Exhibits for the Temple of the Vedic Planetarium in Mayapura

by

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The plan is to have two types of exhibits: high-tech and low-tech. Both types should be easily servicable. Thus the high- tech exhibits should make use of standard video and computer equipment with service contracts and ready availability of replacement units. The low-tech exhibits should be made out of durable materials, and they should also be readily replacable.

A basic strategy is that if the technology for the high-tech exhibits becomes unavailable due to changes in the world economy, the basic message of the planetarium will still be conveyed by the low-tech exhibits.

High-tech exhibits:

Large and small screen videos. The small screen videos will be shown on individual monitors surrounded by printed displays with text and pictures. Typically the viewer starts the video by pressing a button, and earphones are provided. The large screen videos will be projected in a theater room (or rooms) at designated times.

Interactive computer displays. The physical setup is similar to the setup for small screen videos.

Shows in the planetarium dome. These will be multimedia shows involving video projection, slides, a star projector, and sound. Generally they begin with a discussion of the night sky and then shift to a particular topic. The subject matter does not have to be limited to the cosmological themes presented in the list of exhibits below. For example, one could begin with a discussion of the alignment of planets that occurred during the battle of Kuruksetra and then shift to a general discussion of the Bhagavad-gita.

Virtual reality exhibits. An exhibit of this type could be used to show that we are not the material body. This would require powerful computers plus virtual reality interface equipment.

Low-tech exhibits:

Text and pictures on flat surfaces.

Solid models, sculptures, relief panels, and dioramas.

Simple mechanical models.

The following list indicates some of the main exhibits needed for a comprehensive presentation of Vedic cosmology. These are divided into nine categories (A-I), and there are 55 exhibits in all. Most of these exhibits can be presented in several different ways (e.g. through interactive computer displays, planetarium shows, or videos). Nearly all should be presented in both high-tech and low-tech form.

A. Exhibits dealing with the structure of the Fifth Canto universe. These exhibits constitute the core of the planetarium presentation. However, many of them make use of concepts introduced in the exhibits on higher dimensions (category F). Therefore, the exhibits in categories A and F should be located close to one another, and the viewer should be referred to category F exhibits when necessary in the category A exhibits.

A.1 General schematic model and museum directory. This model presents the entire universe in an abstract, schematic form, and it includes directions to the other exhibits in the planetarium complex. It will be a solid structure large enough to walk through.

A.2 The position of Bhumandala in space. Fifth Canto cosmic geography is used as a coordinate system to locate Bhumandala in space in relation to the Western astronomical system. This presentation is based on a systematic analysis of Fifth Canto verses, and it is intended to convince scholars that significant astronomical knowledge is contained in the Fifth Canto. The exhibit will include wall displays with diagrams and verses plus an interactive computer display that takes one through the logical analysis of the verses. A video could also be made of this presentation. A simple mechanical model can also be made showing the movements of the sun relative to the earth globe and Bhumandala.

A.3 The situation of the earth globe in relation to Bhumandala. The higher-dimensional connection between the earth globe as we know it and Bhumandala is explained in this exhibit. Material from Srila Prabhupada's Vrindavana conversations about the Fifth Canto is presented, including his petal example and his example of an animal bound to a central post. There will also be discussion of the *bhrami yantra* set up by Visvakarma to prevent earth humans from going to other khandas.

A.4 The correspondence principle. Higher-dimensional connections between celestial or spiritual geographical features and earthly geographical features are explained. These include the connection between holy rivers in India and their celestial counterparts and the connection between the earthly Vrndavana and Goloka Vrndavana. The exhibit includes the descent of the Ganges from the higher planetary systems.

A.5 The geography of Bhumandala. This exhibit presents the detailed layout of Bhumandala, using geographical material from the Fifth Canto and the cosmological sections of the *Mahabharata*, *Ramayana*, and other puranas. This will require detailed research. It will

include maps on many different scales showing regions accessible to us and regions that are inaccessible. There will also be discussion of: (1) attempts by scholars to understand puranic geography, (2) traditions regarding Atlantis, lost continents, and mystical lands, and (3) geological considerations.

A.6 The relative distances of the planets. This exhibit explains the Vedic statement that the moon is farther from Bhumandala than the sun. This is done by explaining the positions of the sun, the moon, and Mercury through Saturn in relation to Bhumandala.

A.7 Planetary dynamics. This exhibit explains the relation between planetary motion in the Fifth Canto universe and the modern heliocentric solar system. It deals with the topic of geocentric and heliocentric astronomy. The *Surya-siddhanta* as used as an intermediate link, connecting the Fifth Canto with modern astronomy (see the *Surya-siddhanta* exhibits). There is discussion of Newtonian dynamics and Vedic dynamics (ropes of air, etc.).

A.7.1 Does the earth move? This exhibit discusses Mach's principle, relative motion, and other topics relating to the movement of the earth. Perhaps surprizingly, existing scientific proofs that the earth moves are open to alternative interpretations.

A.8 The size of universe. Size figures given in the Fifth Canto and the *Surya-siddhanta* are discussed. The topic of scale in the Fifth Canto is related to the mystic siddhis on the one hand and relativistic space-time dilation on the other. The limitations of the modern system of calculating astronomical distances are also discussed.

A.8.1 Cosmological horizons. The black-hole horizon in general relativity provides an analogy to the transition to non-material time at the boundary of the Vedic universe. The strange properties of black holes are very popular and can be used to illustrate some Vedic ideas. This exhibit includes discussion of the general relativity model of a rotating disk and time dilation in higher planets (the story of king Kakudmi).

A.8.2 Change of scale in Vedic cosmology. The Fifth Canto is notable for the large size of its geographical features (e.g., mountains 80,000 miles high). Many of the inhabitants of these geographical regions are correspondingly large, and they make use of anima and mahima siddhi to reduce their size when visiting the earth. Understanding of these changes in size is essential for our understanding of sizes and distances in the Fifth Canto universe.

A.9 The lower planetary systems. This exhibit presents the lower planetary systems in relation to Bhumandala. Topics include: (1) the 3 types of heavens: divya svarga, bhauma svarga, and bila svarga, (2) the relation between the earth globe and the lower planetary systems (according to the *Surya-siddhanta*), and (3) lower worlds in other cultural traditions.

A.10 The upper planetary systems. The *Brhad-bhagavatamrtam* and other Vedic sources will be used to explain the upper lokas from Bhuvarloka to Satyaloka.

A.11 Life on the moon, sun, and planets. Vedic material is used to describe life on the moon and sun. If material is available, the inhabitants of the five planets Mercury through Saturn will also be described. (Research is necessary in this area.)

A.12 The Apollo moon flights. Did astronauts visit the Moon in 1969-73? This exhibit presents some provocative information suggesting that the public has been deceived.

A.13 The shells of universe and beyond. This exhibit describes the shells of the universe and the multiple universes in the causal ocean. This includes a discussion of the formation of the elements through condensation in successive spherical regions (as described by Srila Jiva Goswami). Comparison is made with current cosmological theories.

B. Exhibits featuring simulated journeys to different parts of the universe and beyond. These are popular video presentations, and they will be produced using computer graphics with narration and musical accompaniment. Paintings and dioramas can give low- tech backup for some of these presentations. The following are a few of the many possibilities in this category.

B.1 Grand tour of the material and spiritual worlds. This video takes the viewer on a journey from the earth as we know it to different parts of Bhumandala, from there to higher planets in Devidhama, then on to Maheshdhama, the Brahmajyoti, Vaikuntha, and Goloka Vrndavana. This is a major video production using computer graphics.

B.2 The visit of Arjuna and Krsna to Mahavisnu. This show illustrates the point that beyond the Brahmajyoti there lies the personal realm of the Supreme Personality of Godhead.

B.3 Arjuna's trip to the stars. This story from the *Mahabharata* show makes some important points about the nature of stars, according to Vedic literature.

B.4 Celestial battles. This show presents Arjuna's battle with the Nivatakavacas and the Danavas of Hiranyapura (a famous flying city).

B.5 Journey to the moon. This is a higher-dimensional trip to the moon, based on sastric evidence. It is based on the material in A.11. There will also be some references to the Apollo moon flights, which are discussed in exhibit A.12.

B.6 King Kakudmi's visit to Brahmaloka. This illustrates Vedic time dilation. It will include graphic illustrates of millions of years of erosion, etc., that took place on the earth during Kakudmi's brief visit to Satyaloka.

B.7 Visit to Kalapagrama. There the viewer meets rajarsis who are waiting out the Kali-yuga. This show illustrates the idea of higher-dimensional regions of the earth. Relative to our senses, the part of Bhumandala beyond this earth globe is a higher- dimensional region. Thus the idea of higher-dimensional regions can be used to clarify the relationship between the earth globe of our experience and Bhumandala.

C. Exhibits dealing with the *Surya-siddhanta.* Some of the exhibits in category A also fall in this category.

C.1 *Surya-siddhanta* and Srila Bhaktisiddhanta. This exhibit explains the role of *Surya-siddhanta* and other jyotisa sastras in Vaisnava tradition. It discusses Srila Bhaktisiddhanta Sarasvati's translation of the *Surya-siddhanta*.

C.2 Eclipses of the sun and moon. This exhibit discusses eclipses from the viewpoint of the Fifth Canto, the *Surya-siddhanta*, and modern astronomy. The role of Rahu and Ketu is discussed. Eclipses are portrayed using computer graphics.

C.3 Surya-siddhanta vs. Greek astronomy. The standard view of scholars is that the astronomy of the *Surya-siddhanta* (and other jyotisa sastras) was imported into India from Greek sources. In this exhibit this claim is shown to be fallacious in a particular case (discussed in an appendix of *Vedic Cosmography and Astronomy*).

C.4 The mathematics of *Surya-siddhanta.* Some of the sophisticated mathematical procedures of the *Surya-siddhanta* are presented in this exhibit.

C.5 *Surya-siddhanta* and planetary diameters. This exhibit shows how accurate knowledge of planetary diameters is coded into the *Surya-siddhanta.*

C.6 *Surya-siddhanta* and star coordinate dating. This exhibit shows how the star coordinates of jyotisa sastras (including *Surya-siddhanta*) can be used to date the times when the coordinates were measured. Dates of about 50,000 years have been obtained by this method.

C.7 *Surya-siddhanta* and the days of the week. The *Surya-siddhanta* shows how to assign the planetary names of the seven days of the week. These names are used the world over, but *Surya-siddhanta* explains how they were chosen.

D. Exhibits exploring traditional perspectives on Fifth Canto cosmology.

D.1 The Fifth Canto in world cultures. There is extensive evidence for the worldwide diffusion of Fifth Canto cosmology. Thus the Fifth Canto can be used to support the idea of an ancient Vedic world culture. Topics include (1) the Santillana and von Dechend study, (2) anthropological material on world mountains with sacred rivers, world trees, etc., and (3) the Sioux Indian story of the bull of dharma.

D.2 Fifth Canto interpretations in India. For a complete presentation of Vedic cosmology, we should cover recent and ancient Indian views on this subject. These views include some points where we agree and some where we disagree. Topics include (1) the Vamsidhara commentary on the Fifth Canto and other Gaudiya Vaisnava commentaries, (2) the perspective of the Madhvacarya and Ramanuja sampradayas, (3) the Lakshmithathachar map,

and other old cosmological maps and globes from India, and (4) the Buddhist and Jain cosmologies.

E. Exhibits presenting evidence for the humanoid inhabitants of the Vedic universe. This is an area in which there is extensive empirical evidence that broadly supports the Vedic position.

E.1 UFOs, siddhis, and higher-dimensional realms. There are many parallels between the reported UFO phenomena and the Vedic accounts of humanoid beings with mystic siddhis. This subject matter is controversial, but it does support the Vedic world view while strongly contradicting the modern scientific view of reality. Topics include (1) evidence for UFOs, (2) humanoid races in the Vedic universe, (3) vimanas and Vedic space travel, (4) a cross-cultural study of humanoid traditions, (5) the descent of messiahs from higher planets, (6) the Vedic description of universal religion (SB 11.14.5-8).

E.2 Nagas and river goddesses in Kashmir geography. This presentation from the *Nilamat Purana* illustrates the Vedic understanding of the relationship between higher living beings and geography.

F. Exhibits presenting Vedic and empirical evidence for the reality of higher dimensions of space. This involves discussion of Vedic physics. This material is essential for understanding Fifth Canto cosmology.

F.1 Vedic physics. This exhibit begins with Krsna. It explains the relation between Krsna and space, mystic siddhis, and higher dimensions.

F.2 Transcendental realms on earth. Topics include (1) Goloka in Gokula Vrindavana, (2) Navadvipa as described by Bhaktivinod Thakura, and (3) material higher-dimensional realms in the Himalayas (e.g., Kalapagrama).

F.3 Parallels between sankhya and modern physics. Topics include (1) geometrodynamics and the formation of gross elements from ether, (2) quantum mechanical waves, holograms, and creation by sound vibration, and (3) the dissolution of the elements.

F.4 The role of God in nature. This exhibit discusses the active role of God in nature and contrasts this with Indian karma mimamsa philosophy and Western deism. There is discussion of where the modern laws of physics apply and where they do not apply. The exhibit shows that the laws of physics are not equal to the laws of nature, and the laws of nature are not independent of higher personal control.

F.5 The paranormal evidence for higher dimensions of space. This exhibit surveys the empirical evidence for the passage of matter though matter. It tells the story of famous 19th century scientists who interpreted this evidence as proof of the existence of higher dimensions of space.

F.6 Bodily travel through matter and space. This exhibit presents Vedic and contemporary examples of bodily travel through solid matter (a phenomenon that, surprisingly, is widely reported).

F.7 Virtual reality model of the universe. This is a model of physical reality based on transformation of information rather than on particles in space. It allows for easy representation of higher-dimensional realms and mystic siddhis. It accounts for the efficacy of mantras, and it provides a compelling account of the transmigration of the soul through the world of maya. The discussion refers to the work of the physicists Fredkin, Tipler, and Dyson.

F.8 Higher dimensions, Kaluza-Klein, and gauge theories. This exhibit presents a simple model of higher dimensional space based on the famous Kaluza-Klein theory. The model provides a simple explanation of many-armed beings (such as Banasura). It also explains the transfer of matter through matter. This model can be presented on a popular level through computer graphics.

G. Exhibits dealing with modern cosmology.

G.1 General discussion of the limitations of science. This exhibit presents the justification and the methodology for criticising major scientific theories. Topics include Thomas Kuhn, Richard Milton, the knowledge filter, anomalies, the Vedic pramanas, and the four limitations of the senses.

G.2 The expanding universe. This exhibit shows some of the flaws of the modern theory of the expanding universe (which is the basis for the big bang theory). It establishes the important point that there is still a great deal of mystery in the cosmos. Many ideas that are taken as solidly established are plagued by anomalies and contradictions and may have to be radically revised. Topics of discussion include Tifft's quantized red shifts, the Hubble constant, the mysteries of galaxies and quasars, the work of Halton Arp, and Hannes Alfven's opposition to the big bang.

G.3 Strange features of current big bang theories. Many people are not aware of just how bizarre modern cosmology has become. This exhibit discusses the quantum mechanical many worlds model which has been quietly adopted by leading physicists of the big bang (such as Hawking, Weinberg, and Tipler). It also discusses the ideas of Tipler, Dyson, and Wheeler of a universal computer that takes shape at the final stages of the universe (and is capable of creating a new universe by simulation).

H. Exhibits dealing with history. Most of the exhibits in this section will require considerable research.

H.1 Precession of the equinoxes and the pole star. This exhibit deals with the problem of the gradual displacement of the pole star due to the precession of the equinoxes. It will discuss

Vedic and empirical material suggesting that catastrophic displacements of the pole have occurred in the past.

H.2 History and the starting date of Kali-yuga. The traditional starting date of Kali-yuga in 3102 B.C. is astronomically determined. This is discussed in this exhibit, along with arguments suggesting that the date refers to a real historical event and was not created artificially by astronomical back- calculation. The use of 3102 B.C. as a date for the flood in Western traditions is also discussed.

H.3 The history of kings in Kali-yuga. This exhibit presents evidence supporting the traditional puranic chronology of kings in Kali-yuga. It supports our position that Krsna's pastimes took place about 5,000 years ago (i.e. in 3102 B.C.). This exhibit makes very important points, but it will require a great deal of further research.

H.4 The Aryan non-invasion. This exhibit presents recent findings suggesting that the Aryan invasion of India never happened.

H.5 Cyclic time, yuga cycles, and forbidden archeology. This exhibit takes advantage of the evidence presented in *Forbidden Archeology* to argue for the reality of the puranic chronology of multi-million-year yuga cycles and manvantaras.

I. Exhibits dealing with themes concerning science and Krsna Consciousness that are indirectly related to cosmology.

I.1 The origin of the human race from demigods. This exhibit presents the Vedic theory of creation as an alternative to Darwin's theory of evolution. The discussion deals with (1) gross and subtle bodily forms, (2) genetic information as bijas, (3) the general transformation from spiritual to subtle to gross (i.e. Visnu to Brahma to Prajapatis, Devas, and lesser species), (4) psychic healing as small-scale subtle to gross transformation, (5) comparison with Darwin's argument based on artificial breeding, (6) the dispute between A.R. Wallace and Charles Darwin on nature of life, and (7) the paranormal physical mechanisms of the subtle-to-gross transformation.

I.2 The mind-body relationship. Topics include: paranormal evidence (e.g., OBEs), Vedic evidence, the distinction between the eternal soul and the material mind, transmigration of the soul, yogic travel to other planets (easy journey), sankhya and the physical mind-body interaction, the dualism of Descartes, and the theories of the cognitive scientists.

I.3 Virtual reality demo showing we are not the body. The virtual reality model of the universe provides an excellent metaphor for the Vedic understanding of the relationship between the material body and the transcendental self. This can be demonstrated directly using virtual reality equipment.

I.4 Limitations of natural selection. This exhibit presents many examples of animals and plants with features which are very difficult to explain using the neo-Darwinian theory of

natural selection and mutation. It provides an easily understandable critique of the theory of evolution, and thus it complements exhibit I.1.

I.5 Mysteries of geology and paleontology. This exhibit presents a number of geological and paleontological mysteries that cast doubt on the standard scientific account of the earth's past. This may include the Cambrian flowering plant fossils of the Salt Range in Pakestan.