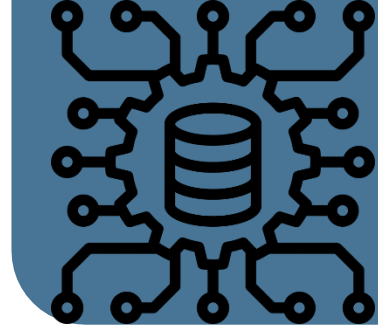
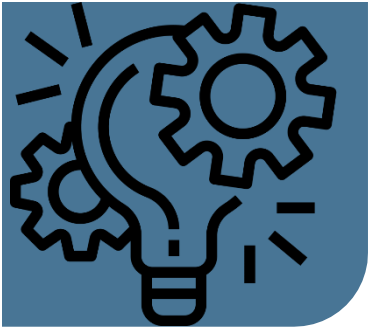




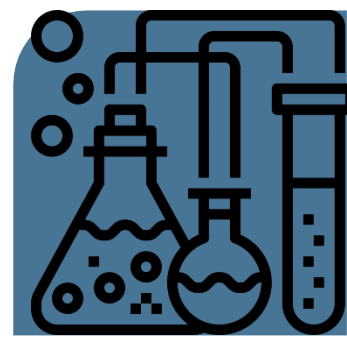
NEWSLETTER

(OCTOBER - DECEMBER 2023)



विज्ञान सर्वत्र पूज्यते

VIGYAN BHARATI RAJASTHAN



About VIBHA

India faces critical challenges as a nation in its march towards a welfare state. Considering the nature of the challenges which are so unique, only rapid strides in the sector of science and technology, in resonance with India's heritage can meet those challenges. In this context Vijnana Bharati, a science movement with swadeshi spirit has a greater role to play.

Vijnana Bharati (Swadeshi Science Movement) was started in Indian Institute of Science, Bengaluru by a few eminent scientists under the guidance of Prof. K.I. Vasu. This movement gradually gained momentum and emerged as an organization with national presence. In 1991(Oct 20-21) at the Nagpur meet, it was decided, to launch the Swadeshi Science Movement at all India Level and named it as Vijnana Bharati.

Vijnana Bharati has units in 22 states across the country and contacts in 4 states. It is working in 11 different areas through autonomous institutions, independent organizations & also as project entities.

Vigyan Bharati Rajasthan (VIBHA Rajasthan)

Vigyan Bharati Rajasthan is a state unit of Vijnana Bharati a non-profit organization dedicated to promoting science literacy and awareness among masses in the state. As per provisions of VIBHA, Rajasthan is divided geographically in three divisions, called as Prant. These prants namely are Jaipur, Chittor and Jodhpur.

The Activities and programs of VIBHA are being organized around Rajasthan in collaborations with various esteemed institutions like CSIR-Central Electronics Engineering Research Institute, Pilani, National Institute of Technical Teachers Training and Research, Chandigarh, Malviya National Institute of Technology, Jaipur, National Institute of Ayurveda, Jaipur, Bikaner Technical University, Bikaner, Rajasthan Technical University, Kota, Central University of Rajasthan, Ajmer and many more educational and scientific institutions.

Programs held between October-December 2023



- 5th October – **Poster Launch & Press Conference**
- 21st October – **2nd Program S.N. Bose Series and 32nd VIBHA Foundation Day**
- 24th December - **VVM State Level Camp 2023-24 and IISF 2023 Outreach Program**
- 21st to 24th December - **Bhartiya Vigyan Sammelan (BVS)**

Upcoming Programs In 2024



- 17th to 20th January - **IISF 2023, Faridabad, Haryana**
- 28th February - **National Science Day**
- March – **Prof. S.N. Bose Program hosted by CU Rajasthan, Ajmer**

Editorial



Dr. Meghendra Sharma
Organizing Secretary,
Vigyan Bharati Rajasthan

Embracing Scientific Excellence: A Glimpse into Vigyan Bharati Rajasthan's Journey

Dear Readers,

As we usher in a new year filled with promise and potential, it is with great pleasure that we bring you the latest edition of the Vigyan Bharati Rajasthan quarterly newsletter. In the spirit of scientific inquiry and innovation, our organization continues to be at the forefront of promoting a culture of scientific excellence and knowledge dissemination.

In the dynamic landscape of Rajasthan, Vigyan Bharati has emerged as a beacon of inspiration, fostering a scientific temperament among the youth and encouraging groundbreaking research. Our commitment to advancing science and technology is reflected in the diverse range of activities and initiatives undertaken over the past quarter.

One of the highlights of this quarter was the successful organization of the program titled ***“Contribution of Scientists and Scientific Institutions in Indian Freedom Struggle: Prof. S.N. Bose”*** at Arya College of engineering and IT, Kukas, Jaipur.

Vigyan Bharati Rajasthan also took significant strides in promoting science education at the grassroots level. Through ***Vidyarthi Vigyan Manthan (VVM)*** a digital based and largest science talent search exam for emerging India. ***Vidyarthi Vigyan Manthan (VVM) State Level Camp 2023*** was organized at Subodh Public School, Sanganer, Jaipur as host institution.

India International Science Festival (IISF) 2023 Outreach Program was organized in collaboration with CSIR-Central Electronics Engineering Research Institution (CEERI), Pilani at Subodh Public School, Sanganer, Jaipur

As we reflect on the achievements of the past quarter, it is evident that Vigyan Bharati Rajasthan is not merely an organization but a movement that empowers individuals to explore the wonders of science and contribute meaningfully to society. We extend our gratitude to our dedicated members, collaborators, and host institutions for their unwavering support, without which these accomplishments would not have been possible.

Looking ahead, we remain committed to fostering a culture of scientific curiosity, collaboration, and innovation. The journey ahead is filled with exciting possibilities, and with your continued support, Vigyan Bharati Rajasthan will undoubtedly continue to be a catalyst for scientific progress in our state.

Thank you for being a part of our journey.

A handwritten signature in black ink, appearing to read 'Meghendra Sharma'.

(Dr. Meghendra Sharma)

Glimpses of Programs

- **05th October 2023 Press Conference and Poster Launch** – The press conference and poster unveiling of the second program of the series of events titled "*Contribution of Scientists and Scientific Institutions in the Indian Freedom Struggle: Prof. S. N. Bose*" under the aegis of "Azadi ka Amrit Mahotsav" organized by Ministry of Culture, Government of India, in collaboration with Vigyan Bharati took place at Rajasthan Technical University, Kota. This program is being organized in collaboration with prestigious institutions such as Rajasthan Technical University (RTU) Kota, Bikaner Technical University (BTU) Bikaner, Central University of Rajasthan (CU Raj) Ajmer, and Shri Karan Agriculture University, Jobner as host institutes along with knowledge partner institutions like CSIR-CEERI, Pilani, NITTTR Chandigarh, MNIT Jaipur, ICAR-DRMR Bharatpur, and NIA Jaipur.

During the poster unveiling, Dr. Meghendra Sharma, Secretary, Vigyan Bharati Rajasthan and Prof. S. K. Singh, Vice-Chancellor, Rajasthan Technical University, Kota jointly addressed the press conference, stating that the program will be held on October 21, 2023, starting at 10:00 AM at Arya College of Engineering and IT, Jaipur. The event will showcase exhibitions on the lives and works of various Indian scientists, invited lectures, and various competitions such as essay writing, poster making, quiz, and model/project presentations. Additionally, on October 21, 2023, in commemoration of the 32nd Foundation Day of Vigyan Bharati, Lifetime Achievement Awards will be given as a tribute to the eminent personalities of Rajasthan who have made invaluable contributions to the field of science.



Newsletter Oct. – Dec. 2023

The objective of this program is to illuminate the role of scientists and scientific institutions in the Indian freedom struggle, especially focusing on the lives and works of 22 distinguished scientists from the pre-independence era, including Professor Satyendra Nath Bose. Dr. Arun Kumar Arya, Principal of Arya College of Engineering and IT, Jaipur, Dr. Rahul Srivastav, Head of the Electronics Engineering Department, Arya College of Engineering and IT, Jaipur; and Er. Ashutosh Sharma, CSIR-CEERI, Jaipur campus was also present during the program at RTU, Kota.

- **21st October 2023 - "Contribution of Scientists and Scientific Institutions in the Indian Freedom Struggle: Prof. S. N. Bose"**

In commemoration and completion of 76 glorious years of independence under "Azadi Ka Amrit Mahotsav" the Ministry of Culture, Government of India, and Vigyan Bharati jointly organized a series of thought-provoking programs titled "Contribution of Scientist and Scientific Institutions in Indian Freedom Struggle: Prof. S.N. Bose." The second program of this series took place on the 21st of October 2023 at Arya College of Engineering and IT, Jaipur, Rajasthan. The program received notable attention from scholars, students, and enthusiasts keen on exploring the interplay of science and history. The event was supported by esteemed institutions including Rajasthan Technical University, Kota, Bikaner Technical University, Bikaner, Central University of Rajasthan, Ajmer, and Sri Karan Narendra Agriculture University, Jobner as host institutions, and CSIR-CEERI, Pilani, NIA, Jaipur, MNIT Jaipur and ICAR-DRMR, Bharatpur as knowledge partners.

Dr. Meghendra Sharma, Organizing Secretary, Vigyan Bharati Rajasthan delivered the welcome address and introduced everyone to the program. Prof. T.G. Sitharam, Chairman, AICTE (All India Council for Technical Education) was the Chief Guest of the program. He emphasized the role of women in science and technology and highlighted India's progress in various fields of science, especially in Artificial Intelligence. Sh. Swant Ranjan, Akhil Bhartiya Bouddhik Pramukh was the keynote speaker of the event. The program was presided over by Prof. S.K. Singh, Vice-Chancellor, Rajasthan Technical University, Kota. Er. Anurag Agrawal, Chairman, Arya College of Engineering and IT delivered the vote of thanks.

Additionally, on the same day October 21, Vigyan Bharati celebrated their 32nd Foundation Day. On this occasion, Sh. Praveen Ramdas discussed the roadmap for reaching indigenous science to the masses. On the auspicious occasion of Vigyan Bharati's foundation day significant personalities in the field of science, technology, and education were honored with Lifetime Achievement Awards for their exceptional contributions.



Among those recognized were Dr. L.S. Rathore, Former DG, Indian Meteorological Department, GoI, Dr. N.K. Joshi, Former Senior Scientist, BARC Mumbai, Mrs. Lata Rawat, Educationalist and Mentor Cambridge Court Group, and Prof. Rishi Singhal, HoD Physics, Rajasthan University, were honored at the event.

Distinguished personalities who graced the program as Guest of Honor Includes Sh. Praveen Ramdas, National secretary, Vigyan Bharati, Dr. Brajesh Pandey, Executive Director, INSA, Prof. Ambarish S. Vidyarthi, Vice-Chancellor, Bikaner Technical University, Prof. Balraj Singh, Vice-Chancellor Shri Karan Narendra Agriculture University, Prof. Sanjeev Sharma, Vice-Chancellor, National Institute of Ayurveda, Prof. Alpna Kateja, Vice-Chancellor, Rajasthan University, Prof. P.C. Trivedi, Former Vice-Chancellor JNVU, Prof. K.K. Sharma, former Vice-Chancellor, MDS University, Ajmer, Sh. N.P. Rajive, Vice Chairperson NIF, Gandhinagar, Dr. P.C. Panchariya, Director, CSIR-CEERI, Dr. B.R. Gurjar, Director NITTTR, Chandigarh, Prof. Harish Hirani, Professor-HAG, IIT Delhi.



Eminent personalities present as Special Guest includes Dr. Ashwini Sharma, former DG RajCOMP, Dr. A. Lenin Fred, Principal Mar Ephraem Engineering College, Prof. Ashwani Kumar, former HoD, Dept. of Botany, RU, Dr. Saksham Gupta, Deputy Director, BIBT, Prof. B.L. Swami, Professor-HAG, MNIT, Jaipur, Prof. R.K. Dubey, Director HRDC JNVU, Jodhpur, Dr. Anjana Kumar, Principal RBMHS, Jaipur, Dr. Raghav Prakash, Director PCGE, Jaipur, Dr. Keshav Badaya Secretary, St. Wilfred's PG College, Jaipur.





- **24th December 2023 – Vidyarthi Vigyan Manthan (VVM) State Level Camp (SLC) 2023 and India International Science festival (IISF) 2023 Outreach Program** was organized by Vigyan Bharati Rajasthan in collaboration with Subodh Public School, Sanganer and CSIR-Central Electronics Engineering Research Institute, Pilani. Out of 128 total selected students 117 students across Rajasthan participated in the State level Camp of VVM. The top two students from each class were chosen for the national camp, and the top three students from every class were awarded cash prizes. An exhibition of various in house developed products and technology was organized by CSIR-CEERI to stimulate students' interest in science. Students had the opportunity to interact with scientists and get answers to all their questions.

Mrs. Diya Kumari, Hon'ble Deputy Chief Minister of Rajasthan, graced the program as the chief guest. In her keynote address, she emphasized the rapid progress of India in the field of science and technology under the leadership of Prime Minister Narendra Modi, citing examples such as the successful Chandrayaan 3 mission. Mrs. Kumari stated that the government will collaborate with scientific and educational institutions to focus on science, technology, and student welfare, working together to establish new benchmarks in the fields of education, science, and technology for the state and the country. Mr. Ravi Nayyar, a renowned social worker, Dr. P.C. Panchariya, Director, CSIR-CEERI Pilani, Dr. B.R. Gurjar, Director, NITTTR Chandigarh, Dr. Brajesh Pandey, Executive Director, INSA, New Delhi and Sh. Prashant Ji, Vibhag Pracharak, Sanganer Vibhag, RSS was present as the special guests of the program. Dr. Meghendra Sharma, Secretary, Vigyan Bharati Rajasthan was the chief coordinator of the program. He provided detailed insights into the objectives of the Vidyarthi Vigyan Manthan (VVM) and the India International Science Festival (IISF) and their organization.





Dr. Sharma said that the India International Science Festival (IISF) is a collaborative endeavor between Ministry of Science and Technology, Ministry of Earth Sciences, Department of Space and Department of Atomic Energy in partnership with Vijnana Bharati (Vigyan Bharati) - a science movement spearheaded by scientists of the nation with swadeshi spirit. IISF's primary objective is to commemorate the world of science, making it accessible to all. The essential notion is to engage general populace with science in an enjoyable and entertaining manner, thereby contributing to health, prosperity and meaningful life. By means of its inventive programs and initiatives, IISF extends opportunities for people and scientific community, both within the country and internationally, to come together, collaborate and partake in the gratification of advancing scientific pursuits towards betterment of India and humanity. IISF 2023 is scheduled to be held in Faridabad from January 17 to 20, 2024, with the aim of promoting awareness in the fields of science, technology, and innovation. The festival aims to provide an educational environment and facilitate dialogue between students and scientists. IISF 2023 will showcase innovative exhibitions, workshops, lectures, and panel discussions, promoting excellence in scientific questions, inspiring youth, and fostering self-reliance in thoughts between scientists, researchers, and the public.

Dr. Vijay Chatterjee, Senior Scientist, CSIR-CEERI, Jaipur Campus and Mrs. Sarika Gaur, Principal, Subodh Public School, served as nodal coordinators.

The participants, including students, teachers, and parents, expressed their appreciation for the program. Certificates and medals were awarded to all participating students, and winners of the State-level camp received an opportunity to participate in the National level camp.









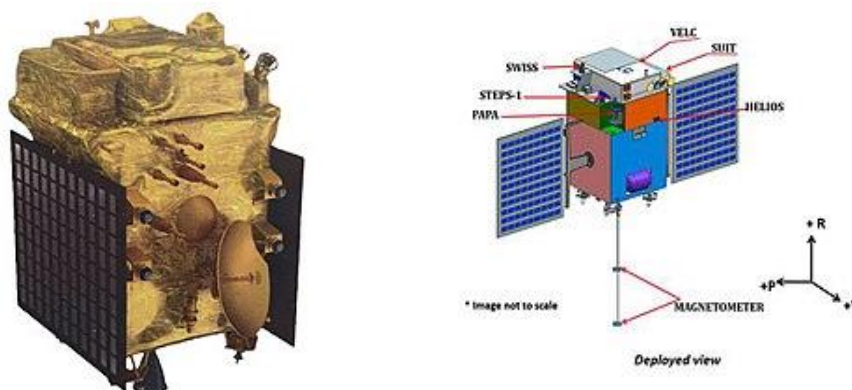
ADITYA-L1

Aditya-L1 is a coronagraphy spacecraft for studying the solar atmosphere, designed and developed by the Indian Space Research Organisation (ISRO) and various other Indian research institutes. It will be orbiting at about 1.5 million km from Earth in a halo orbit around the Lagrange point 1 (L1) between the Earth and the Sun, where it will study the solar atmosphere, solar magnetic storms, and their impact on the environment around the Earth.

It is the first Indian mission dedicated to observe the Sun. Nigar Shaji is the project's director. Aditya-L1 was launched aboard the PSLV C57 at 11:50 IST on 2 September 2023, ten days after the successful landing of ISRO's Moon mission, Chandrayaan-3. It successfully achieved its intended orbit nearly an hour later, and separated from its fourth stage at 12:57 IST. It is projected to reach its designated orbit at the L1 point on 6 January 2024, at around 4 p.m.

The main objectives of Aditya-L1 are:

- To observe the dynamics of the Sun's chromosphere and corona:
 - To study chromospheric and coronal heating, the physics of partially ionised plasma, of coronal mass ejections (CMEs) and their origins, of the coronal magnetic field and heat transfer mechanisms, and flare exchanges.
- To observe the physical particle environment around its position.
- To determine the sequence of processes in multiple layers below the corona that lead to solar eruptions.
- To study space weather, and the origin, composition and dynamics of solar wind.



Aditya-L1 in stowed configuration Aditya-L1 in deployed configuration

The mission was conceptualised in January 2008 by the Advisory Committee for Space Sciences (ADCOS). It was initially envisaged as a small, 400 kg (880 lb) satellite in a Low Earth Orbit (800 km) with a coronagraph to study the solar corona. An experimental budget of ₹3 crore was allocated for the financial year 2016–2017. The scope of the mission has since been expanded and it became a comprehensive solar and space environment observatory to be placed at Lagrange point 1 (L1), hence the mission was renamed as "*Aditya-L1*". As of July 2019, the mission has an allocated cost of ₹378 crores, excluding launch costs.

The mission will take around 109 Earth days after launch to reach the halo orbit around the L1 point, which is about 1,500,000 km (930,000 mi) from Earth. The spacecraft is planned to remain in the halo orbit for its mission duration while being maintained at a station keeping Δv of 0.2–4 m/s per year. The 1,500 kg (3,300 lb) satellite carries seven science payloads with various objectives, including instruments to measure coronal heating, solar wind acceleration, coronal magnetometry, origin and monitoring of near-UV solar radiation (which drives Earth's upper atmospheric dynamics and global climate), coupling of the solar photosphere to the chromosphere and corona, and in-situ characterisations of the space environment around Earth by measuring energetic particle fluxes and magnetic fields of the solar wind, and solar magnetic storms. Aditya-L1 will provide observations of the Sun's photosphere, chromosphere and corona. Its scientific payloads must be placed outside the interference from the Earth's magnetic field, and hence, could not have been useful in the low Earth orbit, as proposed in the original mission concept back in 2008.

State Executive Committee

President

Dr. L.S. Rathore

Organizing secretary

Dr. Meghendra Sharma

Treasurer

Dr. Umesh Gupta

Vice President

Sh. S.N. Saini

Dr. Shankar Baboo

Joint secretary

Er. Shailesh Jain

Er. Sanjay Bansal

Executive members

Prof. N.K. Gupta, Director Education SKNU

Dr. Madhu Shrivastava, Ex. Principle Subodh Girls College

Dr. Amit Kotia, Assistant Professor RU

Mrs. Anju Singh, Central EC Member MSME

Dr. Santosh Sharma, Assistant Professor Govt. College Jaipur

Dr. Kavita Tak, Associate Professor Subodh PG College

Dr. Balram Tripathi, Associate Professor Subodh PG College

Er. Ashok Nagaich, Ex. Additional Chief Engineer, JVVNL

Er. Mahesh Paliwal, Ex. Director Engineering Doordarshan Kendra

Dr. Varun Jindal, Assistant Professor MNIT

Advisory Board

Dr. P.C. Panchariya, Director CSIR-CEERI, Pilani (**Convenor**)

Prof. B.R. Gurjar, Director NITTTR, Chandigarh

Prof. Ambarish S. Vidyarthi, VC BTU, Bikaner

Prof. S.K. Singh, VC RTU, Kota

Prof. Balraj Singh, VC SKNAU, Jobner

Prof. Sanjeev Sharma, VC NIA, Jaipur

Prof. N.P. Padhy, Director MNIT, Jaipur

Prof. Sandeep Sancheti, VC Marwadi University, Rajkot

Prof. K.K. Sharma, Ex VC MDSU, Ajmer

Dr. P.K. Rai, Director ICAR-DRMR, Bharatpur

Prof. Harish Hirani, Professor HAG IIT Delhi

Dr. B.L. Swami, Professor HAG MNIT, Jaipur

Dr. B. Lal Gupta, Director, BIBT, Jaipur

Dr. Raghav Prakash, Chairman PCGE, Jaipur

Er. Anurag Agarwal, Chairman ACEIT, Jaipur

Prof. K.B. Sharma, Principal Subodh PG College, Jaipur

Dr. Keshav Badaya, Chairperson St. Wilfred's PG College, Jaipur

Prof. Ashwini Kumar, Ex. HOD RU

Dr. Ashwini Sharma, EX DG RajCOMP

Invited Members of Executive Committee

Vibhag Pramukh

Prof. Rishi Singhal, HoD Dept. of Physics, RU (Jaipur Vibhag Pramukh)
Prof. Bhawani Shankar, VC Lords University, Alwar (Alwar Vibhag Pramukh)
Dr. Pankaj Agrawal, Sr. Principal Scientist, CSIR-CEERI, Pilani (Jhunjhunu Vibhag Pramukh)
Dr. Brajraj Singh, Assistant Professor MUST, Laxmangarh (Sikar Vibhag Pramukh)
Sh. Jeevan Joshi, Academician (Churu Vibhag Pramukh)
Dr. Amit Shukla (Sawai Madhopur - Karauli Vibhag Pramukh)
Prof. Sudesh Kumar, Banasthali Vidyapeeth (Sanganer- Tonk Vibhag Pramukh)
Dr. Sunil Gupta, (Bharatpur Vibhags Pramukh)

Aayam Pramukh

1. VVM

Dr. Sumit Gupta, HoD Physics, St. Wilfred's College, Jaipur
Dr. Mayur Bhati, EIACP, ICAR-CAZRI, Jodhpur
Dr. Shirish Sharma, Assistant Professor, RAU, Bikaner
Er. Ashutosh Sharma, CSIR-CEERI, Jaipur Campus

2. NSOIM

Dr. Vijay Chatterjee, Sr. Scientist, CSIR-CEERI, Jaipur Campus
Adv. Chetan Meena, Entrepreneur
Sh. Pawan Pareek, CEO Chandra Group
Er. Satyendra Singh, Entrepreneur

3. Shakti

Dr. Madhu Shrivastava, Former Principal, S.S. Jain Subodh Girls College, Sanganer
Dr. Kavita Tak, Associate Professor, S.S. Jain Subodh Girls College, Sanganer
Smt. Sunita Sharma
Dr. Aparna Pareek, Assistant Professor, RU
Dr. Sunidhi Mishra, Assistant Professor, MUST, Laxmangarh
Ms. Neha Verma, Academic Head, MKM School, Sikar

**“सर्वस्य लोचनं शास्त्रं”
“विज्ञान (शास्त्र) सभी के लिए आँख के समान है”
“Science is an eye for everyone”**

Contact Information

Office Address: 77/177, Arawali Marg, Shipra Path, Mansarovar, Jaipur – 302020

Phone: 9829021975, 8058836972

E-mail: sec.vibharajasthan@gmail.com

Website: www.vibharajasthan.org