

**THE UNKNOWN ANCIENT INVENTIONS BEFORE THEIR KNOWN
DISCOVERIES***** Subhashree Indra**<https://doi.org/10.5281/zenodo.18115776>**Abstract:**

India's contribution to discovery of world resources is outstanding. In various fields like science, technology, agriculture, chemistry, space research, literature medicines- in every field India has enriched the world with its contribution to the world. Not only in modern times, the monks and sages of ancient India made scientific discoveries that are inextricably linked with the lives of today's people. Discoveries of Maharshi Kanada, Maharshi Agastya etc. are remarkable of them.

It is very heartbreaking for us that, many of us are unaware of the discoveries of those monks and sages. We have read in different texts about some foreigner scientists who have been claimed to discover the essential things that we need to live in. But is the matter really so? Are they really the first one to discover these things? Let's say about the electricity. We all know that its inventor is Benjamin Franklin. But many of us do not know that many years ago, the great sage named Agastya Muni wrote the process of composed the electricity in his book *Agastya Samhita*. Like that there are many more facts that have been discovered in India long before their inventions in abroad.

My paper is related to some of the inventors of our country India, which many of us do not know. The aim of the research paper is to highlight those unknown discoveries and increase the traditions and glory of India by establishing it in the wide range of the world. With that there is a hope that the world will know about the science, culture and technology of India.

Keywords: Invention, scientific discovery, ancient India, sages, inventor

* Scholar, Department of Philosophy, SKBU

INTRODUCTION:

“Unity in diversity” is the keyword of India which can be applicable in everywhere in the country. India is one of oldest country in the world. Though different people with different languages, different dresses, different rituals and different religions are live here but their culture and love for the country is same and inherent in their heart. The Indian sub-continent which is the grand landmass of south Asia is one of the world’s oldest and most significant civilizations. Ancient India includes the whole subcontinent-containing not only what India is at present, but also Pakistan and Bangladesh were with it. The sages and monks of ancient India were the great people with extraordinary power of knowledge. They invented many facts for the sake of common people. That time the whole world was follow her Indian knowledge to upgrade them.

But as an Indian, it is very unfortunate for us that, many of us unaware of these discoveries. From childhood we have known from different sources like books, television, internet etc. about some foreigner scientists who have been claimed to discover the necessary things that we need in our daily life. But many of us do not know that they have actually been discovered in abroad many years ago. But it is very important for us to reveal the names of the ancient monks who had been discovered those things and about their discoveries also. Here, I will mention some of them in my paper to explore the unknown inventions of India.

THE DISCOVERY OF ELECTRICITY:

For this purpose, the first thing mentioned in my paper is electricity. We all know that Benjamin Franklin writes in his famous book *Experiment and Observations on Electricity* that how to create the electricity.¹ Thus he can be called the inventor of electricity. Then the modern electricity era began with the researches of Alessandro Volta, Michael Faraday and Thomas Edison. This is the known fact to us.

But many of us don’t know that, around 4000 BC in the book *Agastya Samhita*, the great Indian sage Agastya described the method to make dry electricity cell with 1.138 volts and 23 mA also invented the electroplating process and hydrogen balloons. He wrote:

संस्थाप्य मृण्मये पात्रे ताम्रपत्रं सुसंस्कृतम्।
छादयेच्छिखिग्रीवेन चादाभिः काष्ठापांसुभिः॥
दस्तालोष्टो निधात्वयः पारदाच्छादितस्ततः।
संयोगाज्जायते तेजो मित्रावरुणसंज्ञितम्॥²

That means, take a clean earthen pot, put a copper sheet in it. Cover it first with copper sulphate and then by moist wood powder. After that, put a mercury combined zinc sheet on the top of the wood powder to avoid polarization. The contract will formulate an energy identified by the twin name 'Mitra' and 'Varuna' which is generally cathode and anode. Water will be divided by this current into 'Prajña vāvu' and 'Udān vāy' which are oxygen and hydrogen. In this way, by linking through wires, electricity will produce.

¹ Benjamin Franklin discovered electricity in the mid of 1700 AD. He explained the process in his famous book *Experiments and Observations on Electricity* on 1751 from London.

² This shloka is taken from the book *Agastya Samhita* written by Agastya. But there is a considerable disagreement about the period of the book and the author.



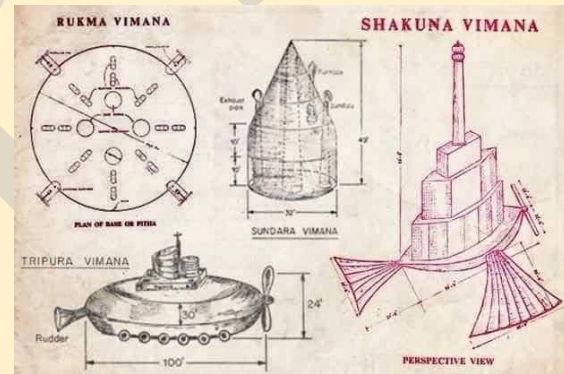
Picture Source: Google Image

So, the originally discovery of electricity was found in India which was unknown to us. On 5th August 1990, in Swadeshi Vigyan Samvidhan Sansthan,³ by maintaining this process, the battery was prepared and tasted. It produces a 1.138-volt open circuit voltage and 23 milliamperes or mA short circuit current.⁴

THE DISCOVERY OF AEROPLANE

My second topic is the invention of the aeroplane. We all know that Wilbur Wright and Orville Wright are invented the world's first successful aeroplane on 17th December, 1903. But in interesting fact is that, many of us do not know that, in the Vedic period, the great sage Varadwaj has provided technical instructions on the model and structure of aeroplane which is much better than today's aeroplane. However, all those books relevant to it are extinct over time. Recovering these scriptures and by compile them, the *Vymanika Shastra* was written by Pandit

Subbaroy Shastri.⁵ It includes 3000 shlokas which are divided in 8 chapters. The text has gained favour among proponents of ancient astronauts. This book was published in Sanskrit language. The *Vymanika Shastra* starts with a qualitative description as though a particular aircraft is being described. The topics covered include definition of an aeroplane, a pilot, aerial router food, clothing, metals, metal production, morrors and their uses in wars, varieties of machinery.³² secrets are there and mentioned that a pilot must be know them. These are (yantras) named 'mantrik', 'tantrik', 'kritak' etc.⁶ It also has details description of four types of planes called 'Shakuna',⁷ 'Sundara',⁸ 'Rukma'⁹ and 'Tripura'.¹⁰ It also describes a small part of a large work named 'Yantra sarvasva'¹¹ which is all about the mechanism composed by Maharshi Bharadwaj. The aeroplanes are looking like as bello



³ Swadeshi Vigyan Samvidhan Sanstha is Nagpur-based research and possibly an educational or a social organization linked to the broader Vijnana Bharati (VIBHA). On 1990, the experiment was held in Nagpur.

⁴ <https://www.mahakavya.com/formula-for-electric-battery-in-agastya-samhita/>

⁵ Full name of *Vymanika Shastra* is *Maharshi Bharadwaaja's Vymanika Shastra or Science of Aeronautics*, trslated into English and edited, printed

and published by G.R. Josyer, Printed at Coronation Press, Mysore-4, India

⁶ Sootra 4, *Vymanika Shastra*, Page No. 4

⁷ Sootra 5, *Vymanika Shastra*, Page No. 90

⁸ Sootra 6, *Vymanika Shastra*, Page No. 94

⁹ Sootra 1, *Vymanika Shastra*, Page No. 107

¹⁰ Sootra 2, *Vymanika Shastra*, Page No. 111

¹¹ *Vymanika Shastra*, Page No. 29

Picture source: vastutantraastro.wordpress.com

In the 102nd Indian Science Congress¹², Anand J. Bodas, who is a pilot and Ameya Jadhav, who holds an M. Tech degree presented a paper on *Vimanika Shastra*. They proved that aeroplanes of Vedic times could not fly only from country to country, but also from planet to planet. In those days, aeroplanes were huge in size and could move left, right as well as backwards, unlike modern planes which only fly forwards. So, the aeroplane model mentioned in *Vymanika Shastra* was much upgraded than today's mode.

THE DISCOVERY OF ATOM:

The next topic is the discovery of the atom. We all know that John Dalton is the inventor of the theory of atom. But many years ago, before John Dalton's invention, a sage named *Kanāda*, who lives in the jungle, gained knowledge about the atom and molecules by intuition¹³ through meditation and wrote it in his famous book *Vaiśeṣika Sūtra*. This book was composed in approximate 600 BC to 200 BC.¹⁴ This book has 373 aphorisms divided into ten chapters. In this book, he wrote about four types of atoms of substance that are *Kṣiti* (soil), *Ap* (water), *Tej* (fire) and *Maruti* (air). The smallest particle of substance he called '*paramanu*'¹⁵. Also, atoms are qualitatively different from each other. By combining two same qualitative atoms form a '*dvyanuka*' which is just like a line and is imperceptible to senses. Three of these

dvyanuka again produce the '*trasarenu*' which is a thing with magnitude and perceptible. Every object of creation is made of atoms turn connect with each other to form '*anu*' (molecules). Atoms are eternal and their combinations constitute the empirical material world. In modern science, the smallest particle in atoms has also been discovered in three concepts, called 'electron', 'proton' and 'neutron' which are claim to be inseparable. But the *paramanu* discovered by Maharshi Kanāda has not yet discovered in science till now. They are most fine and minimal things in the world.

On the other hand, *Vaiśeṣika Sūtra* includes the law of motion, relation between force and motion etc. First in the world, *Vaiśeṣika Sūtra* introduce the idea that 'motion is caused by conjunction and disjunction'.

[20] संयोगविभागवेगानां कर्म समानम् ॥ २० ॥
sanyogavibhāgavegānāṁ karma samānam ॥20 ॥

16

So, the *Vaiśeṣika Sūtra* proves that the concept of atom has been discovered in India many years before their invention in abroad.

THE DISCOVERY OF FACTS ABOUT ASTRONOMY:

¹² The 102nd Indian Science Congress was held at Mumbai University on 4th January, 2015

¹³ **Intuition** is the ability to directly acquire true knowledge without conscious reasoning, inference or sense experience.

¹⁴ *Vaiśeṣika Sūtra of Kanāda*, Debasish Chakrabarty, Page No. 27

¹⁵ *Analytical philosophy in early modern India*, J Ganeri, Stanford Encyclopedia of Philosophy, First published Tue Mar 10, 2009; substantive revision Sun Nov 5, 2023

¹⁶ *Vaiśeṣika Sūtra of Kanāda*, Debasish Chakrabarty, Page No. 43

The next topic that will be discussed is the last topic of this paper that is astronomy.¹⁷ We all know that, scientists like Galileo, Copernicus etc. have discovered a lot of information in astronomy which has been acceptable so far in science. NASA¹⁸ has achieved great success in space research. Its work is really commendable. However, our country is not far behind. The Indian organization ISRO¹⁹ is working successfully in research on space science.

But we do not know that, more than thousands of years ago, the information about space science has been discovered and scripted in various texts in our ancient India. Some of the earliest roots of Indian astronomy can be dated the period of Indus valley civilization or earlier. Astronomy later developed as a discipline of *Vedānga*²⁰ which is one of the auxiliary disciplines associated with the study of *Vedas* dating 1500 BC or older. The oldest known text is the *Vedānga Jyotiṣa*²¹ which was published about 1400 to 1200 BC. It includes the details about the Sun, moon, *nakṣatras*, lunisolar, calendar. It describes rules for tracking the motion of the moon for the purpose of rituals.

According to the *Vedānga Jyotiṣa*, in a *yuga* or era, there are 5 solar years, 67 lunar sidereal cycles, 1835 sidereal days and 62 synodic months.²² After that, Indian astronomy flowered in the 5th to 6th century with the book named *Aryabhatiyam* which is a Sanskrit astronomical treatise which was written by the great India mathematician *Aryabhata*. The 4th chapter of this book named '*Golapada*'²³ which have 50 verses explained geometric and trigonometric aspects of the lunar sphere, features of the ecliptic, celestial sphere²⁴, node, shape of zodiacal signs on horizon etc.

Other astronomers of classical era who further elaborated on *Aryabhatia's* work include *Brahmagupta*, *Varahamihira* and *Lalla*.

We also need to know more about our oldest literature *Rig Veda* which is a treasure of knowledge. Some cosmological concepts like movements of heavenly bodies, course of the year and measurement of time are described in *Rig Veda*. Shloka 1-164-11 and 48 describes time as a wheel with 12 parts and 360 spokes with the remainder of 5 which is regarded as days making reference to the solar calendar.²⁵ Thus *Subla*

¹⁷ **Astronomy** is the scientific study of celestial objects and phenomena beyond Earth's atmosphere, including planets, stars, galaxies, comets, and nebulae.

¹⁸ NASA stands for The National Aeronautics and Space Administration.

¹⁹ ISRO stands for Indian Space Research Organization

²⁰ *Vedānga* refers to the six auxiliary disciplines of Vedic literature—phonetics, meter, grammar, etymology, astronomy, and ritual—developed to help with the correct study, understanding, and recitation of the Vedas.

²¹ *Vedānga Jyotiṣa* is the **astronomy and astrology** branch of the six *Vedāngas*

(ancillary subjects) of the Vedas, focused on determining the correct time for rituals

²² *The Astronomy of the Age of Geometric Altars*, Shubash C. Kak (1995). *Quarterly Journal of the Royal Astronomical Society*. 36: 385–395

²³ There are six chapters in the book *Aryabhatiam*, these are *Gitikapada* (13 verses), *Ganitapada* (33 verses), *Kalakriyapada* (25 verses) and *Golapada* (50 verses)

²⁴ In **astronomy** and **navigation**, the **celestial sphere** is an **abstract sphere** that has an arbitrarily large **radius** and is **concentric** to **Earth**.

²⁵ *The Calendric Astronomy of the Vedas*, Sidharth, B. G. (1998). *Bulletin of the Astronomical Society of*

*Sūtra*²⁶, the text discussed advance mathematics and basic astronomy.

Picture

Source:

https://en.wikipedia.org/wiki/Indian_astronomy

This picture is a page from the Hindu calendar 1871–1872.



The classical era of Indian astronomy begins in the late Gupta era, in the 5th to 6th centuries. *Pañcasiddhantika* is a Sanskrit language text book written by astrologer-astronomer Varāhamihira includes five contemporary astronomical schools and their treatises. These are:

1. *Surya Siddhanta*
2. *Romaka Siddhanta*
3. *Paulisa Siddhanta*
4. *Vasishtha Siddhanta*
5. *Paitāmaha Siddhanta*

The first chapter '*Surya Siddhanta*' includes the definition of different units of time, eccentric model of planetary motion and planetary longitude corrections for various terrestrial locations.

Some of the ancient Indian astronomers are *Lagadha* (1st millennium BCE), *Āryabhata* (476–550 CE), *Brahmagupta* (598–668 CE), *Varāhamihira* (505 CE), *Bhāskara I* (629 CE), *Lalla* (8th century CE), *Śatānanda* (1068–1099 CE), *Bhāskara II* (1114 CE), *Śrīpati* (1045 CE), *Mahendra Sūri* (14th century CE), *Makarandacarya* (1438–1478 CE), *Nilakantha Somayaji* (1444–1544 CE), *Daśabala* (1055–1058 CE), *Acyuta Piṣārati* (1550–1621 CE), *Dinakara* (1550 CE),

India, provided by the NASA astrophysics data system. Page No. 108

²⁶ The *Shulba Sūtras* are part of the larger corpus of texts called the *Shrauta Sūtras*, considered to be

appendices to the *Vedas*. They are the only sources of knowledge of Indian mathematics from the Vedic period.

Mathurānātha Śarman (1609 CE) and Pathani Samanta (1835–1904).²⁷

Finally, it can be said that many more unknown discoveries are in ancient India which we must know. It is not possible to include all those in my paper. So, I am finishing my paper by requesting everyone that, all of us trying to know our Indian culture and discoveries and highlight those inventions so that the glory of India increases.

References:

1. Malaviya, Dr. Sudhakar.(2023). *Agastya Samhita*, Chowkhamba Sanskrit Series Office, Varanasi
2. Josyer, G.R. *Maharshi Bharadwaaja's Vymanika Shastra or Science of Aeronautics*, trslated into English and edited, Coronation Press, Mysore-4, India
3. Chakrabarty, Debasish. (1973). *Vaiśeṣika-Sūtra of Kaṇāda*, D.K. Printworld (P) Ltd., New Delhi
4. Ganeri, J. (10th March, 2009). *Analytical philosophy in early modern India*, Stanford Encyclopaedia of Philosophy, substantive revision Sun Nov 5, 2023
Link: <https://plato.stanford.edu/entries/early-modern-india/>
5. Seal, B., (1915). *The Positive Sciences of the Ancient Hindus*, London: Longmans, Green.
6. Staal, F., (1988), *Means of Formalisation in Indian and Western Logic*, in his *Universal: Studies in Indian Logic and Linguistics* (1988). Chicago: University of Chicago Press
7. Thakur, A., (2003), *Origin and Development of the Vaiśeṣika System*, PHISPC Volume II Part 4, New Delhi: Centre for Studies in Civilization
8. Kak Shubash C. (1995). *The Astronomy of the Age of Geometric Altars*, *Quarterly Journal of the Royal Astronomical Society*

9. Sidharth, B. G. (1998) *The Calendric Astronomy of the Vedas*,. *Bulletin of the Astronomical Society of India*, provided by the NASA astrophysics data system.

Link:<https://prints.iap.res.in/bitstream/handle/2248/3153/sidharth.pdf?sequence=1&isAllowed=y>

²⁷BCE stands for Before Common Era

CE stands for Common Era