

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Lift Off - Secondary Space Education (2)

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## HKUST SPACE CAMP: INSPIRING FUTURE SPACE EXPLORERS IN HONG KONG

**Abstract**

Despite its massive efforts in education and research, Hong Kong has currently very few space related activities and programs, apart from student initiatives such as astronomy clubs at schools. We, at The Hong Kong University of Science and Technology (HKUST) - Centre for Space Science Research, are going to change that in the summer of 2013 through a first-of-its-kind space camp for secondary school students. The objective is to educate the Hong Kong youth about space and astronautics, to inspire their imaginations, and to arouse their interest in the topics.

During the camp participants will learn through a combination of mini-lectures, workshops and physical activities about three main aspects of the space industry: 1) Science, such as astronomy, cosmology, and planetary science; 2) Engineering, such as astrodynamics, propulsion, design of robotic and human missions; 3) Economics, such as commercial space travel, satellite launches, space resource utilizations. We will also treat popular science fiction topics like extraterrestrial life and space colonization through a scientific point of view. Emphasis will also be put on the applicability of secondary school level math and science, especially calculus, vectors, classical mechanics, optics, and chemistry. The purpose is to show to students that 'space' is not as out of reach as they often seem. Special focus will be put on the achievements and future missions and goals of the Chinese space program.

The activities are designed to inspire the students' imagination and creativity while being fun and educational. During the camp participants will learn and experience space science topics through highly interactive workshops using games and visualisation tools to facilitate the learning and to deepen the experience together with hands on activities through games and challenges. Professors and researchers from the HKUST physics department and Institute of Advanced Studies are invited for hosting the workshops and interacting with the participants.

At the end of the camp participants experience the topics through a project where the students get to contribute to real life space science or engineering problems under the theme: "The future of the Chinese

Space Program". At the IAC in Beijing, we will report the lessons learnt during the camp with respect to its goals and share the students' work and their visions for the future.