



**TARA GOVERNMENT COLLEGE (A), SANGAREDDY**

Re-Accredited with "B" grade by NAAC



**DEPARTMENT OF ECONOMICS (HOPE)**

&

**ENTREPRENEURSHIP DEVELOPMENT CELL (EDC)**


**FIELD VISIT**


**ISRO 'SPACE ON WHEELS' AND SCIENCE MUSEUM**


**18-07-2022**



ISRO 'SPACE ON WHEELS' CHRONICLES 75 SATELLITES LAUNCHED  
UNDER INDIAN SPACE PROGRAMME

  
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Tara Government College (A)  
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PRINCIPAL,  
**PRINCIPAL**  
Tara Govt. College (A)  
Sangareddy, Telangana

# REPORT OF FIELD VISIT

## THEME OF VISIT:

**ISRO Revenue from Commercial Satellites Launches: Economic Importance**

## Objectives of the Visit:

1. To make awareness about Economic Importance of Satellites launch by ISRO
2. To Understand the revenue from commercial satellites under Indian space programme.

The field visit to Science Museum and ISRO Space on Wheels Bus is organized by the Club of Department of Economics i.e., HOPE in association with Entrepreneurship Development Cell (EDC) to make awareness among the students about the Economic importance of ISRO satellites and income generation from ISRO commercial satellites since its inception.

The ISRO's a mobile bus (Space on Wheels) exhibited in the Science Museum, Sangareddy, Telangana state on 18<sup>th</sup> July 2022 and we along with a group of students visited and ISRO scientists and a Scientist from Planetarium Sri Raghunandan helped us in knowing the economic importance of Satellites and revenue generating from indigenous commercial satellites launching by ISRO-Vikram Sarabai Space Centre, Govt. of India.





**Scientist Raghunandan briefing about Economic Importance of Satellites, along with Dist. Science Officer, Vijay Kumar, Sangareddy**



## SPACE ON WHEELS EXPO

Space on wheels, a mobile exhibition unit of Indian Space Research Organization (ISRO), was launched with S. Somanath, Director, Vikram Sarabai Space Centre (VSSC), to mark the birth centenary of Vikram Sarabai and the 50<sup>th</sup> anniversary of the formation of ISRO., expressing the hope that it would inspire school children to learn more about the Indian space Programme. Space on Wheels is arranged inside a bus and features scale models of ISRO launch Vehicles, Satellites, Space applications and the launchpads, which make awareness about space technology and ISRO.



## ISRO REVENUE FROM COMMERCIAL SATELLITES LAUNCHES:

Since the inception of the Indian space programme, ISRO has designed and developed satellites for a wide variety of applications, such as communication, meteorology, Earth observation & space science.

The Indian Space Research Organisation (ISRO) generates its major share of revenue by the sale of satellite data, leasing the INSAT/ GSAT transponders along with various other services. These services include (i) Marketing and direct reception of data from Indian Remote Sensing Satellites to national and international clientele, and (ii) Leasing of satellite transponders onboard INSAT/ GSAT satellites. Meanwhile, Antrix had dealings with EADS Astrium, Intelsat, Avanti Group, WorldSpace, Inmarsat, and other space institutions in Europe, Middle East and South East Asia. At present, there are about 1,100 operational satellites orbiting earth while there are about 5-6 PSLV launches every year.

Antrix Corporation Limited, which is the commercial arm of ISRO promotes ISRO's products, services and technologies. Antrix is a Public Sector Undertaking (PSU), wholly owned by the Government of India. It was incorporated as a private limited company owned by the Indian government on 28 September 1992 and is administered by the Department of Space (DoS). However, it earns just over 10% of the money allocated to it by the govt.

In five years, revenue generated by launching satellites for other countries stood at Rs 1,245.17 crore. The Indian Space Research Organisation has launched satellites from 26 countries during the last five years, Jitendra Singh, minister in charge of atomic energy and space, told Rajya Sabha. The revenue earned by the commercial arm of India's space agency rose by around 40 per cent in 2018-19 to Rs 324.19 crore from Rs 232.56 crore last year, helped by satellite launches for foreign customers.

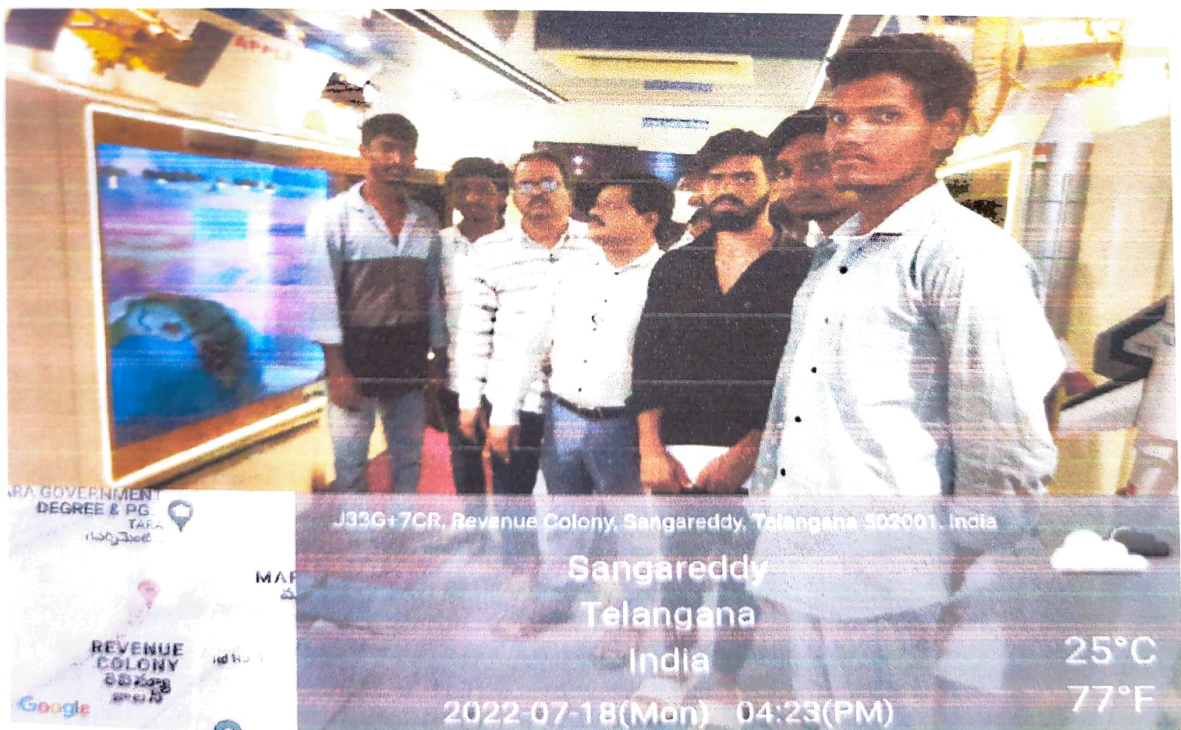
He added, contracts with 10 countries namely; USA, United Kingdom, Germany, Canada, Singapore, The Netherlands, Japan, Malaysia, Algeria and France were signed in the last five years under commercial arrangements.

Indian Space Research Organisation (ISRO) has not just given a stellar performance in space missions, but it has also done the same in its revenue and



financial condition. The premier Indian space agency has proved to be a cash cow, earning Rs 1,245 crore by launching satellites from 26 different nations in the last five years. ISRO generated revenue worth Rs 324.19 crore in the fiscal year 2018-2019 which is a near 40% jump from its earnings of Rs 232.56 crore in 2017-2018.

Adding a feather to its hat, ISRO earned India foreign exchange worth Rs 91.63 crore in 2018-19. Contracts with 10 countries –US, UK, Germany, Netherlands, Japan, Malaysia, Algeria, Canada, Singapore and France – were signed under commercial arrangements in the last five years. So far, India has launched 319 foreign satellites since 1999. The information was tabled in Rajya Sabha by Union Minister for Atomic Energy and Space Dr. Jitendra Singh.



**Students of Tara Govt. College, Sangareddy (A) visit, along with Dr. G. Jagadishwar and Dr. A. Venkatesham**

## **PSLV's 'Golden Jubilee' Mission**

ISRO successfully launched its PSLV48 (Polar Satellite Launch Vehicle) carrying India's Earth Observation Satellite RISAT-2BR1 and 9

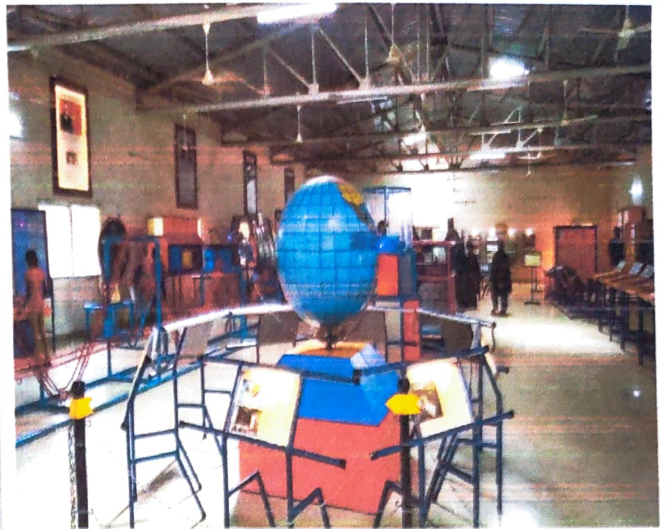
commercial satellites on December 11. PSLV-C48 is the 50th mission of PSLV and carried satellites of Israel, Italy, Japan and USA as co-passengers along with RISAT-2BR1. These international customer satellites have been launched under a commercial arrangement with New Space India Limited. The Polar Satellite Launch Vehicle (PSLV) is, by far, the most experienced launcher in India. This third-generation launch vehicle by Indian Space Research Organisation (ISRO) has successfully propelled Chandrayaan-1 and Spacecraft of the Mars Orbiter Mission out of Earth's powerful gravity in 2008 and 2013 respectively.

### **ISRO tapping small satellite launch market**

ISRO's overall market share in the global satellite launch industry is near 2%. US space company SpaceX, founded and owned by billionaire Elon Musk, holds the lion's share in the market. However, ISRO has dedicated a lot of efforts in innovation for low-cost satellite launches with its workhorse PSLV. Ready to exploit a growing market of small satellite launches in the world, ISRO is developing a Small Satellite Launch Vehicle (SSLV), or mini-PSLV, whose maiden test-flight is due in the first quarter of 2020.







**Students of B.A. final year visited C. V. Raman Science Museum, Sangareddy as part of Field Trip on 18-07-2022**





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I am CH. Sauganya studying in Degree final year BA (HEP) group. We are going in ISRO 'SPACE ON WHEELS' and SCIENCE MUSEUM. Many types of missions. In this museum on one bus in ISRO organization. ISRO organization presents in a Pocket. In this organization we are having in India space development in we are unexpected in this ISRO organization development. Very nice idea and we are very happy.

CH. Sauganya  
BA (HEP)  
6058-19-129-006

My Name is Vishal I am from Tara College yesterday we and my BA III<sup>rd</sup> year students we visited the Sangareddy ISRO SPACE WHEELS and SCIENCE MUSEUM its very nice and I am proud of like this science museum and its very great to have in our country.

Vishal  
D. Vishal  
BA HEP III<sup>rd</sup> year  
English Median



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I visited a science museum in that museum we all types of machines and they total organized ISRO Project in the bus. We got all the knowledge about ISRO launch etc.

V. LAVANYA  
BA HEP III<sup>rd</sup> year  
Final year.  
Roll No: 6058-19-129-030

I am B. Srikanth BA 3<sup>rd</sup> year I visited in Sangareddy. Science museum in the museum Topic 'ISRO' SPACE. ISRO Space come one bus. and explain the ISRO Rackets observed and more knowledge and in India ISRO is very developed good Technology in the but Technically Explain space things. in the bus.

B. Srikanth  
BA (HEP) III<sup>rd</sup> year  
Roll = 6058-19-129-003.