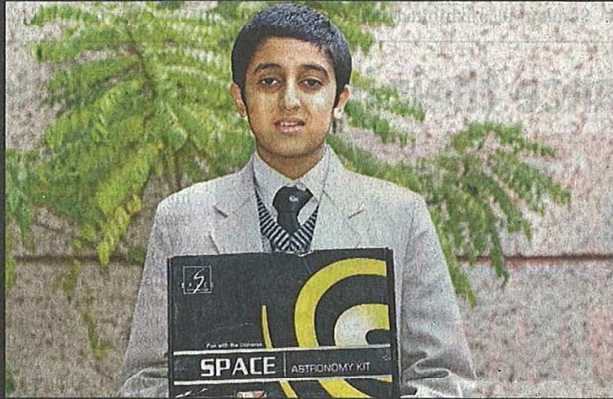


The Asteroid Chasers

Two class VII students of Lotus Valley International School, Sec 126, Noida have discovered asteroids. Here's how they went about it

DHEERAJ DESHPANDE



Q How did you find this asteroid?

SPACE India conducted a workshop to teach us how to find asteroids. For this purpose, we used a special software called Astrometrica. SPACE India taught us how to identify possible asteroids and how to report them. Thereafter, we received data sets from the observatory. We analysed the data sets and reported any probable asteroids that we found.

Q Was it easy to find this asteroid?

The training session had prepared us to find asteroids on our own. When we received the data sets, we set about analysing them. We spent about 30 minutes a day poring over data sets looking for asteroids with continuous 24x7 support by the team at SPACE India.

Q Tell us about the features of the asteroid you found.

The characteristics we looked for were Signal-to-Noise (SNR), magnitude and a straight path.

Q Why is it important to study asteroids?

Asteroids are important because they may tell us about the origin of our solar system. According to a NASA investigator, "The materials that the asteroids are made of represent the building blocks of the planets". Further, scientists believe an asteroid that crashed into Earth deposited some material which allowed life to begin. So the study of asteroids may bring us better insight into the origins of life. Also, asteroids may pro-



➤ Asteroids are small solar system bodies which orbit the Sun. There are made of rock and metal, they can also contain organic compounds (some scientists suggest that asteroids could have brought the necessary chemicals to start life on Earth).

➤ Asteroids are similar to comets but do not have a visible coma (fuzzy outline and tail) like comets do.

➤ They are also known as planetoids or minor planets.

➤ Asteroids vary greatly in size, some feature diameters as small as 10 metres while others stretch out over hundreds of kilometres. Objects under 10 metres in diameter are generally regarded as meteoroids.

➤ Interestingly, the first asteroid was discovered in 1801 by Italian astronomer Giuseppe Piazzi. Named Ceres, it features a diameter of around 950 kilometres and is now regarded as a dwarf planet. Ceres was given dwarf planet status in 2006, along with Pluto, Eris, Makemake and Haumea.

➤ The asteroid belt lies roughly between the orbits of Mars and Jupiter in the Solar System. It is home to a large amount of irregular shaped asteroids that range in size from dust to the dwarf planet Ceres.

➤ The technology used for discovering asteroids has improved dramatically since original discoveries and astronomers now have access to a range of powerful telescopes to aid in their research and discoveries.

QUESTIONS BEHIND DISCOVERY OF ASTEROIDS

THE ORGANIZATION THAT HELPS STUDENTS

SPACE has been bringing the All India Asteroid Search Campaign – a prestigious international science programme to India for the last six years in collaboration with IASC (International Astronomical Search Collaboration) based in the US. This programme gives students the opportunity to be a part of real-time science and be at the forefront of international research.

HOW STUDENTS DISCOVER ASTEROIDS

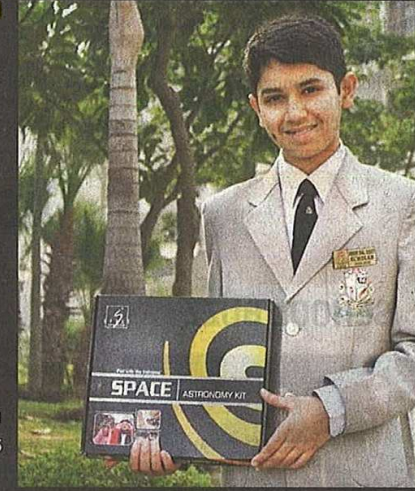
Students are given exclusive access to images of the sky taken through telescopes in the US and use specialised software to look for asteroids in the data. SPACE gives students specialised training in the software and data analysis to make them equipped for the programme. Students get the opportunity to interact with international scientists and work in an international environment of scientific cooperation impossible for school students otherwise.



ANSH BAL DIXIT

Q How did you discover the asteroid?

SPACE India had conducted a training session in which we were taught the basics of spotting an asteroid in sample image sets. The software we worked upon was Astrometrica. When the campaign started, image sets were being sent to us from Texas and in one such image set, I was able to find an asteroid which further went on to become a provisional discovery.



Q What have you named your asteroid?

The original name I gave to this asteroid was abd2004 as per the guidelines given by AIASC. Since it was conducted by SPACE India, it made it mandatory to name the asteroid with three letters followed by four numerals. abd – these are the initials for my name and 2004 is my birth year.

Q Was it easy to find the asteroid?

Equipped with adequate training imparted by SPACE India, it wasn't a very difficult task to find the asteroid.

Q Why is it important to study asteroids?

The study of asteroids is important as they can turn out to be major threats to our planet. Also, asteroids have a huge amount of mineral wealth and with some advancement in spacecraft and robotic technology, these asteroids can be used as sources of raw material to colonise space.

Q What's next for you?

I have always looked forward to studying in the US. This provisional discovery has further strengthened my resolution to make a mark for myself. I would like to work with NASA in the future and make my country proud of me.

The stars didn't want it. My blossoms run up to me. Chanting the revised melody. When I finally got hold of one. My pockets were torn, I couldn't pay the fare. Oh! My stars aligned. NAVYA KAPOOR, IX-D, St Thomas' School, which were heard and answered properly. rest. Also make sure that negativity doesn't enter your mind. The students participated enthusiastically by asking several meaningful questions based on examination stress.