The Vedic mantras are the repository of knowledge about the creation, evolution and dissolution of the universe. The forays of science into cosmology as reflected in the theories of Big Bang and Big Crunch have neither rejected nor corrected but largely corroborated what has been said in the Vedas in this regard. Science which has all along refused to accept the reality of Atman for want of empirical evidence is slowly veering round to concede its presence as can be seen from the discovery of “Psychic photons” (1), space fabric concept of string theory (2) anthropic principle and co- incidental truths of various scientific disciplines (3). The thrust of this paper is to highlight the scientific dimension of the Vedas and glorify the primacy and supremacy of vedic lore over non-vedic knowledge. For illustration of my point I take Sukra mantra from the Taitireeya Aranyak along with few relevant charts.

The major concern of science is to delve into the mysteries of the universe, its creation, evolution & dissolution. While sharing the above concern, the Vedas have an additional dimension and mainly focus on the reality of Parabrahman in relation to human existence.

As per our almanac, the creation dates back to 195585105 years. However as per the scientific estimate of the Big Bang theory, the origin of universe took place about 10000 million years ago with a sudden explosion from pinpoint grenade with astounding density. It is further estimated that the universe would collapse into its original place in about 20 billion years from now. This theory is called Big Crunch. References to creation, evolution & dissolution of the universe are many & frequent in Veda sukhas. In Bhrudaranyak(a-7) it is explained in a single mantra,

Tat Idam Tarhi Aavyakrutam Aset Tat Nama Rupaha Eva Vyaakriyataha
In Taitireeya Upanishad(2-7)
Asadva Idam Agr Aset Tatvo Sada Jayata Tad Atmanam Suwany Akrutha
In Bhagvadgeetha it was presented in more simple direct terms by Lord Krishna nearly 5000 years ago.
Abraha bhuvarkloka Punaravarthino Arjuna(8-16)
Avyakta Vyakta Yaha Sarva Prabhuhanthi Aharagame(8-18)
The entire process of cosmic descendence from parabrahman to fivefold nature and man is discussed in Taitireeya Upanishad (2-1)

"Etasmat Atmana Akasa Sambhootahe A kasat Vayo — Annat Purushaha"
As stated earlier the discoveries of science in this regard have largely corroborated the process leading to the origin of the universe. The original divergence between the Vedas and scientific view regarding the origin of universe is significantly narrowed down in the latest discoveries.
In his concluding words Prof. Brian Greene opines (2)

"after reaching the deepest possible level of understanding science can offer, there will nevertheless be aspects of the universe that remain unexplained. May be we will have to accept that certain features of Universe are the way they are because of happenstance, accident or divine choice".

A perfect scientific theory is supposed to describe accurately a large scale arbitrary observations and make definite predictions about the results of future observations. Though the methods are unknown the Vedic Seers have described the origin, evolution and collapse of the Universe and predicted the movement of equinoxes and Ursa Major perfectly (4). (25850 years).

It is after the second state of expansion the present universe and ecliptic evolved with our planet earth moving around our sun as one of the solar systems in one of the innumerable galaxies of the universe. The ecliptic is the sun’s path exactly through the centre of the zodiac longitudinally and Zodiac is the broad band or belt in the heavens extending 9 degrees on either side of the ecliptic. The ecliptic is divided into 12 equal compartments each being 30 degree in extent and each degree is divided into 60 minutes. The commencement of Zodiac is reckoned from the 1st point of Aries.

The ecliptic is marked by 27 constellations or Nakshatras often called lunar mansions, each measuring 13.20 degrees of arc. The Rasis & Nakshatras are both reckoned from the same point Viz. Zero degree longitude of Aries i.e. the initial point of Mesha or Aswini. The earth’s equator is an imaginary line running around the earth half-way between the north & south poles. When this terrestrial equator is extended indefinitely towards the ecliptic it is called celestial equator and the intersecting point is called equinox. Twice a year the sun crosses the equator and there the intersect or equinox forms and on those days the duration of the day & night is equal all over the world. They are vernal and Autumnal equinoxes. The position of the earth with reference to some fixed star moves nearly 50.3 minutes of a degree of space farther west than the earth was, at the same equinoctial point of the previous year. It is not nearly the earth or the sun but the entire zodiac is subjected to westward motion. This is precession of the equinoxes.

The vernal equinoxes was at Mrugasirsha during Mahabharata period and it moved gradually westward direction from one star to the other for every one thousand years.

When the Zodiac coincides with the first point of Aries is not definitely known and accordingly the ayanamsa varies from 19 - 23 degrees pisces. A number of dates of coincidences are given namely 361, 394, 397, 498, 559 A.D. etc(4).

In Navagrahas, Sukra is the second planet and revolves around the Sun and mediated upon by the following mantra.

Sukram Te Anyat Yajatam Te Anyat Vishu Rupe Ahani Dueo Riva Asi Visuvali Maya Arasi Swadhan Bhadrate pushan Iha Ratihirastu Ithi (Arunam 1).

The Sukra mantra deals with the space, time, god and also maaya which cause the origin of the Jeevatman. It is an invocation to God for his grace. The mantra states that the Brahanman has taken the form of time & year (pushan), which
seems to be divided though not really (due to the equinoxes (Vishvurupe) like the two solstices of the year and this artificial bifurcation is inherently associated with chitta of Jeevatman (Visvahimaya). Further it prays (yajatam te) the Aditya (sustainer) to grace all the desires (Avasi Swadhavo) and ultimately for salvation (Bhadrade Iha Ratih rastu).

One may get a doubt about the solstices and artificial bifurcation. They are clearly stated in the preceding and succeeding slokas. 

Sukla Krishna Samvatsarsastra Dakshina Vanamayoh Parisvayah

The year is divided into two equal halves: Dakshinayana & Uttarayana like the right & left parts of a body. Similarly in the succeeding sloka Natra bhuvaam Na Pusha Napasavaha Na Aditya Samvastara Eva Pratyakshaena Priyatanam Vidyant. no past, no sustainer, no animals, no sun, the atman has taken the form of year & this can be understood by knowledge.

Samvatsararoopapayatanam Ayatanavam Bhavathi (Arunam 12-8).

Besides the Arunam the same is found in many suktas and discussions such as an answer to a question Gargi by Yajnavalkya (B3-8-9).

Etasya Va Aksharasya Prasasane Gargi Nimesha, Muhurtha, Ahorathani, Ardhamasa Ratava Samvastara Ii vidyat Thistanti.

In our mythology at stage the creation is supposed to be carried out by Daksha Prajapati (Goat headed) from Aries after he comes out of his Maya and graced by Lord Shankara. Further from this star Aswini or Hiranyakartha as explained in Bruhadaranyaka(1-1-1).


Like the personification of Universe in Lord Vishnu (Viswaksha Viswa Sambhavam, Sahasra seersha purusha), here the Universe is personified in the different parts of Aswa (Horse). And from here the Hiranyakartha gave rise to Viratpurusha or the universe.


There was nothing in the beginning except Hiranyakartha who desired and created Viratpurusha in the form of Year. This is from the star Aswini and the personified Aswa is worshipped in Aswamedha as the symbol of Hiranyakartha. The year started with Kama or Desire.

Kamastagre Samavarthadi Manaso Reteha (Arunam 23-2).

Manovi Grahaah Sakamnathi Grehaha Gruhitaha (B3-2-7).

Kama yeva Yasyatanagam Hrudayam Loco Sakalya Tasya devateh Striya Itihovacha. (B3-9-11).

The symbol of Maya or Prakriti is Woman and it is the second half of Kalapurusha. It starts from 7th Raasi i.e. Tula which is ruled by Sukra.

The ecliptic is divided into 12 parts each with 30 degrees and the Sun in the 12 Raasis in 12 months each called by 12 different names.

Kathama Aditya Iti Dwadasa Vy Masaha Samvatsarsayati Aditya Etaledagam(B 3-9-5).

As per the Arunam the 12 Sun are Mitra, Ravi, Surya, Bhanu, Kaghha, Pusha, Hiranyakartha, Marichi, Aditya, Savitha, Arka, Bhaskara. However, as Pusha was the diety of star Revathi, he was considered as the Surya of 12th Raasi i.e., Pisces by many. However, in the commentary of Bhatavadeeka by Madhusudhana Saraswathi, Pusha is considered as Surya of Tula Raasi, the 7th. So leaving the controversy aside, the 6th Raasi is from 150 to 180 degrees, 7th from 180 to 210 degrees and 12th from 330 to 360 degrees. The end point of 180, the starting of the 7th is 180 and the opposite of 360 is 180.

So the Sun pusha is linked with the bifurcation point from 1 to 180 degrees i.e. from the starting point of Aries or Aswini to the starting point of Tula. This equinocial vertical beam is considered to be Yogadanda and the lateral 6 houses as 6 chakras in spiritual astrology (E.Krishnamacharya).

Sukra, the representative and the Lord of Tula raasi is the symbol of love, art, dance, music and desire or maya vishwa. This god of love when meditated upon with desire and duality, he is manmadha and without maya or duality he is Kameshvara.

All this is there latent in the sound bytes of Sukra mantra, Pushan, Vishvurupe, Ahani, Viswahii Maya, Yajate Te Bhadrate indicating the Sun dividing the year into 2 parts from Aries to Tula, vernal & autumnal equinoxes, equal day & nights, sukra as Maya and Kameshwa on meditation without maya respectively.

From the above it is clear the Vedas & science have traveled together up to the point of evolution of the universe and equinoxes. While the science couldn’t go beyond because of its self imposed restrictions of empirical proof, the Vedas have gone further to deal with the descendence of the Jeevatma from Parabrahma establishing their superiority over science.

Acknowledgement : I Conway my thanks to Sri.C.Ranga Rao (Rtd. Lecturer) for his help in the preparation of this script, and O.V.Ravi Kumar for his help in D.T.P.

References:
1. About time, Prof. Paul Davis, Expts. of X.Y.Zhou et all, 1995
5. A manual of Hindu Astrology, B.V.Raman, P.49