Paper ID: 31370
oral

66th International Astronautical Congress 2015

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Tools and Technology in Support of Integrated Applications (1)

Author: Mr. Rémi Gourdon
International Space University (ISU), France, gourdon.remi@gmail.com

Mr. Alaa Hussein
International Space University (ISU), United Kingdom, Alaa.Hussein@community.isunet.edu
Ms. Anushree Soni
International Space University (ISU), Canada, anushree.soni@community.isunet.edu
Ms. Bora Aliaj
International Space University (ISU), Albania, bora.aliaj.ba@gmail.com
Mr. Carlos Manuel Entrena Utrilla
International Space University (ISU), Spain, c.entrena-utrilla@community.isunet.edu
Mr. Idriss Sisaïd
International Space University (ISU), France, idriss.sisaid@gmail.com
Ms. Jessica Reinert
International Space University (ISU), United States, jessica.m.reinert@nasa.gov
Mr. Jonathan Faull
International Space University (ISU), Ireland, jonathan.faull@gmail.com
Ms. Laura Bettiol
International Space University (ISU), Italy, laura.bettiol.1@studenti.unipd.it
Mr. Nikola Schmidt
International Space University (ISU), France, nikola.schmidt@community.isunet.edu
Mr. Shrrirup Nambiar
International Space University (ISU), India, shrrirup.nambiar2@gmail.com
Mr. Tihomir Dimitrov
International Space University (ISU), Bulgaria, tihomirdimitrov@yahoo.com
Mr. Madhu Thangavelu
University of Southern California, United States, thangavelu-girardey@cox.net

THE INTERNATIONAL SPACE UNIVERSITY SPACE STUDIES PROGRAM 2015 PLANETARY DEFENSE PROJECT

Abstract

Asteroid and cometary impacts on planetary bodies are a natural, ongoing residual process that remind us of solar system genesis and evolution.Established spacefaring countries are currently working on plans to engage the world community of nations in dealing with this threat that has already caused recent havoc in the city of Chelyabinsk in Russia.

Defending our home planet against hazardous asteroids and comets is a very high priority issue because a high energy impact by larger objects has the potential to literally wipe out large population centers,

decimate flora and fauna, upset our fragile climate and cause incalculable damage to critical physical infrastructure.So it is imperative that we prepare to defend our home planet, especially since new technologies allow us to do so. Space systems and allied technologies must play a key role in planetary defense. However the advanced systems and technologies to be employed will also require unprecedented cooperation and coordination among nations that can only be achieved using state of the art information and communication networks that are maturing right now. Global involvement and innovative and agile organizations, creative structures in policy making and governance are a prerequisite for agile action that is necessary for effective response.

Since asteroid or comet impact poses a global threat, like climate change, Planetary Defense aspires to all humanity. Technologies are maturing that can be commissioned to mitigate this threat. It is imperative that we find ways to integrate all peoples and nation states in this global endeavor. Nations and their space agencies are currently joining forces to examine the problem.

The International Space University(ISU) Space Studies Program(SSP) will hold its 28th summer session at the Ohio University, Athens, Ohio between June 08 and August 07, 2015. Over a hundred highly qualified graduate and post graduate students as well as young space professionals in leadership roles selected from a large pool of candidates from various space agencies around the globe will once again come together to study space exploration in a interdisciplinary, intercultural and international environment, with experts informing them on all aspects of space activity. They will explore the future of space activity and create innovative concepts for all the world to engage in and share. One of the team projects selected for this session is planetary defense.

This paper and presentation will report on the findings and recommendations of the 2015 ISU SSP Planetary Defense team project.