



SUBSCRIBE NOW

READ NOW

Home News Astronautics Science Environment Security Specials Opinion Lounge Community

17<sup>TH</sup> Reinventing Space Conference  
12-14 November 2019 • Belfast

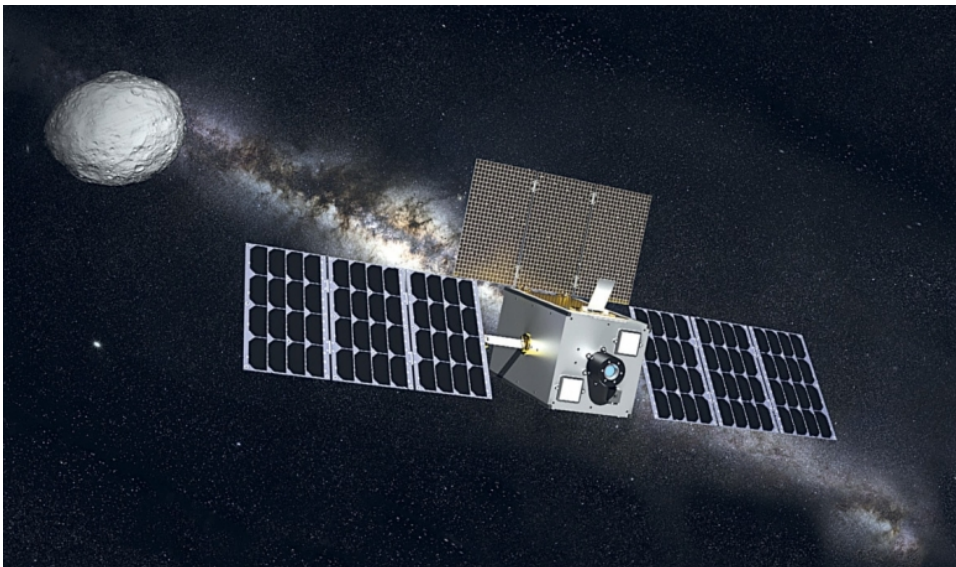


GO TO  
[www.rispace.org](http://www.rispace.org)  
FOR FULL DETAILS

Issue #2(16) 2018

Science

# The rise of interplanetary CubeSats



ESA deep space CubeSat proposal for an asteroid mission.

Jekan Thanga  
University of Arizona, USA

Facebook Twitter Google+ Share

The rapid-miniaturisation of electronics, power systems, instruments and propulsion systems has led to briefcase-sized CubeSat spacecraft that are on the verge of exploring deep space.

The CubeSat standard was developed in the year 2000 by a pair of university professors, Jordi Puig-Suari (CalPoly) and Robert Twiggs (Stanford) who were looking to improve hands-on experience and skills for science and engineering students. It defines standardised masses and volumes for small spacecraft, in addition to specifying how to safely integrate the spacecraft within a rocket fairing using the PPOD, an electro-actuated jack-in-the-box.

Popular configurations are the 3U (10 × 10 × 34 cm), about the size of a loaf of bread, and the 6U (12 × 24 × 36 cm) the size of a brief-case.



See also



Space for Art – Astronauts and artists



Panoramas from the surface of the Moon



To date more than 800 nanosatellites have been launched into low Earth orbit (LEO), with a majority of launches after 2010 by new and emerging players including commercial startups, universities and government research laboratories.

Exploration of deep space marks the next giant leap for CubeSats. There are ambitious missions afoot to explore the Moon, Mars and near-Earth asteroids using CubeSats. These plans are led not just by government-space agencies but include university research groups, research laboratories and startups.

Specials  
SLS ushers transformation of deep space exploration

SUBSCRIBE NOW

READ NOW



To continue reading this premium article, subscribe now for unlimited access to all online content

SUBSCRIBE NOW

If you already have a login and password to access www.room.eu.com - Please [log in](#) to be able to read all the articles of the site.

### Popular articles



### A reluctant American hero



### Who owns outer space?



### Does the speed of light change with time

Facebook Twitter Google+ Share

Tags

CubeSat MarCO interplanetary mother-daughter architecture

Sign up to receive your free issue of ROOM: The Space Journal

email address

SUBSCRIBE

### Popular articles



Astronautics



Astronautics



Astronautics

[The challenge of planetary protection](#)

[Asgardia's parliament – a year of progress](#)

[Settling the final frontier](#)