-2.1488	-237.5888	-1.0324	-0.3095
Shell11	90.6474	1.408	-101.9792	-1.9116	-238.4414	-1.0221	-0.3155
Shell11	90.6474	1.416	-103.122	-1.6071	-239.1147	-1.0724	-0.2404
Shell11	90.6474	1.424	-104.0164	-0.9982	-239.8247	-1.1786	-0.0089
Shell11	90.6474	1.432	-104.3019	-1.3347	-241.1812	-1.2252	0.2274
Shell11	90.6474	1.44	-104.3092	-1.7141	-241.3954	-1.2839	0.5519
Shell11	90.6474	1.448	-104.563	-1.8215	-242.8735	-1.3316	1.0098
Shell11	90.6474	1.456	-105.9298	-1.0712	-243.1548	-1.3074	0.8295
Shell11	90.6474	1.464	-108.4692	-0.6943	-245.0101	-1.2832	1.9442
Shell11	90.6474	1.472	-108.3087	-0.6215	-247.2691	-1.2956	1.824
Shell11	90.6474	1.48	-109.2926	0.1663	-248.7972	-1.2702	1.8419
Shell11	90.6474	1.488	-107.926	-0.9393	-248.5454	-1.1335	2.0392
Shell11	90.6474	1.496	-107.2379	-1.6707	-248.9936	-1.06	2.1302
Shell11	90.6474	1.504	-107.8616	-1.16	-249.9361	-0.9612	2.1844
Shell11	90.6474	1.512	-107.2465	-1.6812	-250.8861	-0.9568	2.1957
Shell11	90.6474	1.52	-107.1962	-1.5521	-252.2266	-0.8867	2.3135
Shell11	90.6474	1.528	-106.1267	-2.6333	-252.8382	-0.9129	2.3241
Shell11	90.6474	1.536	-106.7749	-2.142	-254.1176	-0.874	2.3258
Shell11	90.6474	1.544	-107.7197	-1.9081	-255.6263	-0.7384	2.3873
Shell11	90.6474	1.552	-107.3523	-2.3634	-256.4284	-0.7552	2.3945
Shell11	90.6474	1.56	-105.923	-3.5825	-258.3863	-0.8066	2.3921
Shell13	93.8647	0	0	0	0	1.5142	2.7191
Shell13	93.8647	0.008	-6.4652	-0.5358	-63.2807	0.9992	-2.8781
Shell13	93.8647	0.016	-24.1802	-2.7835	-86.9029	0.199	-2.7378
Shell13	93.8647	0.024	-34.6718	-9.6713	-101.5218	-0.7309	3.1014
Shell13	93.8647	0.032	-43.9638	-11.0391	-103.8781	-0.9342	3.0974
Shell13	93.8647	0.04	-52.6028	-11.9438	-104.0744	-1.2212	2.9053
Shell13	93.8647	0.048	-56.7892	-12.9767	-104.8859	-1.3869	2.7758
Shell13	93.8647	0.056	-61.5696	-14.3104	-105.7048	-1.4659	0.6229
Shell13	93.8647	0.064	-66.377	-13.7655	-104.969	-1.4408	1.0031
Shell13	93.8647	0.072	-69.3008	-14.4055	-106.1888	-1.3837	0.8659
Shell13	93.8647	0.08	-71.4336	-14.8876	-105.956	-1.4291	1.6939
Shell13	93.8647	0.088	-74.7412	-14.3277	-106.4872	-1.3661	2.1019
Shell13	93.8647	0.096	-80.5536	-12.7084	-106.8826	-1.3735	2.1089
Shell13	93.8647	0.104	-80.6134	-12.6955	-106.9986	-1.3015	2.3937
Shell13	93.8647	0.112	-81.8924	-12.0321	-107.2362	-1.1962	2.4075
Shell13	93.8647	0.12	-84.5095	-11.4189	-107.2484	-1.0545	2.5523
Shell13	93.8647	0.128	-84.9013	-11.9177	-107.8123	-1.0115	2.5833
Shell13	93.8647	0.136	-83.2687	-13.8513	-109.7825	-1.0465	2.661
Shell13	93.8647	0.144	-82.4036	-14.7633	-110.9861	-1.0357	2.67
Shell13	93.8647	0.152	-81.6478	-16.1369	-112.8556	-1.038	2.7046
Shell13	93.8647	0.16	-82.7071	-16.3989	-113.9391	-0.9268	2.7346
Shell13	93.8647	0.168	-83.8151	-16.5796	-115.4716	-0.8115	2.7597
Shell13	93.8647	0.176	-84.9995	-16.3405	-116.4527	-0.7299	2.757
Shell13	93.8647	0.184	-84.3892	-17.1934	-117.5006	-0.708	2.7429
Shell13	93.8647	0.192	-84.4983	-17.1623	-118.2359	-0.7053	2.7292

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell13	93.8647	0.2	-84.2822	-17.3763	-118.8926	-0.7116	2.7467
Shell13	93.8647	0.208	-83.4344	-18.2366	-120.4114	-0.7482	2.7776
Shell13	93.8647	0.216	-82.8824	-19.014	-121.1137	-0.7127	2.7451
Shell13	93.8647	0.224	-83.0276	-19.084	-121.7106	-0.7213	2.7403
Shell13	93.8647	0.232	-83.2384	-18.9969	-122.3418	-0.7053	2.7362
Shell13	93.8647	0.24	-82.9247	-19.1853	-123.3094	-0.7095	2.7328
Shell13	93.8647	0.248	-83.0768	-19.0774	-123.6455	-0.699	2.7399
Shell13	93.8647	0.256	-83.3125	-18.9433	-123.5843	-0.7182	2.7546
Shell13	93.8647	0.264	-83.4663	-18.956	-124.2937	-0.683	2.7497
Shell13	93.8647	0.272	-82.9772	-19.186	-124.6941	-0.6806	2.7657
Shell13	93.8647	0.28	-82.106	-19.849	-126.0735	-0.66	2.7482
Shell13	93.8647	0.288	-81.5741	-20.3933	-127.3096	-0.6678	2.7534
Shell13	93.8647	0.296	-80.592	-21.1629	-128.36	-0.6478	2.7609
Shell13	93.8647	0.304	-80.6327	-21.0934	-128.6433	-0.6466	2.7831
Shell13	93.8647	0.312	-79.4278	-22.0798	-130.0368	-0.6257	2.7956
Shell13	93.8647	0.32	-79.2476	-22.2101	-130.2026	-0.5985	2.7898
Shell13	93.8647	0.328	-79.8057	-21.652	-130.8264	-0.6168	2.8131
Shell13	93.8647	0.336	-80.0617	-21.2593	-131.5247	-0.6204	2.818
Shell13	93.8647	0.344	-79.5779	-21.4367	-131.763	-0.6125	2.8167
Shell13	93.8647	0.352	-78.6567	-22.2482	-132.5463	-0.582	2.7834
Shell13	93.8647	0.36	-78.5155	-22.3748	-132.9773	-0.5698	2.7836
Shell13	93.8647	0.368	-78.2092	-22.4285	-133.4196	-0.5461	2.7792
Shell13	93.8647	0.376	-78.2333	-22.4965	-133.6704	-0.5604	2.7735
Shell13	93.8647	0.384	-79.1336	-21.0991	-133.2378	-0.6756	2.8118
Shell13	93.8647	0.392	-79.1147	-21.4953	-133.6548	-0.6046	2.7692
Shell13	93.8647	0.4	-78.4011	-22.4295	-134.6499	-0.5413	2.739
Shell13	93.8647	0.408	-78.9731	-21.8873	-134.9567	-0.5154	2.7517
Shell13	93.8647	0.416	-77.785	-22.3637	-136.8141	-0.4873	2.8052
Shell13	93.8647	0.424	-77.6389	-22.3785	-137.3998	-0.4986	2.8273
Shell13	93.8647	0.432	-77.4659	-22.4206	-137.746	-0.4677	2.8429
Shell13	93.8647	0.44	-76.4725	-22.9333	-139.0624	-0.4431	2.8533
Shell13	93.8647	0.448	-75.4984	-23.6823	-140.676	-0.4055	2.8628
Shell13	93.8647	0.456	-75.0562	-24.1023	-141.8518	-0.4143	2.8579
Shell13	93.8647	0.464	-75.3221	-23.8034	-142.1087	-0.3895	2.8742
Shell13	93.8647	0.472	-75.43	-23.597	-142.7467	-0.3891	2.8956
Shell13	93.8647	0.48	-76.155	-22.8033	-143.1521	-0.3393	2.9655
Shell13	93.8647	0.488	-76.373	-22.2482	-143.6359	-0.3403	3.0369
Shell13	93.8647	0.496	-71.5692	-27.3171	-146.0694	-0.2858	2.723
Shell13	93.8647	0.504	-71.1254	-27.7565	-146.6721	-0.2661	2.7145
Shell13	93.8647	0.512	-70.505	-28.3281	-147.2382	-0.2515	2.7002
Shell13	93.8647	0.52	-70.5813	-28.2727	-147.4443	-0.2641	2.6936
Shell13	93.8647	0.528	-70.1371	-28.7302	-148.3108	-0.2602	2.6781
Shell13	93.8647	0.536	-70.2268	-28.5875	-148.5141	-0.257	2.6667
Shell13	93.8647	0.544	-68.0567	-30.2599	-150.9237	-0.1588	2.6907
Shell13	93.8647	0.552	-66.956	-30.862	-151.6458	-0.139	2.6949
Shell13	93.8647	0.56	-67.0814	-30.7753	-151.9765	-0.1401	2.692
Shell13	93.8647	0.568	-66.6468	-31.1629	-152.3842	-0.1483	2.6733
Shell13	93.8647	0.576	-65.7012	-31.7386	-152.783	-0.1366	2.6563
Shell13	93.8647	0.584	-64.8189	-32.3474	-153.3084	-0.1373	2.6543
Shell13	93.8647	0.592	-64.5654	-32.4381	-153.5079	-0.0997	2.6655
Shell13	93.8647	0.6	-63.4746	-33.123	-154.3398	-0.0947	2.65
Shell13	93.8647	0.608	-63.2841	-33.1002	-154.1885	-0.1084	2.6379
Shell13	93.8647	0.616	-63.0444	-33.0855	-154.3475	-0.1074	2.6215

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell13	93.8647	0.624	-61.519	-33.9791	-155.5225	-0.1203	2.5992
Shell13	93.8647	0.632	-61.279	-34.0207	-155.5353	-0.1212	2.5931
Shell13	93.8647	0.64	-60.0699	-34.2488	-155.8222	-0.1227	2.6003
Shell13	93.8647	0.648	-60.2377	-34.3091	-156.3972	-0.1156	2.5922
Shell13	93.8647	0.656	-59.6827	-34.6511	-157.24	-0.1123	2.5861
Shell13	93.8647	0.664	-59.3473	-34.9432	-158.377	-0.0906	2.5749
Shell13	93.8647	0.672	-59.4432	-34.7792	-158.3739	-0.0436	2.5824
Shell13	93.8647	0.68	-58.6628	-35.241	-158.6607	-0.0268	2.5994
Shell13	93.8647	0.688	-57.3928	-36.1392	-159.8147	-0.0087	2.6074
Shell13	93.8647	0.696	-57.417	-36.1303	-160.0516	-0.0116	2.6056
Shell13	93.8647	0.704	-58.0218	-35.4947	-159.2989	0.0094	2.5872
Shell13	93.8647	0.712	-57.55	-35.8186	-159.6325	0.04	2.5975
Shell13	93.8647	0.72	-57.3064	-35.7286	-159.4111	0.0181	2.5742
Shell13	93.8647	0.728	-56.9712	-36.1093	-159.8781	0.0125	2.5648
Shell13	93.8647	0.736	-56.5141	-36.2797	-159.8302	0.0094	2.557
Shell13	93.8647	0.744	-56.5637	-36.2347	-159.7326	0.0023	2.5562
Shell13	93.8647	0.752	-55.6909	-37.1179	-160.5131	-0.0065	2.5621
Shell13	93.8647	0.76	-55.4218	-37.4837	-160.8075	0.0093	2.5797
Shell13	93.8647	0.768	-54.287	-38.5262	-161.5742	-0.0093	2.5759
Shell13	93.8647	0.776	-54.7435	-37.9175	-161.3441	-0.0261	2.5702
Shell13	93.8647	0.784	-54.4369	-37.9839	-161.557	-0.0256	2.5648
Shell13	93.8647	0.792	-53.2693	-38.3035	-161.6467	-0.0211	2.5371
Shell13	93.8647	0.8	-52.6046	-38.468	-162.2016	-0.0023	2.54
Shell13	93.8647	0.808	-51.8434	-38.9791	-162.524	0.0073	2.5425
Shell13	93.8647	0.816	-51.9493	-38.8867	-162.5337	0.0141	2.5409
Shell13	93.8647	0.824	-52.0077	-38.9115	-162.8719	0.0103	2.5355
Shell13	93.8647	0.832	-51.5633	-39.2681	-163.111	0.0182	2.5393
Shell13	93.8647	0.84	-51.3292	-39.4243	-163.4639	0.0361	2.5394
Shell13	93.8647	0.848	-51.086	-39.685	-163.8841	0.0218	2.5392
Shell13	93.8647	0.856	-50.5699	-40.2075	-164.261	0.058	2.552
Shell13	93.8647	0.864	-50.4864	-40.2298	-164.4938	0.0715	2.5557
Shell13	93.8647	0.872	-49.9965	-40.5601	-165.0493	0.0826	2.551
Shell13	93.8647	0.88	-49.86	-40.6158	-165.1882	0.0706	2.5458
Shell13	93.8647	0.888	-49.3562	-40.6114	-165.5448	0.0942	2.5176
Shell13	93.8647	0.896	-49.1963	-40.7032	-166.0772	0.108	2.5111
Shell13	93.8647	0.904	-48.9703	-40.8977	-166.3102	0.082	2.5071
Shell13	93.8647	0.912	-48.9937	-40.7455	-166.4384	0.0894	2.51
Shell13	93.8647	0.92	-48.3327	-41.3799	-167.0781	0.1395	2.5197
Shell13	93.8647	0.928	-48.8681	-40.7331	-166.5996	0.0698	2.4988
Shell13	93.8647	0.936	-48.5786	-40.9664	-166.8751	0.0707	2.4905
Shell13	93.8647	0.944	-48.3739	-41.0247	-167.0251	0.0835	2.4899
Shell13	93.8647	0.952	-48.1759	-41.0759	-167.2346	0.0773	2.4742
Shell13	93.8647	0.96	-48.0246	-41.1458	-167.5238	0.1031	2.4708
Shell13	93.8647	0.968	-48.0023	-41.2633	-167.9716	0.0952	2.4746
Shell13	93.8647	0.976	-47.9768	-41.2898	-168.1008	0.1005	2.4751
Shell13	93.8647	0.984	-48.0379	-41.3182	-168.3816	0.1241	2.4803
Shell13	93.8647	0.992	-47.6817	-41.7364	-168.9565	0.1259	2.4877
Shell13	93.8647	1	-47.1043	-42.3466	-169.4841	0.0834	2.477
Shell13	93.8647	1.008	-47.1233	-42.3295	-169.6251	0.0723	2.4771
Shell13	93.8647	1.016	-46.3472	-42.4632	-169.7497	0.0752	2.4456
Shell13	93.8647	1.024	-46.1335	-42.7127	-170.1677	0.0544	2.4418
Shell13	93.8647	1.032	-46.0473	-42.8278	-170.6087	0.0789	2.4506
Shell13	93.8647	1.04	-46.0323	-42.8463	-170.8207	0.0849	2.4509

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell13	93.8647	1.048	-46.0569	-42.8263	-170.9888	0.0868	2.4508
Shell13	93.8647	1.056	-46.0575	-42.8277	-171.1323	0.0749	2.4507
Shell13	93.8647	1.064	-45.824	-42.946	-171.451	0.0943	2.4578
Shell13	93.8647	1.072	-45.8216	-42.9495	-171.5232	0.0884	2.4577
Shell13	93.8647	1.08	-45.6187	-43.0399	-171.7143	0.0869	2.4633
Shell13	93.8647	1.088	-45.4605	-43.2483	-171.9284	0.0769	2.4543
Shell13	93.8647	1.096	-44.9957	-43.69	-172.4436	0.0899	2.4613
Shell13	93.8647	1.104	-44.9084	-43.7872	-172.7223	0.0821	2.4604
Shell13	93.8647	1.112	-43.9758	-44.904	-173.9226	0.0209	2.4414
Shell13	93.8647	1.12	-44.8707	-44.2581	-174.1429	0.0233	2.4317
Shell13	93.8647	1.128	-44.8843	-44.3028	-174.3586	0.0354	2.4295
Shell13	93.8647	1.136	-45.328	-44.0788	-174.5455	0.0249	2.4166
Shell13	93.8647	1.144	-45.1977	-44.1099	-175.0775	0.049	2.4226
Shell13	93.8647	1.152	-44.7455	-44.7677	-175.9194	-0.0014	2.4087
Shell13	93.8647	1.16	-45.7413	-43.5411	-175.4263	0.0545	2.429
Shell13	93.8647	1.168	-45.2187	-44.0874	-175.8678	0.0608	2.4245
Shell13	93.8647	1.176	-45.0475	-44.213	-176.3391	0.0523	2.4269
Shell13	93.8647	1.184	-45.177	-44.0747	-176.4112	0.057	2.4254
Shell13	93.8647	1.192	-45.0029	-44.1432	-176.6469	0.0597	2.4306
Shell13	93.8647	1.2	-44.4874	-44.7204	-177.2025	0.0523	2.4307
Shell13	93.8647	1.208	-44.7094	-44.6692	-177.3955	0.0508	2.4384
Shell13	93.8647	1.216	-44.3732	-44.9277	-177.7266	0.0521	2.4409
Shell13	93.8647	1.224	-44.061	-45.1721	-178.1868	0.0446	2.4425
Shell13	93.8647	1.232	-43.6583	-45.7104	-178.6247	0.0512	2.4472
Shell13	93.8647	1.24	-43.7811	-45.6609	-179.2763	0.0572	2.453
Shell13	93.8647	1.248	-43.8693	-45.548	-179.4716	0.0706	2.4564
Shell13	93.8647	1.256	-43.734	-45.7406	-179.7547	0.0517	2.4479
Shell13	93.8647	1.264	-43.6929	-45.7836	-179.9357	0.0646	2.4484
Shell13	93.8647	1.272	-44.0396	-45.5816	-180.107	0.0413	2.4428
Shell13	93.8647	1.28	-44.1392	-45.4902	-180.5507	0.0334	2.4402
Shell13	93.8647	1.288	-43.7362	-45.8559	-180.6725	0.043	2.4463
Shell13	93.8647	1.296	-43.6505	-45.9007	-181.016	0.0317	2.4479
Shell13	93.8647	1.304	-43.4046	-45.8221	-181.1812	0.0249	2.4454
Shell13	93.8647	1.312	-42.9812	-45.9426	-181.5575	0.024	2.4582
Shell13	93.8647	1.32	-42.6214	-46.3304	-182.0309	0.0274	2.4623
Shell13	93.8647	1.328	-42.3222	-46.6506	-182.1671	0.0428	2.4669
Shell13	93.8647	1.336	-42.5363	-46.528	-182.6977	0.059	2.4653
Shell13	93.8647	1.344	-42.6567	-46.5758	-183.0775	0.0853	2.4588
Shell13	93.8647	1.352	-42.8432	-46.3814	-182.9846	0.0491	2.4555
Shell13	93.8647	1.36	-43.25	-46.0476	-183.1639	0.0252	2.4539
Shell13	93.8647	1.368	-43.2707	-45.9599	-183.6547	0.0367	2.4589
Shell13	93.8647	1.376	-42.9834	-46.1769	-183.8518	0.0346	2.4602
Shell13	93.8647	1.384	-43.1847	-46.1712	-184.1083	0.0233	2.4586
Shell13	93.8647	1.392	-43.2442	-46.182	-184.5227	0.0289	2.467
Shell13	93.8647	1.4	-42.9997	-46.5591	-185.1355	0.0312	2.4694
Shell13	93.8647	1.408	-43.3265	-46.2252	-185.3528	0.032	2.4654
Shell13	93.8647	1.416	-43.2715	-46.3004	-186.0501	0.0342	2.4651
Shell13	93.8647	1.424	-43.0633	-46.5599	-186.7356	0.018	2.4611
Shell13	93.8647	1.432	-42.8907	-46.7438	-186.9843	0.0267	2.4634
Shell13	93.8647	1.44	-42.9782	-46.6051	-187.2197	0.0214	2.4634
Shell13	93.8647	1.448	-43.0703	-46.6071	-187.6782	0.0274	2.4667
Shell13	93.8647	1.456	-43.3092	-46.4138	-187.6306	0.024	2.4626
Shell13	93.8647	1.464	-43.3113	-46.4123	-187.6622	0.0219	2.4626

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell13	93.8647	1.472	-43.5691	-46.2423	-187.995	0.0118	2.4634
Shell13	93.8647	1.48	-43.4703	-46.4005	-188.0981	0.0189	2.4634
Shell13	93.8647	1.488	-43.5699	-46.3895	-188.3339	0.0341	2.4669
Shell13	93.8647	1.496	-43.9504	-46.2016	-188.6896	0.0216	2.4639
Shell13	93.8647	1.504	-44.1317	-46.0567	-189.1009	0.0184	2.4644
Shell13	93.8647	1.512	-44.3284	-46.0407	-189.6191	0.0319	2.4711
Shell13	93.8647	1.52	-44.7194	-45.7171	-190.0855	0.0355	2.4751
Shell13	93.8647	1.528	-44.8868	-45.5478	-190.096	0.0163	2.4728
Shell13	93.8647	1.536	-45.0515	-45.3903	-190.4564	0.0154	2.471
Shell13	93.8647	1.544	-45.2684	-45.2344	-190.8073	0.0042	2.4669
Shell13	93.8647	1.552	-45.8267	-44.9975	-191.2359	0.0114	2.4726
Shell13	93.8647	1.56	-46.0476	-44.9529	-191.3645	0.0036	2.4785
Shell13	93.8647	1.568	-46.9191	-44.6598	-191.7827	-0.0156	2.4628
Shell13	93.8647	1.576	-47.3207	-44.5915	-192.1573	-0.0089	2.4513
Shell13	93.8647	1.584	-46.6881	-45.28	-192.8364	-0.0265	2.4495
Shell13	93.8647	1.592	-46.758	-45.2683	-193.0018	-0.0086	2.4479
Shell13	93.8647	1.6	-46.1822	-45.3817	-193.2776	-0.0036	2.4462
Shell13	93.8647	1.608	-45.5345	-45.6454	-193.578	-0.0113	2.4363
Shell13	93.8647	1.616	-44.9386	-45.8971	-193.9406	0.0079	2.4321
Shell13	93.8647	1.624	-44.8549	-45.9103	-194.4103	-0.0163	2.4282
Shell13	93.8647	1.632	-44.853	-45.9148	-194.5179	-0.0218	2.4281
Shell13	93.8647	1.64	-44.6044	-45.8235	-194.8135	-0.0449	2.4334
Shell13	93.8647	1.648	-44.8696	-45.7702	-194.8899	-0.044	2.4249
Shell13	93.8647	1.656	-44.6173	-45.8193	-195.1745	-0.0601	2.4332
Shell13	93.8647	1.664	-44.1904	-46.1868	-195.6371	-0.0317	2.4333
Shell13	93.8647	1.672	-44.1262	-45.9249	-195.9722	-0.0343	2.4258
Shell13	93.8647	1.68	-43.9947	-45.392	-196.4404	-0.0069	2.398
Shell13	93.8647	1.688	-43.3495	-45.4959	-196.9862	0.0299	2.3784
Shell13	93.8647	1.696	-43.681	-45.426	-197.3386	0.013	2.3896
Shell13	93.8647	1.704	-44.7164	-45.2089	-197.6987	0.0347	2.4283
Shell13	93.8647	1.712	-44.7394	-45.1936	-197.9108	0.0437	2.4284
Shell13	93.8647	1.72	-44.755	-45.1879	-198.2578	0.0462	2.4285
Shell13	93.8647	1.728	-44.7291	-45.1527	-199.0016	0.0623	2.4255
Shell13	93.8647	1.736	-44.8904	-44.9864	-199.1064	0.0559	2.424
Shell13	93.8647	1.744	-44.8472	-44.9839	-199.382	0.0389	2.4258
Shell13	93.8647	1.752	-45.0148	-44.8157	-199.6089	0.0363	2.4244
Shell13	93.8647	1.76	-45.2284	-44.6066	-200.1054	0.0071	2.4228
Shell13	93.8647	1.768	-45.2673	-44.5793	-200.4806	0.0188	2.4231
Shell13	93.8647	1.776	-45.3035	-44.5542	-200.9607	0.0153	2.4234
Shell13	93.8647	1.784	-45.3405	-44.5319	-201.5831	0.0203	2.4239
Shell13	93.8647	1.792	-45.2411	-44.5285	-201.7613	0.0095	2.4279
Shell13	93.8647	1.8	-45.3306	-44.3654	-202.057	0.0154	2.4323
Shell13	93.8647	1.808	-45.273	-44.3425	-202.3925	-0.0052	2.429
Shell13	93.8647	1.816	-45.2663	-44.3631	-202.9252	-0.0012	2.4291
Shell13	93.8647	1.824	-45.2543	-44.3009	-203.3775	-0.0069	2.4259
Shell13	93.8647	1.832	-45.2556	-44.3026	-203.478	-0.0131	2.4258
Shell13	93.8647	1.84	-45.4661	-44.0708	-203.8564	-0.0372	2.4281
Shell13	93.8647	1.848	-45.7671	-43.4987	-204.7481	-0.0818	2.422
Shell13	93.8647	1.856	-45.8099	-43.4647	-204.9655	-0.0716	2.4221
Shell13	93.8647	1.864	-45.8701	-43.4135	-205.2388	-0.0654	2.4223
Shell13	93.8647	1.872	-45.9403	-43.3566	-205.6539	-0.0688	2.4223
Shell13	93.8647	1.88	-46.265	-43.3085	-206.1559	-0.0343	2.4341
Shell13	93.8647	1.888	-45.9593	-43.3706	-207.0031	-0.0121	2.424

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell13	93.8647	1.896	-45.8811	-43.2495	-207.0879	-0.019	2.4184
Shell13	93.8647	1.904	-45.7512	-43.2991	-207.3835	0.0018	2.415
Shell13	93.8647	1.912	-46.2738	-43.1887	-207.5949	-0.0001	2.3958
Shell13	93.8647	1.92	-45.7875	-43.2273	-208.0011	-0.0026	2.4174
Shell13	93.8647	1.928	-45.8182	-43.2062	-208.2894	0.0175	2.4177
Shell13	93.8647	1.936	-45.7288	-43.2329	-208.5561	0.0373	2.4243
Shell13	93.8647	1.944	-45.3683	-43.6287	-209.1482	0.0186	2.4234
Shell13	93.8647	1.952	-45.2455	-43.6693	-209.302	0.0147	2.4194
Shell13	93.8647	1.96	-44.9796	-43.8974	-209.3179	0.0164	2.4243
Shell13	93.8647	1.968	-45.2746	-43.576	-209.3381	0.0271	2.4213
Shell13	93.8647	1.976	-45.2488	-43.6031	-209.4401	0.0343	2.4215
Shell13	93.8647	1.984	-45.024	-43.6086	-209.6898	0.0423	2.4162
Shell13	93.8647	1.992	-44.7981	-43.5916	-210.547	0.0516	2.4054
Shell13	93.8647	2	-44.8874	-43.5133	-210.8993	0.0532	2.4055
Shell13	93.8647	2.008	-45.1329	-43.4537	-211.4256	0.0717	2.4141
Shell13	93.8647	2.016	-45.4163	-43.144	-211.6125	0.0502	2.4108
Shell13	93.8647	2.024	-45.5034	-42.9606	-211.8727	0.0548	2.4056
Shell13	93.8647	2.032	-45.6947	-42.7895	-212.5108	0.0625	2.4059
Shell13	93.8647	2.04	-45.7634	-42.7399	-213.3289	0.0882	2.4068
Shell13	93.8647	2.048	-45.9589	-42.5249	-213.5805	0.0977	2.4089
Shell13	93.8647	2.056	-46.1039	-42.3559	-213.7525	0.1074	2.4113
Shell13	93.8647	2.064	-45.9876	-42.4893	-214.0185	0.102	2.4134
Shell13	93.8647	2.072	-46.0491	-42.429	-214.2077	0.0891	2.4137
Shell13	93.8647	2.08	-46.0922	-42.3903	-214.5214	0.0744	2.414
Shell13	93.8647	2.088	-45.9249	-42.421	-214.9685	0.0779	2.413
Shell13	93.8647	2.096	-46.1678	-42.1708	-215.3558	0.0668	2.4115
Shell13	93.8647	2.104	-46.2186	-42.1335	-215.8702	0.0796	2.4119
Shell13	93.8647	2.112	-46.2497	-42.0557	-216.4279	0.0817	2.4152
Shell13	93.8647	2.12	-46.5157	-41.8195	-217.2168	0.1065	2.4151
Shell13	93.8647	2.128	-46.3347	-41.8823	-217.3138	0.1135	2.4208
Shell13	93.8647	2.136	-46.2863	-41.8519	-217.7542	0.1318	2.4174
Shell13	93.8647	2.144	-46.394	-41.7496	-218.0818	0.1229	2.4177
Shell13	93.8647	2.152	-46.7729	-41.617	-218.2142	0.1425	2.4066
Shell13	93.8647	2.16	-46.6743	-41.4931	-218.7179	0.1494	2.4101
Shell13	93.8647	2.168	-46.6964	-41.4057	-219.0449	0.1526	2.4171
Shell13	93.8647	2.176	-46.8093	-41.0677	-219.493	0.1822	2.4135
Shell13	93.8647	2.184	-46.7317	-41.0845	-220.074	0.1754	2.4113
Shell13	93.8647	2.192	-46.7285	-40.9426	-220.6315	0.149	2.4106
Shell13	93.8647	2.2	-46.8276	-40.8476	-220.9767	0.1462	2.4112
Shell13	93.8647	2.208	-46.517	-41.1602	-221.1507	0.1447	2.4099
Shell13	93.8647	2.216	-46.0195	-41.2504	-221.728	0.1658	2.3959
Shell13	93.8647	2.224	-46.0441	-41.2551	-222.2064	0.1566	2.3978
Shell13	93.8647	2.232	-45.9676	-41.2535	-223.0104	0.1446	2.3945
Shell13	93.8647	2.24	-46.0039	-41.2181	-223.1481	0.1336	2.3946
Shell13	93.8647	2.248	-46.0449	-41.2086	-223.5927	0.142	2.3964
Shell13	93.8647	2.256	-46.248	-40.9822	-223.8658	0.1536	2.3987
Shell13	93.8647	2.264	-46.5552	-40.8665	-224.3557	0.1769	2.4086
Shell13	93.8647	2.272	-46.3953	-40.9662	-224.1916	0.1874	2.4113
Shell13	93.8647	2.28	-46.2212	-41.0526	-224.3526	0.1997	2.4151
Shell13	93.8647	2.288	-45.9589	-41.5644	-224.3246	0.1938	2.3991
Shell13	93.8647	2.296	-46.1691	-41.2947	-224.6419	0.2	2.4046
Shell13	93.8647	2.304	-45.5991	-41.1233	-225.3605	0.1716	2.4261
Shell13	93.8647	2.312	-45.4782	-41.2889	-225.4565	0.1836	2.4227

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell13	93.8647	2.32	-45.5987	-41.312	-225.9203	0.2097	2.4163
Shell13	93.8647	2.328	-45.4002	-41.5779	-226.001	0.2069	2.4116
Shell13	93.8647	2.336	-45.6173	-41.2722	-226.4391	0.2192	2.4172
Shell13	93.8647	2.344	-45.4606	-41.2484	-226.6787	0.2127	2.4093
Shell13	93.8647	2.352	-45.6258	-41.0571	-227.0184	0.2344	2.4121
Shell13	93.8647	2.36	-46.0431	-40.6113	-227.8045	0.2384	2.4152
Shell13	93.8647	2.368	-46.2489	-40.3441	-228.0316	0.2272	2.4203
Shell13	93.8647	2.376	-46.396	-40.4287	-228.8916	0.2603	2.4104
Shell13	93.8647	2.384	-46.3813	-40.369	-229.5903	0.2926	2.4065
Shell13	93.8647	2.392	-46.5257	-40.4537	-230.0421	0.304	2.4131
Shell13	93.8647	2.4	-46.6876	-40.4732	-230.2079	0.3385	2.4262
Shell13	93.8647	2.408	-46.99	-40.1959	-230.3371	0.3442	2.4365
Shell13	93.8647	2.416	-46.7954	-40.4799	-230.7116	0.3508	2.4271
Shell13	93.8647	2.424	-47.1895	-40.0229	-231.3891	0.3625	2.4248
Shell13	93.8647	2.432	-46.3684	-40.962	-231.0764	0.3474	2.4345
Shell13	93.8647	2.44	-46.6581	-40.6659	-231.7279	0.3313	2.432
Shell13	93.8647	2.448	-46.7458	-40.5739	-231.9347	0.3196	2.433
Shell13	93.8647	2.456	-46.2833	-40.6201	-232.3204	0.3121	2.4081
Shell13	93.8647	2.464	-46.6559	-40.2817	-232.7535	0.3309	2.4182
Shell13	93.8647	2.472	-47.069	-39.9336	-233.2631	0.3392	2.4254
Shell13	93.8647	2.48	-47.2608	-39.7452	-233.7246	0.3361	2.4257
Shell13	93.8647	2.488	-47.5998	-39.5972	-234.1842	0.3363	2.4349
Shell13	93.8647	2.496	-47.9054	-39.2579	-234.7726	0.3375	2.432
Shell13	93.8647	2.504	-47.7181	-39.4862	-234.9578	0.3432	2.4297
Shell13	93.8647	2.512	-47.8254	-39.6331	-235.182	0.3313	2.433
Shell13	93.8647	2.52	-48.2518	-39.4308	-235.7498	0.3192	2.4324
Shell13	93.8647	2.528	-48.722	-39.0207	-236.5404	0.3404	2.4451
Shell13	93.8647	2.536	-48.8013	-38.9443	-236.8044	0.3447	2.4457
Shell13	93.8647	2.544	-49.4006	-38.4567	-237.62	0.3528	2.4354
Shell13	93.8647	2.552	-49.5643	-38.299	-237.9456	0.3582	2.4354
Shell13	93.8647	2.56	-49.6279	-38.2348	-238.248	0.3486	2.4366
Shell13	93.8647	2.568	-49.7711	-38.1042	-238.9011	0.3482	2.4371
Shell13	93.8647	2.576	-50.1874	-37.9797	-239.8129	0.3231	2.4238
Shell13	93.8647	2.584	-50.2745	-37.8388	-240.1791	0.3362	2.4264
Shell13	93.8647	2.592	-50.3497	-37.7694	-240.4877	0.3374	2.4267
Shell13	93.8647	2.6	-50.6891	-37.3968	-241.0094	0.3625	2.4271
Shell13	93.8647	2.608	-50.8349	-37.2555	-241.7948	0.3603	2.4298
Shell13	93.8647	2.616	-50.7237	-37.3766	-242.0615	0.3643	2.43
Shell13	93.8647	2.624	-50.7719	-37.3312	-242.6152	0.3541	2.4321
Shell13	93.8647	2.632	-50.9613	-37.3387	-242.956	0.3435	2.4422
Shell13	93.8647	2.64	-51.3535	-36.9421	-243.604	0.3452	2.4401
Shell13	93.8647	2.648	-52.0281	-36.1871	-244.3337	0.3356	2.4338
Shell13	93.8647	2.656	-52.3211	-35.9044	-244.8972	0.3411	2.4341
Shell13	93.8647	2.664	-52.7114	-35.4268	-245.1622	0.3345	2.4348
Shell13	93.8647	2.672	-53.0082	-35.1036	-246.3119	0.3744	2.4453
Shell13	93.8647	2.68	-53.2479	-34.8419	-246.7792	0.3631	2.4483
Shell13	93.8647	2.688	-54.0161	-34.1889	-247.5853	0.3376	2.4496
Shell13	93.8647	2.696	-54.0431	-34.1295	-248.2524	0.3481	2.4571
Shell13	93.8647	2.704	-54.284	-33.8678	-248.7258	0.335	2.4604
Shell13	93.8647	2.712	-54.696	-33.514	-249.283	0.3332	2.4598
Shell13	93.8647	2.72	-54.9293	-33.442	-249.6907	0.3075	2.4519
Shell13	93.8647	2.728	-55.3064	-33.1288	-250.2798	0.2995	2.4561
Shell13	93.8647	2.736	-55.5138	-32.9214	-250.6485	0.3058	2.4522

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell13	93.8647	2.744	-55.7802	-32.5352	-251.1302	0.3072	2.4615
Shell13	93.8647	2.752	-55.9273	-32.3967	-251.5624	0.2926	2.4618
Shell13	93.8647	2.76	-56.3861	-31.9013	-252.2896	0.2903	2.4643
Shell13	93.8647	2.768	-56.32	-31.9658	-252.5458	0.2983	2.4667
Shell13	93.8647	2.776	-56.3343	-31.9537	-253.0803	0.3118	2.4702
Shell13	93.8647	2.784	-57.491	-31.9035	-254.1654	0.2821	2.4169
Shell13	93.8647	2.792	-58.058	-31.5427	-254.7598	0.3138	2.4309
Shell13	93.8647	2.8	-58.7432	-31.2031	-255.779	0.2732	2.4506
Shell13	93.8647	2.808	-59.2244	-31.0339	-256.1033	0.2645	2.4635
Shell13	93.8647	2.816	-59.2044	-31.0844	-256.1739	0.2729	2.4604
Shell13	93.8647	2.824	-60.1282	-30.966	-256.497	0.265	2.4518
Shell13	93.8647	2.832	-60.3956	-30.8206	-257.22	0.2217	2.4613
Shell13	93.8647	2.84	-60.764	-30.7435	-257.3911	0.2261	2.4802
Shell13	93.8647	2.848	-60.8982	-30.7979	-257.9054	0.2128	2.4832
Shell13	93.8647	2.856	-61.5386	-30.1936	-258.5289	0.187	2.4978
Shell13	93.8647	2.864	-61.7676	-29.9059	-258.7284	0.2034	2.5061
Shell13	93.8647	2.872	-61.8362	-29.7501	-259.4745	0.2071	2.5152
Shell13	93.8647	2.88	-61.8893	-29.6999	-259.8029	0.1897	2.5177
Shell13	93.8647	2.888	-62.1459	-29.3732	-260.3784	0.1867	2.5191
Shell13	93.8647	2.896	-62.1708	-29.3242	-260.6807	0.1808	2.5247
Shell13	93.8647	2.904	-61.9635	-29.5349	-260.7274	0.2101	2.5216
Shell13	93.8647	2.912	-61.9552	-29.5655	-260.9643	0.199	2.5215
Shell13	93.8647	2.92	-62.0107	-29.5412	-261.3618	0.1647	2.5203
Shell13	93.8647	2.928	-62.8609	-29.038	-262.2033	0.1302	2.5145
Shell13	93.8647	2.936	-63.079	-28.8041	-262.5021	0.105	2.5206
Shell13	93.8647	2.944	-63.4206	-28.6084	-263.135	0.1136	2.5225
Shell13	93.8647	2.952	-63.3941	-28.6366	-263.1761	0.1094	2.5218
Shell13	93.8647	2.96	-63.5246	-28.467	-263.53	0.0871	2.5297
Shell13	93.8647	2.968	-63.6688	-28.5132	-264.4118	0.0263	2.5323
Shell13	93.8647	2.976	-63.8342	-28.3298	-264.7563	-0.0019	2.5408
Shell13	93.8647	2.984	-64.2571	-27.8897	-265.4043	-0.0652	2.5473
Shell13	93.8647	2.992	-64.7437	-27.6609	-265.9577	-0.0824	2.5531
Shell13	93.8647	3	-65.2011	-27.2628	-266.2534	-0.0869	2.5732
Shell13	93.8647	3.008	-65.0094	-27.4567	-266.2928	-0.0889	2.5659
Shell13	93.8647	3.016	-65.5108	-26.9037	-266.7575	-0.1215	2.5711
Shell13	93.8647	3.024	-65.876	-26.7491	-267.2076	-0.1448	2.5824
Shell13	93.8647	3.032	-66.7354	-26.4997	-268.0023	-0.1336	2.6168
Shell13	93.8647	3.04	-66.652	-26.4638	-268.664	-0.1629	2.6136
Shell13	93.8647	3.048	-67.1032	-26.1696	-269.2626	-0.223	2.652
Shell13	93.8647	3.056	-68.3275	-24.6824	-270.1413	-0.4239	2.7824
Shell13	93.8647	3.064	-69.4941	-23.3886	-271.6089	-0.6949	2.9389
Shell13	93.8647	3.072	-69.7385	-23.1181	-271.8452	-0.7034	2.964
Shell13	93.8647	3.08	-69.8548	-22.9635	-272.3464	-0.742	2.9551
Shell13	93.8647	3.088	-69.7652	-23.0965	-272.369	-0.7326	2.9312
Shell13	93.8647	3.096	-69.6541	-23.1629	-272.3399	-0.7166	2.9226
Shell13	93.8647	3.104	-69.9097	-22.8602	-272.5007	-0.7309	2.9386
Shell13	93.8647	3.112	-70.0506	-22.7274	-272.7621	-0.7775	2.9604
Shell13	93.8647	3.12	-69.907	-22.8356	-273.5266	-0.8747	3.0431
Shell13	93.8647	3.128	-69.9262	-22.7791	-273.7565	-0.8998	3.0563
Shell13	93.8647	3.136	-69.761	-22.8996	-273.9618	-0.9315	3.1319
Shell13	93.8647	3.144	-69.8382	-22.8026	-274.0158	-0.9463	-3.1253
Shell13	93.8647	3.152	-69.8382	-22.8026	-274.0158	-0.9463	-3.1253
Shell13	93.8647	3.16	-69.2822	-23.496	-274.1693	-0.8879	2.9941

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell12	74.3143	0	0	0	0	1.5045	-1.8382
Shell12	74.3143	0.008	4.7756	-0.6331	-40.8026	1.3911	-0.3611
Shell12	74.3143	0.016	28.2129	4.4012	-78.1003	-0.2825	0.2453
Shell12	74.3143	0.024	49.5265	7.3072	-90.3877	-1.0462	0.4339
Shell12	74.3143	0.032	61.9017	11.3182	-93.2804	-1.1727	0.4128
Shell12	74.3143	0.04	72.9736	12.9466	-98.3971	-1.3055	0.4946
Shell12	74.3143	0.048	81.8879	13.8408	-102.7862	-1.3507	0.7392
Shell12	74.3143	0.056	88.7829	14.4098	-107.1391	-1.266	0.5122
Shell12	74.3143	0.064	93.0186	16.5027	-111.115	-1.1297	0.4319
Shell12	74.3143	0.072	99.7101	15.8233	-114.8514	-1.1426	0.4285
Shell12	74.3143	0.08	104.1019	15.5424	-120.4441	-0.9383	0.2945
Shell12	74.3143	0.088	106.2942	15.7862	-123.0013	-0.8228	0.2925
Shell12	74.3143	0.096	107.8411	15.9454	-125.8536	-0.7117	0.3235
Shell12	74.3143	0.104	109.1939	15.9757	-128.8935	-0.7546	0.2783
Shell12	74.3143	0.112	113.3654	16.151	-131.3821	-0.6389	0.2718
Shell12	74.3143	0.12	113.7018	14.8462	-134.7713	-0.5408	0.2316
Shell12	74.3143	0.128	114.1982	13.446	-138.1993	-0.4632	0.2155
Shell12	74.3143	0.136	114.1863	12.2108	-140.9159	-0.4177	0.2439
Shell12	74.3143	0.144	115.7578	11.7097	-143.5586	-0.3654	0.2725
Shell12	74.3143	0.152	115.7587	11.1716	-144.7976	-0.3407	0.2846
Shell12	74.3143	0.16	116.1558	11.0833	-145.7476	-0.312	0.2862
Shell12	74.3143	0.168	118.3639	10.7707	-147.7703	-0.2751	0.2714
Shell12	74.3143	0.176	118.3463	10.7835	-149.3577	-0.1621	0.2584
Shell12	74.3143	0.184	119.0919	11.2477	-150.9132	-0.1651	0.2733
Shell12	74.3143	0.192	119.9511	11.2104	-153.4368	-0.0749	0.2647
Shell12	74.3143	0.2	120.4752	11.088	-154.3944	-0.0875	0.267
Shell12	74.3143	0.208	120.6164	10.7583	-155.6307	-0.0629	0.283
Shell12	74.3143	0.216	120.8908	10.3005	-156.8707	-0.0452	0.2877
Shell12	74.3143	0.224	121.5376	10.5816	-157.9652	0.0015	0.2808
Shell12	74.3143	0.232	121.6842	10.5545	-158.638	0.0115	0.2746
Shell12	74.3143	0.24	122.3731	10.3983	-160.6942	0.0461	0.2686
Shell12	74.3143	0.248	122.6941	10.5233	-161.5703	0.0529	0.2536
Shell12	74.3143	0.256	123.2423	10.2372	-163.2546	0.0536	0.2586
Shell12	74.3143	0.264	124.2001	10.2663	-163.3348	0.0781	0.261
Shell12	74.3143	0.272	124.4756	10.3305	-164.5046	0.1095	0.252
Shell12	74.3143	0.28	124.9993	10.5981	-165.5676	0.126	0.2444
Shell12	74.3143	0.288	125.1955	11.016	-166.4531	0.1559	0.223
Shell12	74.3143	0.296	125.0669	10.8873	-167.8262	0.145	0.2045
Shell12	74.3143	0.304	125.7569	10.7764	-169.0357	0.1235	0.195
Shell12	74.3143	0.312	125.9178	10.8657	-170.5126	0.1592	0.1987
Shell12	74.3143	0.32	126.4197	11.2832	-171.2346	0.1827	0.1818
Shell12	74.3143	0.328	126.6739	11.3482	-172.2017	0.1995	0.1843
Shell12	74.3143	0.336	127.0104	11.1974	-172.9688	0.2153	0.1906
Shell12	74.3143	0.344	127.7284	11.1173	-173.802	0.2037	0.1757
Shell12	74.3143	0.352	128.3025	10.9295	-174.5172	0.2291	0.1742
Shell12	74.3143	0.36	128.7771	11.1723	-175.2839	0.2141	0.1697
Shell12	74.3143	0.368	128.55	10.8141	-176.6383	0.2074	0.1853
Shell12	74.3143	0.376	128.1558	10.4262	-177.956	0.1764	0.2032
Shell12	74.3143	0.384	128.592	10.5149	-178.7285	0.1722	0.1925
Shell12	74.3143	0.392	128.9422	10.6403	-179.5958	0.1793	0.1927
Shell12	74.3143	0.4	130.4667	10.6652	-181.2156	0.178	0.1681
Shell12	74.3143	0.408	131.8412	10.4747	-181.91	0.1874	0.158
Shell12	74.3143	0.416	132.998	10.6204	-182.2791	0.1826	0.1731

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell12	74.3143	0.424	133.9479	10.6125	-183.8208	0.1727	0.1816
Shell12	74.3143	0.432	134.5396	10.4276	-184.8221	0.1838	0.1903
Shell12	74.3143	0.44	135.2382	10.7691	-186.0839	0.1509	0.197
Shell12	74.3143	0.448	135.7828	10.676	-187.0206	0.135	0.1859
Shell12	74.3143	0.456	136.8929	10.909	-187.6395	0.1455	0.1834
Shell12	74.3143	0.464	137.5045	11.2075	-188.1804	0.1423	0.191
Shell12	74.3143	0.472	138.2238	11.3544	-189.2044	0.0992	0.1982
Shell12	74.3143	0.48	138.6977	11.4209	-190.5942	0.0919	0.202
Shell12	74.3143	0.488	139.7822	11.5995	-191.4493	0.0575	0.2172
Shell12	74.3143	0.496	140.1878	11.6517	-192.2283	0.0727	0.2196
Shell12	74.3143	0.504	141.2745	11.8162	-192.9918	0.0488	0.2194
Shell12	74.3143	0.512	142.5876	12.5477	-194.1759	0.0308	0.2385
Shell12	74.3143	0.52	144.1698	12.6365	-195.7868	0.0185	0.225
Shell12	74.3143	0.528	145.2331	12.7953	-196.3843	-0.0084	0.2193
Shell12	74.3143	0.536	146.1507	12.7415	-197.002	-0.011	0.2266
Shell12	74.3143	0.544	147.1281	12.9503	-197.9866	0.002	0.2333
Shell12	74.3143	0.552	148.0352	13.0267	-198.5852	-0.0175	0.2241
Shell12	74.3143	0.56	148.9427	12.8583	-199.4457	-0.0259	0.2307
Shell12	74.3143	0.568	149.1142	12.9725	-200.0546	-0.0375	0.2275
Shell12	74.3143	0.576	149.6659	12.9046	-201.2711	-0.0546	0.2314
Shell12	74.3143	0.584	150.8403	13.185	-201.9921	-0.0571	0.2259
Shell12	74.3143	0.592	150.9152	13.211	-202.9976	-0.0671	0.2259
Shell12	74.3143	0.6	151.2598	13.4099	-203.9814	-0.1041	0.2314
Shell12	74.3143	0.608	152.9356	13.4302	-204.685	-0.1113	0.2167
Shell12	74.3143	0.616	153.1145	13.5347	-205.2034	-0.1113	0.2245
Shell12	74.3143	0.624	154.1654	13.4584	-205.9827	-0.1056	0.213
Shell12	74.3143	0.632	154.9942	13.6959	-206.8116	-0.1019	0.2053
Shell12	74.3143	0.64	155.5519	14.1025	-207.1741	-0.1131	0.1909
Shell12	74.3143	0.648	156.0051	14.1657	-207.93	-0.1599	0.1932
Shell12	74.3143	0.656	157.2501	14.4541	-208.8723	-0.168	0.1922
Shell12	74.3143	0.664	160.022	14.9069	-210.759	-0.2405	0.1918
Shell12	74.3143	0.672	161.625	15.0825	-211.5561	-0.2985	0.1959
Shell12	74.3143	0.68	162.0031	15.2916	-212.5261	-0.2677	0.2031
Shell12	74.3143	0.688	162.6659	15.3903	-212.7186	-0.2964	0.2191
Shell12	74.3143	0.696	163.5342	15.8053	-213.5567	-0.3016	0.2264
Shell12	74.3143	0.704	164.0793	15.8165	-214.3719	-0.326	0.22
Shell12	74.3143	0.712	164.732	15.912	-214.7363	-0.3273	0.2041
Shell12	74.3143	0.72	164.9192	15.7951	-215.5852	-0.3413	0.2198
Shell12	74.3143	0.728	164.5795	15.8712	-216.3059	-0.3401	0.218
Shell12	74.3143	0.736	165.0797	15.6394	-216.8909	-0.3611	0.2382
Shell12	74.3143	0.744	164.3086	15.6355	-217.6315	-0.3833	0.2409
Shell12	74.3143	0.752	165.4329	16.0316	-218.7425	-0.4034	0.2023
Shell12	74.3143	0.76	165.3855	15.8585	-219.6923	-0.4107	0.2115
Shell12	74.3143	0.768	165.7079	15.9433	-220.2911	-0.4273	0.2237
Shell12	74.3143	0.776	166.0718	15.9688	-220.964	-0.459	0.2403
Shell12	74.3143	0.784	165.0777	15.8283	-221.7336	-0.4763	0.262
Shell12	74.3143	0.792	165.3282	15.9967	-222.2771	-0.4751	0.2776
Shell12	74.3143	0.8	165.9963	15.8628	-223.8425	-0.5138	0.289
Shell12	74.3143	0.808	165.9327	15.7743	-224.7687	-0.5021	0.2934
Shell12	74.3143	0.816	166.3608	15.9106	-225.7767	-0.5077	0.2986
Shell12	74.3143	0.824	166.5791	15.8278	-226.4612	-0.5086	0.3073
Shell12	74.3143	0.832	167.3032	16.2926	-226.9498	-0.533	0.3124
Shell12	74.3143	0.84	167.9093	16.5574	-227.3639	-0.5396	0.3117

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell12	74.3143	0.848	167.9686	16.4776	-228.0614	-0.5428	0.3261
Shell12	74.3143	0.856	168.0686	16.5532	-228.7647	-0.5614	0.3508
Shell12	74.3143	0.864	168.1202	16.6725	-229.3087	-0.5567	0.3629
Shell12	74.3143	0.872	168.1599	16.7983	-230.0628	-0.563	0.3924
Shell12	74.3143	0.88	168.3813	16.8214	-230.9236	-0.5698	0.4104
Shell12	74.3143	0.888	168.7614	17.2585	-231.6458	-0.558	0.3821
Shell12	74.3143	0.896	169.0326	16.9893	-232.41	-0.5618	0.405
Shell12	74.3143	0.904	168.9698	16.9259	-233.2255	-0.5514	0.4058
Shell12	74.3143	0.912	169.0453	16.9506	-234.1184	-0.5691	0.406
Shell12	74.3143	0.92	170.3352	17.6605	-235.9408	-0.5849	0.4265
Shell12	74.3143	0.928	171.6238	17.9297	-237.158	-0.5614	0.457
Shell12	74.3143	0.936	171.7264	17.8745	-237.9639	-0.5546	0.462
Shell12	74.3143	0.944	171.6586	17.5882	-238.8989	-0.5426	0.4627
Shell12	74.3143	0.952	171.2932	17.4343	-239.9795	-0.5333	0.4691
Shell12	74.3143	0.96	171.1648	17.1086	-241.2191	-0.5213	0.4792
Shell12	74.3143	0.968	171.9904	16.8657	-243.0447	-0.5407	0.5362
Shell12	74.3143	0.976	171.2383	17.0146	-244.3327	-0.5413	0.5515
Shell12	74.3143	0.984	171.217	16.9662	-246.0376	-0.5662	0.5657
Shell12	74.3143	0.992	171.4701	16.8972	-246.8558	-0.5854	0.5794
Shell12	74.3143	1	170.6581	16.5467	-248.2627	-0.5997	0.5958
Shell12	74.3143	1.008	170.4032	16.4271	-249.4454	-0.6004	0.5909
Shell12	74.3143	1.016	170.586	16.5364	-250.1664	-0.5739	0.5895
Shell12	74.3143	1.024	170.5472	16.5869	-251.493	-0.5604	0.5827
Shell12	74.3143	1.032	170.7118	16.5658	-252.7213	-0.5145	0.5875
Shell12	74.3143	1.04	169.6236	16.1416	-253.8887	-0.502	0.5697
Shell12	74.3143	1.048	169.294	15.6253	-254.6346	-0.5021	0.5988
Shell12	74.3143	1.056	165.8107	13.6238	-256.729	-0.4624	0.6053
Shell12	74.3143	1.064	164.8218	13.406	-258.0752	-0.4849	0.6334
Shell12	74.3143	1.072	164.8621	13.1716	-259.2394	-0.4546	0.6484
Shell12	74.3143	1.08	164.2523	12.7532	-260.3758	-0.4304	0.6465
Shell12	74.3143	1.088	164.0457	12.7924	-261.4549	-0.4215	0.6333
Shell12	74.3143	1.096	163.2705	12.5945	-262.8096	-0.3825	0.6507
Shell12	74.3143	1.104	162.3722	12.5294	-264.0841	-0.3465	0.6851
Shell12	74.3143	1.112	161.3522	11.9523	-264.9617	-0.3155	0.6883
Shell12	74.3143	1.12	161.1897	11.8139	-266.192	-0.3268	0.6888
Shell12	74.3143	1.128	160.6555	11.6348	-267.3866	-0.3184	0.6727
Shell12	74.3143	1.136	158.8182	11.4634	-268.8597	-0.2585	0.7175
Shell12	74.3143	1.144	157.6521	10.513	-269.4439	-0.2462	0.7214
Shell12	74.3143	1.152	156.5225	9.9947	-270.2267	-0.2351	0.7585
Shell12	74.3143	1.16	156.5526	9.7866	-270.9311	-0.2096	0.7761
Shell12	74.3143	1.168	156.6613	9.3384	-271.6082	-0.1828	0.7744
Shell12	74.3143	1.176	156.4328	9.1597	-271.9412	-0.2039	0.7442
Shell12	74.3143	1.184	154.4462	8.5154	-274.9831	-0.0723	0.8148
Shell12	74.3143	1.192	154.4898	8.2079	-276.0632	0.0144	0.8189
Shell12	74.3143	1.2	154.2708	7.5542	-276.5139	0.0739	0.8308
Shell12	74.3143	1.208	153.6946	7.3573	-278.1345	0.1545	0.8412
Shell12	74.3143	1.216	153.0629	6.7122	-278.931	0.1657	0.8387
Shell12	74.3143	1.224	152.9399	6.2034	-279.4347	0.2497	0.8647
Shell12	74.3143	1.232	152.5667	5.761	-279.807	0.2845	0.8396
Shell12	74.3143	1.24	152.3154	5.2645	-281.0758	0.244	0.8072
Shell12	74.3143	1.248	152.2546	4.9324	-281.7194	0.2234	0.7945
Shell12	74.3143	1.256	151.527	4.3408	-282.8059	0.267	0.7997
Shell12	74.3143	1.264	151.271	3.9062	-283.5119	0.28	0.8011

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell12	74.3143	1.272	151.0257	3.8937	-284.0207	0.2943	0.8148
Shell12	74.3143	1.28	150.1254	3.4082	-284.9341	0.3066	0.8393
Shell12	74.3143	1.288	150.0839	3.2903	-285.2287	0.3238	0.8554
Shell12	74.3143	1.296	149.0503	2.4166	-285.6334	0.33	0.8407
Shell12	74.3143	1.304	149.0508	2.1785	-286.4803	0.3273	0.8369
Shell12	74.3143	1.312	149.8463	1.2568	-287.3609	0.354	0.7855
Shell12	74.3143	1.32	150.3726	0.736	-288.1372	0.3887	0.7874
Shell12	74.3143	1.328	150.538	0.6145	-288.6947	0.3899	0.7702
Shell12	74.3143	1.336	150.4361	0.1804	-289.1488	0.4169	0.7647
Shell12	74.3143	1.344	150.4888	0.0857	-289.8832	0.4716	0.7571
Shell12	74.3143	1.352	149.9806	-0.4644	-289.9617	0.5077	0.7262
Shell12	74.3143	1.36	149.7973	-0.8624	-290.8793	0.5363	0.7398
Shell12	74.3143	1.368	149.0926	-1.3228	-291.7689	0.5577	0.7368
Shell12	74.3143	1.376	148.8989	-1.6126	-292.2563	0.5721	0.7505
Shell12	74.3143	1.384	149.0936	-1.6049	-292.6125	0.5846	0.7306
Shell12	74.3143	1.392	149.627	-1.6448	-292.8076	0.5617	0.7007
Shell12	74.3143	1.4	150.5989	-1.4282	-293.5975	0.5617	0.6921
Shell12	74.3143	1.408	152.297	-1.6037	-293.7428	0.5409	0.6303
Shell12	74.3143	1.416	152.0758	-2.0631	-294.4315	0.5818	0.6535
Shell12	74.3143	1.424	152.3269	-2.1364	-294.3727	0.5845	0.6595
Shell12	74.3143	1.432	152.593	-2.0517	-295.4299	0.6155	0.6597
Shell12	74.3143	1.44	152.9834	-2.6697	-296.7787	0.6356	0.6815
Shell06	65.32	0	0	0	0	1.4604	0.0316
Shell06	65.32	0.008	-0.8147	-2.415	-22.0429	1.5118	-2.4612
Shell06	65.32	0.016	-7.9375	-8.6729	-82.4691	0.8425	-2.6072
Shell06	65.32	0.024	-19.0887	-18.5322	-101.2365	0.0711	-2.0497
Shell06	65.32	0.032	-24.4548	-27.4915	-110.9409	-1.1577	-2.7282
Shell06	65.32	0.04	-25.8087	-32.5254	-112.8957	-1.3347	2.7366
Shell06	65.32	0.048	-30.2178	-35.8589	-113.1002	-1.2228	1.6948
Shell06	65.32	0.056	-32.8872	-36.8411	-112.5001	-1.1639	1.2255
Shell06	65.32	0.064	-35.324	-35.8977	-111.1641	-1.1525	1.0068
Shell06	65.32	0.072	-36.9883	-36.4558	-111.731	-1.1148	0.747
Shell06	65.32	0.08	-39.3147	-35.9297	-111.3255	-1.0131	0.4851
Shell06	65.32	0.088	-40.6089	-36.6669	-112.4087	-1.0108	0.5867
Shell06	65.32	0.096	-43.1959	-36.6218	-112.9872	-1.034	0.6171
Shell06	65.32	0.104	-44.3107	-36.2363	-112.9031	-1.0304	0.5662
Shell06	65.32	0.112	-46.0672	-35.7654	-113.8779	-1.0428	0.624
Shell06	65.32	0.12	-46.7911	-35.2707	-114.4744	-0.9991	0.5782
Shell06	65.32	0.128	-47.1475	-36.085	-115.5643	-1.0407	1.1573
Shell06	65.32	0.136	-47.999	-35.8974	-116.1416	-1.0234	1.1173
Shell06	65.32	0.144	-48.2464	-36.1597	-117.1776	-0.998	1.1871
Shell06	65.32	0.152	-48.9215	-35.6844	-117.0311	-0.9852	0.8778
Shell06	65.32	0.16	-48.8313	-36.0973	-117.313	-0.9794	0.8576
Shell06	65.32	0.168	-49.4728	-35.8534	-117.3695	-0.9707	0.8994
Shell06	65.32	0.176	-50.1022	-35.5943	-117.4649	-0.9661	0.903
Shell06	65.32	0.184	-50.3229	-35.8474	-117.6649	-0.9374	0.7261
Shell06	65.32	0.192	-50.0054	-36.5562	-119.2539	-1.0495	1.0133
Shell06	65.32	0.2	-49.1432	-37.8356	-120.5751	-1.0406	1.3486
Shell06	65.32	0.208	-50.384	-36.8159	-119.6769	-1.0747	1.0759
Shell06	65.32	0.216	-50.595	-37.3287	-120.3292	-1.082	1.2271
Shell06	65.32	0.224	-51.109	-37.16	-120.8393	-1.1066	1.2574
Shell06	65.32	0.232	-51.8861	-37.0303	-121.2024	-1.0874	1.5003
Shell06	65.32	0.24	-51.1648	-37.1449	-121.3051	-1.0838	1.3844

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell06	65.32	0.248	-51.2772	-36.9803	-121.1713	-1.078	1.4115
Shell06	65.32	0.256	-51.2391	-36.9946	-121.3969	-1.0703	1.4338
Shell06	65.32	0.264	-51.4082	-36.8401	-121.4306	-1.0651	1.3647
Shell06	65.32	0.272	-51.3425	-36.85	-121.6786	-1.0459	1.2839
Shell06	65.32	0.28	-51.0343	-37.174	-122.3075	-1.0379	1.1946
Shell06	65.32	0.288	-50.7948	-37.479	-123.2336	-1.0336	1.0751
Shell06	65.32	0.296	-50.3922	-37.9083	-123.5893	-1.0251	1.0832
Shell06	65.32	0.304	-50.1228	-38.264	-124.1107	-1.0204	0.9755
Shell06	65.32	0.312	-49.5053	-38.6839	-124.8376	-1.0258	1.0078
Shell06	65.32	0.32	-48.9973	-39.19	-125.3382	-1.0189	0.9561
Shell06	65.32	0.328	-48.9022	-39.2143	-125.8068	-0.9839	0.9351
Shell06	65.32	0.336	-48.4709	-40.1499	-126.9899	-1.0044	1.3121
Shell06	65.32	0.344	-48.6575	-39.7871	-126.7498	-1.0085	1.1628
Shell06	65.32	0.352	-48.3086	-40.1482	-127.0836	-1.0038	1.053
Shell06	65.32	0.36	-48.2895	-40.2014	-126.5461	-1.0325	1.1733
Shell06	65.32	0.368	-47.8227	-40.6985	-126.902	-1.0018	1.3289
Shell06	65.32	0.376	-47.8691	-40.5836	-127.1911	-1.0139	1.2116
Shell06	65.32	0.384	-47.6783	-40.7761	-127.5355	-1.0174	1.2338
Shell06	65.32	0.392	-47.9973	-40.7287	-127.7631	-1.0036	1.1465
Shell06	65.32	0.4	-48.107	-40.7371	-128.1556	-0.9723	1.0966
Shell06	65.32	0.408	-48.3867	-40.3115	-128.2586	-0.9386	1.1863
Shell06	65.32	0.416	-47.6471	-40.6209	-128.3497	-0.9401	1.0903
Shell06	65.32	0.424	-47.6274	-40.6236	-128.0931	-0.9422	1.155
Shell06	65.32	0.432	-47.4565	-40.962	-128.3888	-0.9502	1.132
Shell06	65.32	0.44	-47.4032	-41.0405	-128.1434	-0.9663	1.1724
Shell06	65.32	0.448	-47.1153	-41.6561	-128.7844	-0.9648	1.0637
Shell06	65.32	0.456	-47.0093	-41.719	-128.7151	-0.9715	1.1963
Shell06	65.32	0.464	-46.8714	-41.9961	-129.0936	-0.9687	1.2129
Shell06	65.32	0.472	-46.4201	-42.5515	-129.9867	-0.9662	1.107
Shell06	65.32	0.48	-46.1041	-42.9957	-130.3618	-0.9738	0.9916
Shell06	65.32	0.488	-46.0631	-43.0287	-130.3245	-1.0044	1.0577
Shell06	65.32	0.496	-45.6924	-43.5027	-130.8818	-1.01	0.9651
Shell06	65.32	0.504	-46.0384	-43.2109	-130.6858	-1.0369	1.1422
Shell06	65.32	0.512	-45.9197	-43.5287	-131.2184	-1.0203	1.0136
Shell06	65.32	0.52	-46.1537	-43.6301	-131.6697	-1.0169	0.948
Shell06	65.32	0.528	-45.1759	-44.5587	-132.2791	-1.0161	1.0687
Shell06	65.32	0.536	-44.985	-44.8164	-132.5249	-1.0179	1.0017
Shell06	65.32	0.544	-44.985	-44.8164	-132.5249	-1.0179	1.0017
Shell06	65.32	0.552	-44.762	-45.0781	-132.9884	-1.0095	0.9694
Shell06	65.32	0.56	-44.762	-45.0781	-132.9884	-1.0095	0.9694
Shell06	65.32	0.568	-44.6924	-45.142	-133.1008	-1.0152	0.9905
Shell06	65.32	0.576	-44.706	-45.2149	-133.4329	-1.0007	0.984
Shell06	65.32	0.584	-44.6361	-45.2789	-133.5456	-1.0065	1.0053
Shell06	65.32	0.592	-44.4966	-45.4067	-133.7703	-1.0171	1.0475
Shell06	65.32	0.6	-44.6667	-45.4241	-133.9339	-1.017	1.0168
Shell06	65.32	0.608	-44.2541	-45.849	-134.3702	-1.0104	1.0734
Shell06	65.32	0.616	-44.0648	-46.067	-134.4639	-1.011	1.084
Shell06	65.32	0.624	-43.4331	-46.8787	-135.1115	-1.0275	1.0974
Shell06	65.32	0.632	-43.3387	-47.0888	-135.4858	-1.0316	1.0534
Shell06	65.32	0.64	-43.5058	-47.1002	-135.8675	-1.0154	1.0522
Shell06	65.32	0.648	-43.5078	-47.1874	-135.9085	-1.0141	1.0084
Shell06	65.32	0.656	-44.2457	-46.8792	-136.1037	-1.0116	1.0045
Shell06	65.32	0.664	-44.2191	-47.2917	-136.8717	-0.9997	0.9136

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell06	65.32	0.672	-43.8633	-47.8472	-137.6995	-1.0222	0.9401
Shell06	65.32	0.68	-43.2685	-48.354	-138.1008	-1.0282	1.1043
Shell06	65.32	0.688	-43.1848	-48.6213	-138.5737	-1.0144	1.0803
Shell06	65.32	0.696	-41.8773	-49.908	-139.6596	-0.9975	1.4546
Shell06	65.32	0.704	-41.7412	-50.0755	-139.8206	-1.0018	1.4214
Shell06	65.32	0.712	-41.8742	-50.0548	-139.8431	-1.003	1.3926
Shell06	65.32	0.72	-41.74	-50.1835	-139.9224	-0.9978	1.4251
Shell06	65.32	0.728	-41.7438	-50.1773	-140.0609	-0.9953	1.4318
Shell06	65.32	0.736	-41.8586	-50.3865	-140.5493	-0.9966	1.4597
Shell06	65.32	0.744	-41.8286	-50.5818	-140.8663	-0.9855	1.5406
Shell06	65.32	0.752	-41.357	-51.235	-141.5985	-0.9865	1.4675
Shell06	65.32	0.76	-41.4719	-51.4609	-142.1094	-0.9978	1.4796
Shell06	65.32	0.768	-41.3155	-51.7889	-142.3702	-1.0231	1.3939
Shell06	65.32	0.776	-41.0905	-52.4542	-142.969	-1.036	1.363
Shell06	65.32	0.784	-40.6319	-53.269	-143.5837	-1.027	1.4696
Shell06	65.32	0.792	-40.2827	-53.6848	-144.4205	-1.0236	1.3819
Shell06	65.32	0.8	-39.7241	-54.2413	-144.9718	-0.9925	1.5836
Shell06	65.32	0.808	-39.1557	-54.7368	-145.8672	-0.9961	1.6691
Shell06	65.32	0.816	-39.5268	-54.977	-146.4498	-0.9857	1.795
Shell06	65.32	0.824	-39.5504	-55.0243	-146.6159	-0.9909	1.7647
Shell06	65.32	0.832	-39.968	-55.0254	-146.9078	-0.9854	1.7939
Shell06	65.32	0.84	-39.1959	-55.8097	-147.6976	-0.9762	1.8159
Shell06	65.32	0.848	-39.0633	-55.9896	-148.5008	-1.0389	1.7259
Shell06	65.32	0.856	-37.6144	-57.3669	-149.7815	-1.0093	1.8335
Shell06	65.32	0.864	-37.2451	-57.7402	-150.1276	-1.0255	1.7795
Shell06	65.32	0.872	-37.1116	-58.1835	-150.5418	-0.9895	1.8883
Shell06	65.32	0.88	-37.1081	-58.3708	-151.1847	-0.9936	1.9178
Shell06	65.32	0.888	-37.1544	-58.442	-151.605	-0.9957	1.9452
Shell06	65.32	0.896	-37.1095	-58.6428	-151.8512	-1.0026	1.9496
Shell06	65.32	0.904	-36.7878	-58.994	-152.4994	-1.0011	1.9499
Shell06	65.32	0.912	-35.9307	-59.7717	-153.1944	-0.962	2.0067
Shell06	65.32	0.92	-35.9645	-59.9351	-153.697	-0.9426	2.0423
Shell06	65.32	0.928	-35.744	-60.1279	-154.0754	-0.9404	2.0507
Shell06	65.32	0.936	-35.4991	-60.3933	-154.6508	-0.9323	2.0641
Shell06	65.32	0.944	-35.6305	-60.6045	-155.293	-0.9005	2.1273
Shell06	65.32	0.952	-35.4283	-60.9174	-155.9839	-0.886	2.1594
Shell06	65.32	0.96	-35.3151	-61.1115	-156.4127	-0.8761	2.1738
Shell06	65.32	0.968	-34.711	-61.7822	-157.0879	-0.8519	2.1979
Shell06	65.32	0.976	-34.5836	-62.2096	-157.6032	-0.84	2.2145
Shell06	65.32	0.984	-34.3302	-62.5022	-157.9598	-0.8228	2.2248
Shell06	65.32	0.992	-34.3354	-62.6846	-158.3908	-0.8157	2.2396
Shell06	65.32	1	-33.8327	-63.3387	-159.085	-0.8426	2.2334
Shell06	65.32	1.008	-31.5194	-65.5948	-161.4565	-0.917	2.1891
Shell06	65.32	1.016	-31.592	-65.5142	-161.5125	-0.9026	2.1995
Shell06	65.32	1.024	-31.0392	-66.0839	-162.4258	-0.9224	2.1829
Shell06	65.32	1.032	-30.8659	-66.2986	-162.9233	-0.9129	2.2041
Shell06	65.32	1.04	-30.6187	-66.8332	-163.8401	-0.9116	2.2316
Shell06	65.32	1.048	-30.1827	-67.361	-164.4167	-0.9255	2.254
Shell06	65.32	1.056	-28.8498	-68.5797	-165.2063	-0.8999	2.2794
Shell06	65.32	1.064	-28.3466	-69.2351	-165.7297	-0.8341	2.3108
Shell06	65.32	1.072	-27.661	-69.922	-166.2856	-0.8094	2.3078
Shell06	65.32	1.08	-26.7802	-70.8507	-167.2991	-0.7793	2.334
Shell06	65.32	1.088	-25.7255	-71.8774	-168.5684	-0.8317	2.3333

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell06	65.32	1.096	-25.9524	-71.8057	-168.7559	-0.8531	2.3323
Shell06	65.32	1.104	-25.0779	-72.4816	-169.615	-0.9011	2.3229
Shell06	65.32	1.112	-24.8426	-72.8014	-169.7407	-0.9237	2.3376
Shell06	65.32	1.12	-24.9164	-72.8626	-170.1274	-0.9926	2.3307
Shell06	65.32	1.128	-24.9869	-72.9242	-170.3991	-1.0306	2.3139
Shell06	65.32	1.136	-24.7743	-73.3903	-171.1563	-1.0888	2.3119
Shell06	65.32	1.144	-24.0492	-74.1532	-172.0705	-1.1754	2.271
Shell06	65.32	1.152	-23.6734	-74.4971	-172.4514	-1.2226	2.2206
Shell06	65.32	1.16	-23.08	-75.0884	-173.5717	-1.2556	2.2168
Shell06	65.32	1.168	-21.494	-76.3514	-174.8377	-1.1001	2.3343
Shell06	65.32	1.176	-20.6496	-77.0808	-175.5325	-1.0316	2.3825
Shell06	65.32	1.184	-19.9327	-77.6543	-176.397	-0.9901	2.3943
Shell06	65.32	1.192	-19.818	-77.7715	-176.9111	-0.9762	2.4034
Shell06	65.32	1.2	-18.6688	-78.684	-177.844	-1.0905	2.378
Shell06	65.32	1.208	-17.998	-79.3333	-178.9243	-1.1385	2.3969
Shell06	65.32	1.216	-19.4771	-78.4451	-180.3322	-1.5104	0.4362
Shell06	65.32	1.224	-18.7683	-79.0851	-180.7143	-1.4413	2.0669
Shell06	65.32	1.232	-18.029	-79.6408	-181.7997	-1.4099	2.1772
Shell06	65.32	1.24	-18.1431	-79.5823	-182.6234	-1.5009	1.6623
Shell06	65.32	1.248	-17.7516	-79.901	-182.9112	-1.4952	1.7106
Shell06	65.32	1.256	-17.5517	-80.1461	-183.3746	-1.5079	0.5944
Shell06	65.32	1.264	-17.149	-80.5094	-184.8444	-1.5209	1.1794
Shell06	65.32	1.272	-16.7586	-80.8066	-185.1981	-1.5104	0.1488
Shell06	65.32	1.28	-17.1929	-80.5532	-185.6542	-1.3083	-0.4701
Shell06	65.32	1.288	-16.8742	-80.8216	-186.2018	-1.2487	-0.5078
Shell06	65.32	1.296	-17.2038	-80.6227	-186.5608	-1.1143	-0.55
Shell06	65.32	1.304	-17.1311	-80.7157	-186.8642	-1.0877	-0.5549
Shell06	65.32	1.312	-17.1658	-80.7603	-187.5351	-1.0963	-0.5521
Shell06	65.32	1.32	-15.9179	-81.7489	-188.9172	-1.1188	-0.5638
Shell06	65.32	1.328	-15.9247	-81.7539	-189.6935	-1.1224	-0.5592
Shell06	65.32	1.336	-17.1394	-81.0016	-190.6303	-1.0482	-0.5665
Shell06	65.32	1.344	-17.4117	-80.8627	-190.9364	-0.9126	-0.5656
Shell06	65.32	1.352	-17.3289	-81.0021	-192.1256	-1.0224	-0.5451
Shell06	65.32	1.36	-17.8569	-80.6631	-192.96	-0.9264	-0.5558
Shell06	65.32	1.368	-16.5537	-81.6944	-193.722	-1.0795	-0.5127
Shell06	65.32	1.376	-19.0627	-80.0823	-195.0856	-0.8204	-0.5521
Shell06	65.32	1.384	-20.4685	-79.1709	-197.2512	-0.9198	-0.5211
Shell06	65.32	1.392	-19.5385	-79.8691	-197.5373	-1.1283	-0.45
Shell06	65.32	1.4	-19.811	-79.718	-198.17	-1.07	-0.4644
Shell06	65.32	1.408	-20.8837	-79.0251	-198.856	-0.8989	-0.502
Shell06	65.32	1.416	-21.3033	-78.8686	-199.9347	-0.8999	-0.5119
Shell06	65.32	1.424	-22.0686	-78.4557	-200.5109	-0.8402	-0.5302
Shell06	65.32	1.432	-22.7654	-78.0406	-201.0938	-0.8572	-0.5301
Shell06	65.32	1.44	-23.1151	-77.8799	-201.6045	-0.8523	-0.5381
Shell06	65.32	1.448	-23.5008	-77.7027	-202.2429	-0.8243	-0.5479
Shell06	65.32	1.456	-24.2925	-77.1974	-202.9894	-0.8466	-0.5472
Shell06	65.32	1.464	-25.2402	-76.6039	-204.1818	-0.8677	-0.5471
Shell06	65.32	1.472	-25.9507	-76.1055	-205.5832	-0.8559	-0.5633
Shell06	65.32	1.48	-26.9035	-75.4849	-206.6833	-0.8731	-0.569
Shell06	65.32	1.488	-27.8102	-74.92	-207.5746	-0.8317	-0.5704
Shell06	65.32	1.496	-29.1408	-74.103	-208.9999	-0.8406	-0.5681
Shell06	65.32	1.504	-31.9513	-72.3071	-210.8644	-1.0115	-0.5601
Shell06	65.32	1.512	-33.1947	-71.4323	-211.6847	-1.0909	-0.5259

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Shell06	65.32	1.52	-34.6902	-70.4945	-213.019	-1.1654	-0.509
Shell06	65.32	1.528	-35.7458	-69.8369	-214.0599	-1.1621	-0.5065
Shell06	65.32	1.536	-36.5642	-69.3091	-215.0681	-1.4494	-0.1739
Shell06	65.32	1.544	-37.468	-68.8456	-216.0323	-1.2829	2.3073
Shell06	65.32	1.552	-37.8718	-68.6689	-216.9891	-1.214	2.3358
Shell06	65.32	1.56	-37.8833	-68.657	-217.6044	-1.0789	2.3725
Shell06	65.32	1.568	-38.6715	-68.2083	-218.599	-1.1073	2.3481
Shell06	65.32	1.576	-39.1257	-68.0211	-219.5979	-1.1302	2.3076
Shell06	65.32	1.584	-39.3204	-68.0309	-220.3705	-1.3292	2.0249
Shell06	65.32	1.592	-39.9205	-67.7352	-221.1958	-1.3868	1.7478
Shell06	65.32	1.6	-40.2631	-67.5343	-222.5567	-1.4526	0.2668
Shell06	65.32	1.608	-40.6379	-67.4441	-223.5933	-1.4283	0.2258
Shell06	65.32	1.616	-42.2085	-66.5608	-225.4922	-1.2649	2.0862
Shell06	65.32	1.624	-43.0473	-66.249	-226.7703	-1.2854	0.0563
Shell06	65.32	1.632	-43.8026	-65.9809	-227.59	-1.1396	-0.1594
Shell06	65.32	1.64	-44.0611	-66.0669	-228.059	-1.0401	-0.22
Shell06	65.32	1.648	-44.2898	-66.0831	-228.7497	-0.9432	-0.2939
Shell06	65.32	1.656	-45.3051	-65.9609	-229.751	-0.8606	-0.3415
Shell06	65.32	1.664	-44.251	-66.6945	-230.0587	-0.7525	-0.3775
Shell06	65.32	1.672	-44.9114	-66.4898	-230.9915	-0.7054	-0.395
Shell06	65.32	1.68	-44.3499	-66.8092	-231.5481	-0.7159	-0.4037
Shell06	65.32	1.688	-44.9417	-66.4261	-232.5944	-0.7372	-0.3882
Shell06	65.32	1.696	-46.6553	-65.5576	-234.3583	-0.6347	-0.4638
Shell06	65.32	1.704	-47.3408	-65.2117	-235.4821	-0.6503	-0.4688
Shell06	65.32	1.712	-49.3324	-64.0589	-237.6293	-0.639	-0.4707
Shell06	65.32	1.72	-50.8077	-63.4846	-238.4346	-0.6358	-0.4743
Cylinder01	28.157	0	0	0	0	1.5497	1.8879
Cylinder01	28.157	0.008	-1.0418	9.2938	-4.9493	1.5333	2.8362
Cylinder01	28.157	0.016	0.5898	2.8106	-40.1019	1.4954	-0.6941
Cylinder01	28.157	0.024	2.5943	0.3533	-66.8192	1.4722	-1.3903
Cylinder01	28.157	0.032	3.1151	0.5988	-86.2698	1.4171	-2.1629
Cylinder01	28.157	0.04	4.9015	4.9613	-95.6901	1.2129	-1.1326
Cylinder01	28.157	0.048	8.8193	3.7146	-113.1839	1.2043	-0.897
Cylinder01	28.157	0.056	9.4002	2.9086	-126.1705	1.2442	-1.4399
Cylinder01	28.157	0.064	10.4862	4.8507	-137.9516	1.1939	-1.672
Cylinder01	28.157	0.072	11.6205	4.7576	-149.5675	1.1237	-1.4448
Cylinder01	28.157	0.08	13.6223	4.2962	-159.9043	1.17	-1.462
Cylinder01	28.157	0.088	12.1123	3.2139	-170.0964	1.304	-1.6135
Cylinder01	28.157	0.096	13.0133	3.0007	-174.7502	1.2756	-1.7253
Cylinder01	28.157	0.104	13.1559	3.5234	-179.273	1.2493	-1.5832
Cylinder01	28.157	0.112	13.2559	2.4894	-186.9146	1.3351	-1.4055
Cylinder01	28.157	0.12	14.5882	3.0489	-194.4376	1.2509	-1.8167
Cylinder01	28.157	0.128	14.8647	2.4028	-202.1952	1.2574	-1.7197
Cylinder01	28.157	0.136	15.1697	3.0591	-205.3603	1.2424	-1.2886
Cylinder01	28.157	0.144	16.5166	2.1901	-210.0335	1.3458	-1.4575
Cylinder01	28.157	0.152	15.3861	3.6422	-215.281	1.4386	-1.9143
Cylinder01	28.157	0.16	16.3686	4.1824	-219.4123	1.4979	-1.6894
Cylinder01	28.157	0.168	17.4115	3.1793	-224.2218	1.5099	-2.7639
Cylinder01	28.157	0.176	19.861	3.5541	-227.8178	1.4979	1.2485
Cylinder01	28.157	0.184	20.7623	3.0446	-232.4475	1.5316	-2.4182
Cylinder01	28.157	0.192	20.9348	3.7339	-236.8773	1.4959	2.6718
Cylinder01	28.157	0.2	21.149	2.727	-241.4013	1.5103	-0.0931
Cylinder01	28.157	0.208	21.4563	2.5744	-244.9219	1.4807	0.3282

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder01	28.157	0.216	22.7129	2.5249	-248.1178	1.4352	0.7664
Cylinder01	28.157	0.224	20.9824	2.4168	-254.3499	1.3381	0.7056
Cylinder01	28.157	0.232	21.2952	3.9988	-259.2736	1.3278	-0.0139
Cylinder01	28.157	0.24	22.0438	3.2959	-261.931	1.3294	0.3099
Cylinder01	28.157	0.248	22.7023	3.4505	-264.8564	1.3015	0.3276
Cylinder01	28.157	0.256	22.9449	3.9671	-270.5018	1.3253	0.4179
Cylinder01	28.157	0.264	22.9179	4.5977	-274.3874	1.4366	0.4153
Cylinder01	28.157	0.272	23.9167	3.5083	-277.5495	1.4009	0.25
Cylinder01	28.157	0.28	24.5815	4.0747	-281.9716	1.4395	0.1534
Cylinder01	28.157	0.288	23.884	5.2731	-283.8365	1.4198	0.651
Cylinder01	28.157	0.296	24.4523	4.8342	-286.1947	1.4092	0.6578
Cylinder01	28.157	0.304	24.4677	4.844	-287.8417	1.3989	0.6366
Cylinder01	28.157	0.312	25.1472	4.4932	-290.9631	1.3788	0.3125
Cylinder01	28.157	0.32	24.3359	4.9833	-294.0099	1.4581	0.6238
Cylinder01	28.157	0.328	25.1731	4.2676	-296.1876	1.3923	0.233
Cylinder01	28.157	0.336	25.0085	4.2943	-298.811	1.4033	0.4854
Cylinder01	28.157	0.344	25.4513	5.0566	-301.2616	1.3841	0.4805
Cylinder01	28.157	0.352	25.3154	4.6104	-302.8361	1.4066	0.176
Cylinder01	28.157	0.36	26.867	4.0114	-306.9352	1.3294	0.2352
Cylinder01	28.157	0.368	27.3744	4.7654	-308.7057	1.3303	0.5055
Cylinder02	40.7162	0	0	0	0	1.497	0.7953
Cylinder02	40.7162	0.008	1.6992	0.9297	-21.5539	1.5314	-0.0157
Cylinder02	40.7162	0.016	2.4312	1.3259	-43.5921	1.5451	0.3442
Cylinder02	40.7162	0.024	3.3731	-1.9846	-64.3062	1.5437	0.3761
Cylinder02	40.7162	0.032	3.8264	-1.2301	-78.3718	1.5412	-0.0709
Cylinder02	40.7162	0.04	4.4175	-2.6592	-93.1559	1.4715	0.9535
Cylinder02	40.7162	0.048	4.4022	-1.9073	-104.8563	1.4823	1.3268
Cylinder02	40.7162	0.056	4.3835	-1.7097	-117.9026	1.4316	0.6667
Cylinder02	40.7162	0.064	5.3739	-1.8992	-126.8013	1.5246	-2.6015
Cylinder02	40.7162	0.072	4.7934	-2.3194	-137.4759	1.5575	-0.4648
Cylinder02	40.7162	0.08	3.4166	-3.0777	-146.4061	1.4261	-0.4639
Cylinder02	40.7162	0.088	2.7629	-1.3801	-154.3145	1.2395	-1.1918
Cylinder02	40.7162	0.096	3.816	-3.0369	-162.7114	1.2648	-1.4627
Cylinder02	40.7162	0.104	3.3085	-3.3611	-169.6198	1.3737	-1.3696
Cylinder02	40.7162	0.112	2.7848	-3.9656	-175.8377	1.3742	-1.3624
Cylinder02	40.7162	0.12	2.4491	-6.2919	-183.0319	1.4926	-1.2911
Cylinder02	40.7162	0.128	2.1634	-6.9524	-188.8332	1.5349	1.4385
Cylinder02	40.7162	0.136	2.384	-8.3747	-194.5124	1.5354	0.7408
Cylinder02	40.7162	0.144	2.6571	-7.8302	-197.6172	1.517	-0.5043
Cylinder02	40.7162	0.152	2.3884	-8.3507	-202.5313	1.4971	-1.2722
Cylinder02	40.7162	0.16	2.3562	-8.6959	-206.1787	1.4615	-2.3332
Cylinder02	40.7162	0.168	3.1254	-8.1021	-210.6226	1.5126	-2.7563
Cylinder02	40.7162	0.176	3.1441	-8.2315	-213.3477	1.5048	-2.5713
Cylinder02	40.7162	0.184	3.1099	-8.9347	-219.6798	1.4674	-2.1784
Cylinder02	40.7162	0.192	2.3251	-9.34	-223.4405	1.5112	-1.2958
Cylinder02	40.7162	0.2	2.283	-9.6528	-226.5688	1.4756	-2.027
Cylinder02	40.7162	0.208	2.1952	-10.3424	-231.9658	1.4742	-1.4491
Cylinder02	40.7162	0.216	2.1652	-10.4022	-235.3551	1.536	-3.031
Cylinder02	40.7162	0.224	2.4758	-11.9231	-239.396	1.4405	-2.0442
Cylinder02	40.7162	0.232	2.1293	-12.2537	-243.4503	1.5187	-1.8054
Cylinder02	40.7162	0.24	2.3298	-12.6105	-245.9778	1.4437	-1.8324
Cylinder02	40.7162	0.248	1.9096	-12.6799	-249.5866	1.528	-2.9452
Cylinder02	40.7162	0.256	1.8709	-12.0483	-253.3791	1.5187	2.5694

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder02	40.7162	0.264	3.635	-13.0358	-255.9353	1.3977	2.7725
Cylinder02	40.7162	0.272	3.0031	-14.3047	-259.7378	1.4715	3.0177
Cylinder02	40.7162	0.28	3.2522	-14.087	-264.0163	1.3876	2.3404
Cylinder02	40.7162	0.288	2.8827	-13.3146	-267.5339	1.4234	1.8665
Cylinder02	40.7162	0.296	1.8473	-14.1026	-268.8126	1.4951	2.3061
Cylinder02	40.7162	0.304	1.7924	-13.6849	-271.7407	1.4916	2.2713
Cylinder02	40.7162	0.312	1.9928	-13.7041	-274.0715	1.5399	2.9238
Cylinder02	40.7162	0.32	3.2842	-14.7799	-276.4172	1.5297	0.0484
Cylinder02	40.7162	0.328	2.8246	-14.4576	-280.7781	1.5377	2.4351
Cylinder02	40.7162	0.336	3.1182	-13.7119	-283.8855	1.5349	1.2043
Cylinder02	40.7162	0.344	3.1649	-13.6863	-286.239	1.5181	1.2775
Cylinder02	40.7162	0.352	3.4561	-13.243	-288.3739	1.476	1.1215
Cylinder02	40.7162	0.36	3.418	-13.2416	-290.9576	1.4563	1.2969
Cylinder02	40.7162	0.368	3.34	-12.8798	-293.8189	1.4057	1.3516
Cylinder02	40.7162	0.376	3.5681	-13.4862	-295.6131	1.4145	1.2158
Cylinder03	52.6362	0	0	0	0	1.4903	-0.5011
Cylinder03	52.6362	0.008	3.895	1.2246	-30.5896	1.499	0.5791
Cylinder03	52.6362	0.016	3.2929	1.3472	-53.6283	1.4855	-2.2417
Cylinder03	52.6362	0.024	3.0933	3.348	-74.7405	1.4724	-1.1855
Cylinder03	52.6362	0.032	4.6499	1.282	-93.7382	1.484	-1.9891
Cylinder03	52.6362	0.04	6.5591	0.4791	-106.3962	1.3326	-0.3766
Cylinder03	52.6362	0.048	7.9954	3.3146	-117.2051	1.1298	-0.3751
Cylinder03	52.6362	0.056	8.4591	2.5876	-126.9336	1.495	-1.3807
Cylinder03	52.6362	0.064	9.7436	3.2495	-138.9009	1.4622	-0.9385
Cylinder03	52.6362	0.072	10.9229	6.2301	-147.6137	1.2461	-0.7844
Cylinder03	52.6362	0.08	12.1142	5.0062	-155.4954	1.2983	-1.7266
Cylinder03	52.6362	0.088	11.8008	6.7823	-163.974	1.2927	-1.7198
Cylinder03	52.6362	0.096	13.8104	6.2686	-173.0245	1.323	-1.4446
Cylinder03	52.6362	0.104	14.0468	5.907	-179.8835	1.192	-1.3519
Cylinder03	52.6362	0.112	13.8036	5.9817	-186.1764	1.3398	-1.0464
Cylinder03	52.6362	0.12	14.2711	5.139	-192.9211	1.2427	-1.2906
Cylinder03	52.6362	0.128	14.1461	5.8829	-197.6312	1.2096	-1.3902
Cylinder03	52.6362	0.136	14.1425	3.8086	-202.7369	1.3412	-0.9276
Cylinder03	52.6362	0.144	15.0603	3.979	-209.4608	1.5142	-0.3145
Cylinder03	52.6362	0.152	15.2484	3.1129	-215.3926	1.4306	0.6294
Cylinder03	52.6362	0.16	15.9769	3.6838	-220.3286	1.4684	-0.1873
Cylinder03	52.6362	0.168	16.7223	5.6486	-225.8919	1.4013	-1.2691
Cylinder03	52.6362	0.176	17.0009	5.153	-231.1581	1.405	-1.4325
Cylinder03	52.6362	0.184	17.0163	4.5282	-234.078	1.4195	-1.4296
Cylinder03	52.6362	0.192	18.3178	1.6893	-237.7016	1.4488	-0.5287
Cylinder03	52.6362	0.2	17.8113	2.4715	-241.3519	1.4181	0.6837
Cylinder03	52.6362	0.208	17.8338	2.6239	-244.9341	1.4734	0.277
Cylinder03	52.6362	0.216	19.2353	3.6308	-249.0029	1.4087	0.5626
Cylinder03	52.6362	0.224	19.2003	2.8268	-252.7356	1.3839	0.7612
Cylinder03	52.6362	0.232	19.3744	4.2197	-260.2961	1.4274	0.1814
Cylinder03	52.6362	0.24	20.646	4.4793	-261.6267	1.4299	0.1191
Cylinder03	52.6362	0.248	20.9369	4.6075	-265.6545	1.3454	0.1216
Cylinder03	52.6362	0.256	20.3334	4.1261	-267.4596	1.3958	-0.1357
Cylinder03	52.6362	0.264	22.022	3.0172	-269.0958	1.2505	-0.3903
Cylinder03	52.6362	0.272	22.2686	2.6782	-272.7541	1.2411	-0.358
Cylinder03	52.6362	0.28	22.3268	3.2482	-276.7814	1.2332	-0.4278
Cylinder03	52.6362	0.288	22.2478	3.2566	-280.3782	1.1916	-0.5355
Cylinder03	52.6362	0.296	23.2315	3.7754	-286.0761	1.233	0.0249

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder03	52.6362	0.304	24.0354	4.6124	-291.0979	1.2415	0.2932
Cylinder03	52.6362	0.312	24.8341	4.1382	-293.2442	1.3035	0.253
Cylinder03	52.6362	0.32	25.1348	4.5863	-296.9676	1.3217	0.1807
Cylinder03	52.6362	0.328	24.7257	3.6064	-299.399	1.3574	0.0071
Cylinder03	52.6362	0.336	25.774	3.476	-304.6797	1.4243	0.1932
Cylinder04	44.0899	0	0	0	0	1.5113	0.4755
Cylinder04	44.0899	0.008	1.623	0.7882	-23.632	1.3934	-0.3564
Cylinder04	44.0899	0.016	4.1147	1.8202	-46.9119	1.5115	-0.5742
Cylinder04	44.0899	0.024	2.8577	4.6841	-56.531	1.4084	-1.4243
Cylinder04	44.0899	0.032	3.3276	0.7502	-73.6219	1.3759	-1.2213
Cylinder04	44.0899	0.04	3.9752	-0.3569	-86.9833	1.4511	-1.8312
Cylinder04	44.0899	0.048	4.5107	-1.6672	-99.9594	1.5483	-1.9603
Cylinder04	44.0899	0.056	4.7535	-3.7667	-113.9238	1.5518	2.9461
Cylinder04	44.0899	0.064	6.1697	-6.1551	-126.0125	1.4339	-3.0656
Cylinder04	44.0899	0.072	6.4239	-7.7117	-135.4455	1.4008	2.0516
Cylinder04	44.0899	0.08	6.126	-7.8398	-144.5628	1.321	1.5289
Cylinder04	44.0899	0.088	6.5817	-7.8007	-152.5854	1.3078	1.7151
Cylinder04	44.0899	0.096	6.8354	-8.5671	-158.2344	1.2832	1.6023
Cylinder04	44.0899	0.104	6.9779	-9.8719	-166.318	1.2012	1.6379
Cylinder04	44.0899	0.112	7.7661	-10.1511	-171.6675	1.2239	1.5675
Cylinder04	44.0899	0.12	7.7064	-10.8724	-176.8228	1.1609	1.6694
Cylinder04	44.0899	0.128	8.4133	-11.1037	-180.6034	1.1981	1.7361
Cylinder04	44.0899	0.136	7.7428	-11.0583	-184.2601	1.1428	1.6916
Cylinder04	44.0899	0.144	8.0339	-11.3326	-190.5323	1.1267	1.5051
Cylinder04	44.0899	0.152	8.1961	-11.341	-195.7782	1.1594	1.5821
Cylinder04	44.0899	0.16	8.4825	-11.2888	-199.5862	1.2118	1.5218
Cylinder04	44.0899	0.168	8.6586	-11.8206	-204.019	1.195	1.5794
Cylinder04	44.0899	0.176	8.7045	-11.7666	-208.2561	1.2362	1.6043
Cylinder04	44.0899	0.184	8.7127	-11.6376	-211.5624	1.299	1.6306
Cylinder04	44.0899	0.192	8.7308	-12.0815	-216.0645	1.32	1.622
Cylinder04	44.0899	0.2	8.6456	-11.7433	-218.532	1.3141	1.6663
Cylinder04	44.0899	0.208	8.721	-11.2642	-222.4057	1.3199	1.7079
Cylinder04	44.0899	0.216	8.7941	-10.6697	-224.6313	1.3488	1.7452
Cylinder04	44.0899	0.224	8.8341	-10.43	-226.7926	1.3232	1.7126
Cylinder04	44.0899	0.232	8.8435	-9.9334	-230.5926	1.3096	1.6899
Cylinder04	44.0899	0.24	8.2916	-9.3483	-234.318	1.299	1.4885
Cylinder04	44.0899	0.248	8.7986	-9.2946	-235.9933	1.2863	1.3977
Cylinder04	44.0899	0.256	9.1704	-8.2682	-238.7008	1.253	1.4047
Cylinder04	44.0899	0.264	9.1965	-8.0957	-241.8323	1.2832	1.3805
Cylinder04	44.0899	0.272	9.4664	-7.9121	-245.2812	1.3382	1.2878
Cylinder04	44.0899	0.28	9.468	-7.4815	-248.9443	1.3948	1.263
Cylinder04	44.0899	0.288	9.8921	-6.7405	-251.654	1.3734	1.3632
Cylinder04	44.0899	0.296	9.3865	-5.8783	-255.5991	1.4004	1.6528
Cylinder04	44.0899	0.304	9.5769	-5.4026	-258.4285	1.4063	1.5946
Cylinder04	44.0899	0.312	9.7121	-5.1623	-260.4903	1.4276	1.5911
Cylinder04	44.0899	0.32	9.7271	-4.139	-263.2735	1.4985	2.4462
Cylinder04	44.0899	0.328	9.7669	-4.288	-265.1903	1.5058	2.5079
Cylinder04	44.0899	0.336	9.703	-4.0488	-267.071	1.5441	2.4378
Cylinder04	44.0899	0.344	10.0114	-4.5752	-270.5602	1.5636	-0.0328
Cylinder04	44.0899	0.352	10.3115	-4.5611	-273.512	1.5413	-0.2782
Cylinder04	44.0899	0.36	10.4913	-4.841	-275.9638	1.5435	-0.6986
Cylinder04	44.0899	0.368	10.3739	-4.8817	-278.9012	1.552	-1.0941
Cylinder04	44.0899	0.376	10.6708	-4.3903	-280.9802	1.5681	0.1251

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder04	44.0899	0.384	10.7247	-4.3923	-282.4567	1.5539	1.1199
Cylinder04	44.0899	0.392	11.164	-3.8432	-284.0083	1.53	0.4861
Cylinder04	44.0899	0.4	11.9227	-4.1397	-286.6987	1.4181	-0.9185
Cylinder04	44.0899	0.408	11.7189	-2.866	-290.2146	1.4416	-1.0783
Cylinder04	44.0899	0.416	11.4981	-2.0025	-293.1595	1.4423	-1.3337
Cylinder04	44.0899	0.424	11.5365	-1.2049	-296.2493	1.5207	0.0839
Cylinder04	44.0899	0.432	10.8942	-0.732	-297.7666	1.5396	-2.0579
Cylinder04	44.0899	0.44	10.6919	-0.142	-301.0197	1.5325	2.3463
Cylinder04	44.0899	0.448	11.5547	-0.201	-304.3689	1.5114	-0.5191
Cylinder05	50.6464	0	0	0	0	1.5415	1.4443
Cylinder05	50.6464	0.008	1.5251	-1.2223	-25.5567	1.5135	-1.2602
Cylinder05	50.6464	0.016	2.6743	-0.4054	-55.4776	1.3745	-1.812
Cylinder05	50.6464	0.024	3.9545	-0.7992	-79.0971	1.3143	-1.3832
Cylinder05	50.6464	0.032	6.9889	0.0626	-97.9916	1.3702	-1.4184
Cylinder05	50.6464	0.04	8.74	2.6436	-116.3846	1.3336	-1.3204
Cylinder05	50.6464	0.048	10.1308	3.0267	-131.1624	1.2826	-1.4535
Cylinder05	50.6464	0.056	13.0366	4.3023	-144.2876	1.2641	-1.2715
Cylinder05	50.6464	0.064	14.0934	4.7647	-154.0344	1.2823	-1.3156
Cylinder05	50.6464	0.072	16.1558	4.4934	-165.332	1.238	-1.4817
Cylinder05	50.6464	0.08	17.1426	3.6053	-175.3364	1.1523	-1.5482
Cylinder05	50.6464	0.088	17.369	3.7939	-181.7534	1.1612	-1.5234
Cylinder05	50.6464	0.096	18.9715	4.2475	-190.1609	1.0578	-1.6342
Cylinder05	50.6464	0.104	19.9588	3.759	-198.2939	1.0474	-1.6838
Cylinder05	50.6464	0.112	20.6106	3.207	-206.1137	1.0447	-1.5584
Cylinder05	50.6464	0.12	21.6578	2.3292	-211.5343	1.0286	-1.6965
Cylinder05	50.6464	0.128	22.1276	2.1692	-217.8853	0.9754	-1.7292
Cylinder05	50.6464	0.136	22.6906	1.6619	-223.1097	0.93	-1.6271
Cylinder05	50.6464	0.144	22.918	2.7488	-229.3551	1.1284	-1.5712
Cylinder05	50.6464	0.152	23.7655	1.9791	-235.5664	1.2041	-1.8012
Cylinder05	50.6464	0.16	24.1082	1.0264	-239.6477	1.1885	-1.6212
Cylinder05	50.6464	0.168	24.1793	0.1353	-243.4593	1.2614	-1.6079
Cylinder05	50.6464	0.176	24.2104	0.0445	-247.3904	1.3084	-1.5972
Cylinder05	50.6464	0.184	24.1087	0.1929	-251.5114	1.2528	-1.4697
Cylinder05	50.6464	0.192	24.4126	-0.9775	-256.1757	1.1592	-1.4923
Cylinder05	50.6464	0.2	25.0384	-1.4374	-258.9142	1.2452	-1.5953
Cylinder05	50.6464	0.208	25.3443	-0.8222	-263.3849	1.3212	-1.5016
Cylinder05	50.6464	0.216	25.7109	-0.8862	-266.5369	1.3654	-1.2654
Cylinder05	50.6464	0.224	25.9488	-1.2954	-269.7547	1.4132	-0.8259
Cylinder05	50.6464	0.232	26.7059	-0.8968	-272.6377	1.3523	-0.7284
Cylinder05	50.6464	0.24	27.3343	-1.1954	-277.0319	1.3528	-0.9245
Cylinder05	50.6464	0.248	27.599	-0.3917	-279.8782	1.3475	-0.8499
Cylinder05	50.6464	0.256	27.8557	-1.4104	-283.0051	1.3658	-0.6798
Cylinder05	50.6464	0.264	27.8445	-2.6585	-286.5174	1.4055	-0.4456
Cylinder05	50.6464	0.272	28.809	-1.8495	-289.8636	1.313	-0.7346
Cylinder05	50.6464	0.28	29.7353	-1.9839	-292.0429	1.2951	-0.4515
Cylinder05	50.6464	0.288	29.2868	-1.8705	-294.9044	1.3409	-0.4953
Cylinder05	50.6464	0.296	30.9643	-2.1936	-298.8463	1.2554	-0.1016
Cylinder06	65.2215	0	0	0	0	1.5479	2.3591
Cylinder06	65.2215	0.008	2.1829	-0.0928	-37.1618	1.5237	-0.1088
Cylinder06	65.2215	0.016	3.1295	-1.4345	-67.1925	1.5668	0.1307
Cylinder06	65.2215	0.024	5.2939	-0.2328	-89.5226	1.4813	-1.4836
Cylinder06	65.2215	0.032	6.5075	2.8678	-107.0293	1.4065	-1.392
Cylinder06	65.2215	0.04	8.7917	2.0181	-125.6105	1.3998	-0.8337

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder06	65.2215	0.048	11.5197	3.8469	-140.837	1.3351	-1.1411
Cylinder06	65.2215	0.056	12.9606	3.952	-155.8881	1.3198	-1.2822
Cylinder06	65.2215	0.064	14.4915	4.9088	-170.407	1.2252	-1.3197
Cylinder06	65.2215	0.072	15.4342	4.5509	-178.3406	1.2042	-1.3907
Cylinder06	65.2215	0.08	16.4616	4.3908	-189.6499	1.2415	-1.4241
Cylinder06	65.2215	0.088	17.6623	4.961	-195.6977	1.2469	-1.4766
Cylinder06	65.2215	0.096	18.6616	4.8441	-205.1718	1.1481	-1.3703
Cylinder06	65.2215	0.104	19.846	5.9059	-213.1724	1.1568	-1.4234
Cylinder06	65.2215	0.112	20.9561	4.4008	-219.6342	1.1654	-1.3841
Cylinder06	65.2215	0.12	21.4998	3.2547	-226.1083	1.0863	-1.5244
Cylinder06	65.2215	0.128	22.3638	2.9734	-231.6073	1.0339	-1.3964
Cylinder06	65.2215	0.136	23.6112	2.8304	-238.0391	0.9845	-1.4993
Cylinder06	65.2215	0.144	23.9489	1.3007	-243.7885	1.0102	-1.6517
Cylinder06	65.2215	0.152	25.0837	1.7382	-247.442	1.046	-1.5607
Cylinder06	65.2215	0.16	24.3522	0.9174	-251.6095	1.0155	-1.6889
Cylinder06	65.2215	0.168	24.8229	0.8272	-257.8406	0.9894	-1.6178
Cylinder06	65.2215	0.176	26.4055	-1.194	-264.2232	1.0973	-1.5985
Cylinder06	65.2215	0.184	27.8957	-2.8383	-268.5732	1.0462	-1.5014
Cylinder06	65.2215	0.192	27.7126	-2.7827	-270.5224	0.9702	-1.4154
Cylinder06	65.2215	0.2	26.9896	-3.3612	-273.1792	1.0215	-1.228
Cylinder06	65.2215	0.208	27.8664	-3.3467	-278.1535	0.9879	-1.3174
Cylinder06	65.2215	0.216	28.0576	-3.435	-281.4844	0.9568	-1.4234
Cylinder06	65.2215	0.224	28.1547	-4.3471	-282.8854	0.9605	-1.369
Cylinder06	65.2215	0.232	28.9552	-4.5668	-286.794	1.0023	-1.3974
Cylinder06	65.2215	0.24	30.1659	-5.2972	-290.5286	1.0679	-1.4656
Cylinder06	65.2215	0.248	30.7407	-5.6519	-294.0276	0.9572	-1.6083
Cylinder06	65.2215	0.256	31.8354	-6.3421	-298.1911	0.9608	-1.5217
Cylinder07	67.9315	0	0	0	0	1.4146	1.0221
Cylinder07	67.9315	0.008	2.872	1.8782	-38.5823	1.5416	0.0711
Cylinder07	67.9315	0.016	3.4511	1.821	-70.108	1.4957	0.1806
Cylinder07	67.9315	0.024	3.6627	1.6521	-89.737	1.4898	0.7934
Cylinder07	67.9315	0.032	6.3601	-3.2389	-109.0262	1.4835	1.8167
Cylinder07	67.9315	0.04	7.497	-2.3954	-126.0695	1.2578	0.9793
Cylinder07	67.9315	0.048	8.1785	-3.6436	-138.6163	1.1246	1.3987
Cylinder07	67.9315	0.056	8.2721	-3.6019	-149.9781	1.1283	1.3379
Cylinder07	67.9315	0.064	9.2503	-2.7214	-162.7175	1.1637	1.2546
Cylinder07	67.9315	0.072	10.5929	-3.1355	-170.9946	1.1076	1.3201
Cylinder07	67.9315	0.08	10.8283	-3.6632	-180.2111	1.1632	1.3666
Cylinder07	67.9315	0.088	13.1407	-4.4323	-187.5321	1.2252	1.3989
Cylinder07	67.9315	0.096	11.5874	-4.201	-194.1883	1.2466	1.4212
Cylinder07	67.9315	0.104	12.4012	-4.4439	-202.6294	1.2802	1.2014
Cylinder07	67.9315	0.112	13.9092	-4.8541	-209.6163	1.336	1.0894
Cylinder07	67.9315	0.12	14.567	-4.1566	-215.0268	1.3397	1.2767
Cylinder07	67.9315	0.128	14.7065	-5.0236	-219.4752	1.4831	0.7431
Cylinder07	67.9315	0.136	14.8852	-5.4405	-224.3929	1.4753	1.059
Cylinder07	67.9315	0.144	15.3115	-5.6173	-228.2865	1.4984	-0.1966
Cylinder07	67.9315	0.152	15.3287	-5.2207	-232.7971	1.4913	-0.5747
Cylinder07	67.9315	0.16	15.4064	-5.3587	-239.7156	1.4684	-0.7118
Cylinder07	67.9315	0.168	15.6323	-4.7659	-244.4111	1.4669	-0.4913
Cylinder07	67.9315	0.176	16.4672	-4.4787	-248.9174	1.4992	0.3133
Cylinder07	67.9315	0.184	16.5396	-4.8228	-252.6428	1.4887	-0.0892
Cylinder07	67.9315	0.192	16.6733	-5.1799	-256.4101	1.4654	-0.5793
Cylinder07	67.9315	0.2	17.9523	-4.7497	-261.4142	1.3674	-0.2439

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder07	67.9315	0.208	19.025	-4.714	-266.4516	1.3557	-0.185
Cylinder07	67.9315	0.216	19.8613	-5.2564	-272.2779	1.3644	-0.2061
Cylinder07	67.9315	0.224	20.3133	-5.4398	-276.5364	1.3441	-0.2896
Cylinder07	67.9315	0.232	21.2741	-5.2062	-281.0255	1.2686	-0.7966
Cylinder07	67.9315	0.24	20.7833	-4.6836	-285.1554	1.3605	-1.2534
Cylinder07	67.9315	0.248	21.0244	-5.5853	-287.9141	1.2808	-0.9546
Cylinder07	67.9315	0.256	22.2042	-6.9238	-291.1111	1.4997	-0.2732
Cylinder08	54.7307	0	0	0	0	1.5314	1.657
Cylinder08	54.7307	0.008	0.4955	-1.0939	-31.435	1.518	-1.639
Cylinder08	54.7307	0.016	1.3716	0.9224	-56.1341	1.4846	-0.5704
Cylinder08	54.7307	0.024	2.0705	3.6673	-78.9956	1.5698	2.5012
Cylinder08	54.7307	0.032	2.0555	2.7615	-98.9323	1.4477	-1.6869
Cylinder08	54.7307	0.04	2.7372	4.3619	-114.9797	1.4833	-2.1361
Cylinder08	54.7307	0.048	3.3615	4.8657	-130.5545	1.4631	-1.9442
Cylinder08	54.7307	0.056	3.6982	7.3618	-141.0968	1.355	-1.899
Cylinder08	54.7307	0.064	4.3507	8.3286	-150.2765	1.2439	-1.8609
Cylinder08	54.7307	0.072	5.3775	9.9744	-160.8952	1.2053	-1.7421
Cylinder08	54.7307	0.08	4.8541	11.8543	-168.7955	1.0957	-1.8303
Cylinder08	54.7307	0.088	4.3252	12.1486	-178.574	1.0066	-2.0297
Cylinder08	54.7307	0.096	4.3595	11.2695	-186.2212	0.8638	-2.041
Cylinder08	54.7307	0.104	4.6103	9.34	-193.7027	0.7396	-2.0123
Cylinder08	54.7307	0.112	2.8513	8.4877	-200.1573	0.6308	-2.1356
Cylinder08	54.7307	0.12	2.2896	7.5263	-204.5141	0.4679	-2.1333
Cylinder08	54.7307	0.128	1.1124	6.212	-209.9637	0.3064	-2.2354
Cylinder08	54.7307	0.136	1.8061	3.7465	-214.0195	0.0675	-2.2291
Cylinder08	54.7307	0.144	2.3203	2.243	-216.8457	-0.0095	-2.3051
Cylinder08	54.7307	0.152	1.7347	1.0225	-219.7185	-0.0764	-2.4694
Cylinder08	54.7307	0.16	1.4975	-1.2647	-221.874	-0.1952	-2.5058
Cylinder08	54.7307	0.168	0.1191	-3.2541	-224.3621	-0.4023	-2.4948
Cylinder08	54.7307	0.176	0.2311	-5.2864	-225.8896	-0.4282	-2.584
Cylinder08	54.7307	0.184	-0.1834	-7.4288	-226.8982	-0.4972	-2.6529
Cylinder08	54.7307	0.192	-0.1476	-8.0385	-227.4538	-0.5247	-2.5969
Cylinder08	54.7307	0.2	-0.5276	-9.7317	-228.8206	-0.6143	-2.6779
Cylinder08	54.7307	0.208	-0.6192	-10.69	-230.2705	-0.5979	-2.7274
Cylinder08	54.7307	0.216	-0.6351	-10.8705	-231.8833	-0.6872	-2.7261
Cylinder08	54.7307	0.224	-0.7488	-11.6057	-233.5022	-0.6559	-2.8321
Cylinder08	54.7307	0.232	-0.6766	-10.618	-235.1141	-0.6991	-2.7445
Cylinder08	54.7307	0.24	-0.5874	-10.7982	-236.9392	-0.7249	-2.8926
Cylinder08	54.7307	0.248	-0.6366	-11.3981	-237.5718	-0.7422	-2.945
Cylinder08	54.7307	0.256	-0.9479	-12.0774	-239.2092	-0.8144	-2.9786
Cylinder08	54.7307	0.264	-1.017	-11.4152	-240.4261	-0.8106	3.1185
Cylinder08	54.7307	0.272	-0.9834	-12.5506	-241.2104	-0.8433	-2.9979
Cylinder08	54.7307	0.28	-1.0465	-13.3384	-242.3566	-0.8671	-2.9851
Cylinder08	54.7307	0.288	-1.6685	-13.8143	-242.8963	-0.825	-2.8791
Cylinder08	54.7307	0.296	-1.4605	-13.8362	-243.8588	-0.8147	-2.9013
Cylinder08	54.7307	0.304	-1.4544	-14.3538	-244.9405	-0.8026	-2.8147
Cylinder08	54.7307	0.312	-1.2244	-13.9471	-245.7291	-0.8131	-2.8265
Cylinder08	54.7307	0.32	-1.2831	-14.1061	-247.5207	-0.7869	-2.8188
Cylinder08	54.7307	0.328	-1.0233	-14.1816	-247.8937	-0.8144	-2.8296
Cylinder08	54.7307	0.336	-1.0928	-13.9635	-248.9521	-0.8159	-2.8869
Cylinder08	54.7307	0.344	-1.1035	-13.6969	-249.9032	-0.8297	-2.8595
Cylinder08	54.7307	0.352	-0.606	-14.2356	-251.2047	-0.8211	-2.7944
Cylinder08	54.7307	0.36	0.1312	-14.4755	-251.407	-0.7796	-2.8382

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder08	54.7307	0.368	0.6011	-14.3006	-252.3286	-0.7818	-2.852
Cylinder08	54.7307	0.376	2.2818	-14.9549	-254.5588	-0.8178	-2.7621
Cylinder08	54.7307	0.384	3.1953	-15.3122	-255.9903	-0.8729	-2.716
Cylinder08	54.7307	0.392	3.4897	-15.5744	-257.4276	-0.8573	-2.8521
Cylinder08	54.7307	0.4	3.5013	-15.6577	-258.3492	-0.8952	-2.8477
Cylinder08	54.7307	0.408	3.258	-15.5721	-259.0244	-0.8747	-2.8391
Cylinder08	54.7307	0.416	3.9428	-16.1776	-260.3929	-0.8707	-2.7484
Cylinder08	54.7307	0.424	3.8937	-15.922	-261.3493	-0.82	-2.8525
Cylinder08	54.7307	0.432	3.9409	-16.0843	-262.7369	-0.8236	-2.7408
Cylinder08	54.7307	0.44	4.3939	-15.9549	-263.4698	-0.8522	-2.6885
Cylinder08	54.7307	0.448	4.4073	-16.2192	-263.9428	-0.8547	-2.6888
Cylinder08	54.7307	0.456	5.1808	-16.3142	-264.6375	-0.7827	-2.7161
Cylinder08	54.7307	0.464	5.473	-16.325	-265.72	-0.7778	-2.7215
Cylinder08	54.7307	0.472	5.9366	-16.2933	-266.2351	-0.7599	-2.76
Cylinder08	54.7307	0.48	6.4486	-15.9634	-267.0585	-0.7837	-2.6971
Cylinder08	54.7307	0.488	6.794	-15.5644	-267.8637	-0.7272	-2.6835
Cylinder08	54.7307	0.496	6.9361	-15.971	-268.004	-0.7224	-2.7165
Cylinder08	54.7307	0.504	7.334	-15.1222	-269.2332	-0.7172	-2.648
Cylinder08	54.7307	0.512	8.0286	-15.175	-270.9704	-0.7583	-2.6774
Cylinder08	54.7307	0.52	8.344	-14.7554	-272.4803	-0.7543	-2.6651
Cylinder08	54.7307	0.528	8.661	-14.4564	-273.0815	-0.7312	-2.693
Cylinder08	54.7307	0.536	8.7564	-14.1105	-274.0486	-0.7165	-2.7314
Cylinder08	54.7307	0.544	9.4555	-14.1867	-274.6655	-0.7272	-2.7203
Cylinder08	54.7307	0.552	9.8088	-13.2912	-276.2379	-0.6985	-2.8011
Cylinder08	54.7307	0.56	10.8932	-12.5583	-276.7257	-0.6803	-2.8535
Cylinder08	54.7307	0.568	11.321	-12.3134	-278.4049	-0.6395	-2.9029
Cylinder08	54.7307	0.576	11.511	-11.915	-279.2602	-0.5915	-3.0071
Cylinder08	54.7307	0.584	11.4674	-11.5708	-280.2603	-0.5302	-3.0961
Cylinder08	54.7307	0.592	11.4717	-11.2266	-281.6092	-0.4975	3.1377
Cylinder08	54.7307	0.6	11.4422	-10.9973	-282.7538	-0.4781	3.1001
Cylinder08	54.7307	0.608	11.7304	-10.8048	-283.1405	-0.4529	3.0568
Cylinder08	54.7307	0.616	12.21	-11.1648	-283.1232	-0.4758	3.0915
Cylinder08	54.7307	0.624	12.4445	-11.2757	-283.9314	-0.4547	3.124
Cylinder08	54.7307	0.632	12.4661	-11.164	-284.5095	-0.5044	3.1365
Cylinder08	54.7307	0.64	12.7056	-11.1871	-284.8302	-0.4618	3.131
Cylinder08	54.7307	0.648	13.2293	-11.0284	-285.9109	-0.4244	3.1092
Cylinder08	54.7307	0.656	13.495	-10.9556	-286.4679	-0.5031	3.1176
Cylinder08	54.7307	0.664	14.1909	-10.9128	-287.6668	-0.4171	3.0553
Cylinder08	54.7307	0.672	14.6701	-11.8044	-287.6923	-0.4163	3.0234
Cylinder08	54.7307	0.68	15.0116	-12.0506	-289.0828	-0.4305	2.972
Cylinder09	53.4531	0	0	0	0	1.5213	2.3689
Cylinder09	53.4531	0.008	0.9222	-2.9944	-28.5746	1.4317	1.9681
Cylinder09	53.4531	0.016	1.74	-1.3167	-56.9504	1.5228	0.5783
Cylinder09	53.4531	0.024	2.4282	-1.2272	-80.0153	1.5197	-2.7644
Cylinder09	53.4531	0.032	4.1485	-0.0526	-98.6454	1.484	-0.6629
Cylinder09	53.4531	0.04	5.752	0.1001	-119.0192	1.5156	0.3313
Cylinder09	53.4531	0.048	8.4914	0.6681	-134.2532	1.43	-0.2852
Cylinder09	53.4531	0.056	10.517	2.0897	-144.7923	1.4572	-1.2005
Cylinder09	53.4531	0.064	11.5236	4.7403	-155.3806	1.4404	-1.272
Cylinder09	53.4531	0.072	11.5421	4.6749	-165.5644	1.4703	-1.1022
Cylinder09	53.4531	0.08	12.2437	5.3649	-174.7616	1.4333	-1.6951
Cylinder09	53.4531	0.088	14.1476	5.7067	-183.5143	1.4793	-1.0379
Cylinder09	53.4531	0.096	15.7906	7.9409	-191.6432	1.5056	-0.2727

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder09	53.4531	0.104	16.7305	7.8126	-199.6456	1.4215	-0.1758
Cylinder09	53.4531	0.112	17.8809	8.7358	-206.1558	1.4404	0.8001
Cylinder09	53.4531	0.12	17.873	8.5651	-210.2002	1.4817	1.2933
Cylinder09	53.4531	0.128	17.8449	10.0333	-216.7636	1.3956	0.9551
Cylinder09	53.4531	0.136	17.8284	11.3406	-222.1964	1.404	1.3054
Cylinder09	53.4531	0.144	19.4548	11.7805	-227.097	1.393	0.9913
Cylinder09	53.4531	0.152	21.722	11.0546	-233.0707	1.2962	0.5624
Cylinder09	53.4531	0.16	25.1326	11.319	-240.9735	1.1752	0.3751
Cylinder09	53.4531	0.168	25.7077	12.0744	-246.8288	1.2424	0.2716
Cylinder09	53.4531	0.176	26.5796	12.6171	-251.9548	1.3676	0.2329
Cylinder09	53.4531	0.184	27.744	13.0338	-257.2227	1.3582	-0.1569
Cylinder09	53.4531	0.192	27.9047	11.8634	-261.5771	1.1682	0.5569
Cylinder09	53.4531	0.2	27.9927	12.6713	-265.7802	1.1787	0.3508
Cylinder09	53.4531	0.208	28.6194	12.6269	-270.2915	1.2086	0.4128
Cylinder09	53.4531	0.216	28.7965	13.0296	-273.917	1.2094	0.4745
Cylinder09	53.4531	0.224	29.4529	13.0679	-277.5553	1.263	0.5961
Cylinder09	53.4531	0.232	30.4314	13.9091	-281.8439	1.3056	0.7664
Cylinder09	53.4531	0.24	31.099	13.8728	-286.1395	1.2805	0.8728
Cylinder09	53.4531	0.248	30.9198	13.8619	-289.8619	1.2958	0.6879
Cylinder09	53.4531	0.256	31.8335	14.5102	-293.3902	1.3268	0.9003
Cylinder09	53.4531	0.264	32.72	14.8904	-296.3983	1.3889	0.8935
Cylinder09	53.4531	0.272	33.5865	15.6023	-300.8206	1.4477	0.7896
Cylinder09	53.4531	0.28	34.6803	15.6068	-304.2793	1.3979	0.7425
Cylinder09	53.4531	0.288	34.8386	14.9422	-307.08	1.4052	0.5305
Cylinder10	58.2447	0	0	0	0	1.4702	0.3584
Cylinder10	58.2447	0.008	3.2302	-2.0631	-29.0951	1.5108	2.2846
Cylinder10	58.2447	0.016	4.1346	-3.0828	-64.0964	1.5259	-3.0942
Cylinder10	58.2447	0.024	5.0337	-2.5513	-87.2818	1.4884	1.699
Cylinder10	58.2447	0.032	7.5466	-2.6651	-108.6396	1.3534	2.6842
Cylinder10	58.2447	0.04	10.3316	-1.6396	-123.5772	1.4931	2.889
Cylinder10	58.2447	0.048	11.4536	-2.5502	-140.6402	1.3139	2.3801
Cylinder10	58.2447	0.056	11.8461	-2.8092	-153.2603	1.1251	2.4852
Cylinder10	58.2447	0.064	13.3677	-2.0838	-165.5975	1.2082	2.5825
Cylinder10	58.2447	0.072	13.6461	-2.0834	-176.5621	1.1008	2.1842
Cylinder10	58.2447	0.08	13.8636	-1.2184	-185.4589	1.1181	2.3253
Cylinder10	58.2447	0.088	14.0621	-1.6102	-194.7537	1.0357	2.264
Cylinder10	58.2447	0.096	13.792	-0.2932	-202.5531	1.1261	2.2869
Cylinder10	58.2447	0.104	14.0468	-0.2447	-208.4062	1.0403	2.1644
Cylinder10	58.2447	0.112	13.7852	-0.0622	-216.5183	0.9987	2.1404
Cylinder10	58.2447	0.12	14.2032	0.469	-222.0804	0.9335	2.3043
Cylinder10	58.2447	0.128	13.2542	1.4411	-227.9483	0.8425	2.4287
Cylinder10	58.2447	0.136	13.2528	1.4355	-234.6125	0.8332	2.3448
Cylinder10	58.2447	0.144	13.5136	2.4382	-240.2834	0.7895	2.3673
Cylinder10	58.2447	0.152	12.7843	3.5895	-245.2333	0.837	2.4298
Cylinder10	58.2447	0.16	11.5016	4.4838	-249.24	0.8257	2.4234
Cylinder10	58.2447	0.168	9.8382	5.4148	-255.5177	0.7767	2.388
Cylinder10	58.2447	0.176	8.7069	6.3455	-259.435	0.6807	2.4183
Cylinder10	58.2447	0.184	7.8569	6.8317	-263.0907	0.6414	2.502
Cylinder10	58.2447	0.192	7.1587	8.4496	-267.126	0.6417	2.5249
Cylinder10	58.2447	0.2	7.0546	9.5135	-270.6307	0.564	2.6191
Cylinder10	58.2447	0.208	5.3408	11.2965	-274.6863	0.4878	2.7113
Cylinder10	58.2447	0.216	3.9089	12.454	-277.7907	0.4652	2.6569
Cylinder10	58.2447	0.224	2.804	12.8614	-281.2381	0.4289	2.6573

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder10	58.2447	0.232	2.7116	15.739	-284.5216	0.3746	2.5737
Cylinder10	58.2447	0.24	1.0309	15.0204	-286.767	0.3051	2.6376
Cylinder10	58.2447	0.248	0.0822	15.5575	-288.7276	0.2666	2.5139
Cylinder10	58.2447	0.256	-1.4429	15.1401	-290.8897	0.2145	2.4726
Cylinder10	58.2447	0.264	-1.7721	15.6864	-293.2868	0.2625	2.5069
Cylinder10	58.2447	0.272	-2.0314	15.729	-294.2637	0.1773	2.4952
Cylinder10	58.2447	0.28	-2.9974	16.2469	-295.8749	0.1659	2.4759
Cylinder10	58.2447	0.288	-4.2043	17.0179	-297.8405	0.125	2.4644
Cylinder10	58.2447	0.296	-4.3013	16.6645	-299.0916	-0.0228	2.652
Cylinder10	58.2447	0.304	-6.1539	16.9625	-301.8846	0.0099	2.6854
Cylinder10	58.2447	0.312	-6.397	18.4058	-303.7899	-0.0794	2.7562
Cylinder10	58.2447	0.32	-7.3334	17.8188	-304.5379	-0.0457	2.7938
Cylinder11	56.9073	0	0	0	0	1.5489	1.9068
Cylinder11	56.9073	0.008	0.7921	-2.5206	-30.4999	1.5597	2.4555
Cylinder11	56.9073	0.016	3.13	0.0196	-60.5517	1.4721	0.1087
Cylinder11	56.9073	0.024	3.1348	-0.758	-80.8997	1.5144	1.6356
Cylinder11	56.9073	0.032	4.7551	-1.7222	-98.2207	1.4589	0.4914
Cylinder11	56.9073	0.04	8.8	-3.0801	-116.7704	1.4276	3.0392
Cylinder11	56.9073	0.048	10.5516	-4.1509	-130.8461	1.2065	-3.1345
Cylinder11	56.9073	0.056	11.1661	-3.8884	-142.2703	1.0948	2.7484
Cylinder11	56.9073	0.064	11.8813	-4.9748	-153.9295	1.0773	2.6396
Cylinder11	56.9073	0.072	13.2662	-4.4767	-163.7097	0.9495	2.6682
Cylinder11	56.9073	0.08	12.972	-5.0308	-170.9795	0.9442	2.7466
Cylinder11	56.9073	0.088	13.6566	-4.0857	-177.7798	0.7743	2.8599
Cylinder11	56.9073	0.096	11.1629	-2.389	-184.136	0.6854	2.8657
Cylinder11	56.9073	0.104	10.4504	-1.6376	-190.648	0.6429	2.8609
Cylinder11	56.9073	0.112	9.8732	-2.8851	-195.1314	0.4738	2.9871
Cylinder11	56.9073	0.12	9.3496	-1.7181	-199.4938	0.175	3.0853
Cylinder11	56.9073	0.128	6.9552	-1.4952	-202.8889	0.0191	3.1255
Cylinder11	56.9073	0.136	5.2623	0.1166	-205.3627	-0.166	-3.0625
Cylinder11	56.9073	0.144	3.2813	0.1454	-208.6225	-0.2334	-3.1061
Cylinder11	56.9073	0.152	1.6959	1.6408	-211.0369	-0.3802	-3.0283
Cylinder11	56.9073	0.16	0.9786	2.4068	-212.6883	-0.4258	-2.9761
Cylinder11	56.9073	0.168	0.1211	3.1433	-214.5198	-0.3783	-2.966
Cylinder11	56.9073	0.176	-1.994	4.5619	-217.0012	-0.5421	-2.9513
Cylinder11	56.9073	0.184	-2.5566	5.9315	-218.7872	-0.6149	-2.8992
Cylinder11	56.9073	0.192	-3.1169	5.9288	-221.8483	-0.5975	-2.9109
Cylinder11	56.9073	0.2	-3.4789	8.7883	-225.3218	-0.6228	-2.9101
Cylinder11	56.9073	0.208	-4.8136	9.8603	-226.3853	-0.691	-3.0512
Cylinder11	56.9073	0.216	-3.3845	7.9195	-227.7862	-0.7674	-2.7944
Cylinder11	56.9073	0.224	-4.0193	9.1881	-230.0149	-0.7752	-2.7771
Cylinder11	56.9073	0.232	-3.6652	9.8106	-231.7849	-0.7663	-2.7637
Cylinder11	56.9073	0.24	-3.9853	10.2419	-232.9731	-0.829	-2.8126
Cylinder11	56.9073	0.248	-3.3486	10.0593	-233.8369	-0.7542	-2.7908
Cylinder11	56.9073	0.256	-3.6768	10.1388	-235.1369	-0.7338	-2.6132
Cylinder11	56.9073	0.264	-4.7131	10.8275	-236.9272	-0.8018	-2.5482
Cylinder11	56.9073	0.272	-4.7132	11.0256	-237.5029	-0.7634	-2.6499
Cylinder11	56.9073	0.28	-4.6602	10.856	-239.1695	-0.8479	-2.6309
Cylinder11	56.9073	0.288	-4.5405	10.6951	-240.4432	-0.7405	-2.6319
Cylinder11	56.9073	0.296	-5.555	11.0854	-241.2739	-0.7786	-2.7025
Cylinder11	56.9073	0.304	-3.2683	11.2364	-243.8992	-0.8158	-2.658
Cylinder11	56.9073	0.312	-4.5135	11.7254	-245.5182	-0.783	-2.7628
Cylinder11	56.9073	0.32	-2.6177	12.7034	-245.8532	-0.662	-2.4992

ID	Vintial	Time	pos(x)	pos(y)	pos(z)	Elevation	Azimuth
Cylinder11	56.9073	0.328	-4.4802	13.8033	-247.1672	-0.7236	-2.6238
Cylinder11	56.9073	0.336	-4.1373	14.4348	-247.8536	-0.6057	-2.6532
Cylinder11	56.9073	0.344	-2.8245	13.8106	-249.4255	-0.7419	-2.4287
Cylinder11	56.9073	0.352	-2.4313	13.9168	-250.2059	-0.6923	-2.5058
Cylinder11	56.9073	0.36	-2.8002	14.0816	-251.0011	-0.7113	-2.4955
Cylinder11	56.9073	0.368	-3.1405	14.6829	-252.6848	-0.7783	-2.4558
Cylinder11	56.9073	0.376	-1.9917	14.3107	-253.7044	-0.6479	-2.4836
Cylinder11	56.9073	0.384	-1.7138	14.3407	-254.4755	-0.6937	-2.4998
Cylinder11	56.9073	0.392	-2.0783	14.9267	-254.7985	-0.6916	-2.5221
Cylinder11	56.9073	0.4	0.3054	13.9963	-256.47	-0.7718	-2.4956
Cylinder11	56.9073	0.408	0.982	14.0054	-257.1907	-0.6816	-2.6064
Cylinder11	56.9073	0.416	-0.6635	14.2129	-258.0476	-0.729	-2.6043
Cylinder11	56.9073	0.424	-1.9973	15.2818	-258.3534	-0.6684	-2.6258
Cylinder11	56.9073	0.432	-0.9004	14.8072	-259.729	-0.6525	-2.595
Cylinder11	56.9073	0.44	-0.9543	15.5524	-260.6852	-0.6957	-2.5644
Cylinder11	56.9073	0.448	-0.5996	15.8129	-261.5669	-0.7322	-2.5679
Cylinder11	56.9073	0.456	0.5212	15.6786	-263.1958	-0.6303	-2.5057
Cylinder11	56.9073	0.464	0.411	16.6899	-263.8622	-0.6786	-2.4802
Cylinder11	56.9073	0.472	0.3823	17.4383	-264.2446	-0.6409	-2.4877
Cylinder11	56.9073	0.48	1.2243	16.2564	-266.2699	-0.6241	-2.5831
Cylinder11	56.9073	0.488	2.6746	16.3187	-267.8007	-0.5456	-2.5945
Cylinder11	56.9073	0.496	2.2941	16.4712	-268.0471	-0.5957	-2.5196
Cylinder11	56.9073	0.504	2.0693	16.7938	-268.761	-0.5946	-2.5066
Cylinder11	56.9073	0.512	2.9071	16.2057	-270.9386	-0.6243	-2.5215
Cylinder11	56.9073	0.52	3.2572	17.3375	-271.4708	-0.591	-2.4446
Cylinder11	56.9073	0.528	2.6001	17.6915	-272.7883	-0.5965	-2.533
Cylinder11	56.9073	0.536	3.5367	18.2176	-273.2663	-0.5933	-2.3459
Cylinder11	56.9073	0.544	4.6313	18.0672	-274.3936	-0.5657	-2.4651
Cylinder11	56.9073	0.552	5.3605	18.5117	-274.669	-0.5035	-2.4704
Cylinder11	56.9073	0.56	5.8113	17.7502	-275.8119	-0.5104	-2.49
Cylinder11	56.9073	0.568	4.6815	19.1368	-276.7178	-0.6102	-2.4039
Cylinder11	56.9073	0.576	4.9454	19.3962	-277.7487	-0.5118	-2.4581
Cylinder11	56.9073	0.584	6.175	19.0621	-278.4195	-0.5693	-2.3641
Cylinder11	56.9073	0.592	6.8318	20.345	-278.7377	-0.4781	-2.2829
Cylinder11	56.9073	0.6	8.5693	20.7158	-278.8024	-0.4796	-2.2544
Cylinder11	56.9073	0.608	6.332	20.6178	-280.2783	-0.4445	-2.276
Cylinder11	56.9073	0.616	8.5697	19.4424	-281.6436	-0.4295	-2.3938
Cylinder11	56.9073	0.624	8.6113	19.2429	-282.5276	-0.3827	-2.3315
Cylinder11	56.9073	0.632	10.9796	19.5124	-283.8134	-0.4596	-2.322
Cylinder11	56.9073	0.64	9.0429	19.5593	-284.8926	-0.3768	-2.389
Cylinder11	56.9073	0.648	11.5612	20.5305	-286.3686	-0.3595	-2.4471

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