中華民國天文學會
The Astronomical Society of the Republic of China (Taiwan)

Contribution ID: **88** Type: **Poster**

Localization Performance of a Compact GRB Monitor to Fly on a future Cubesat

This paper reports the localization performance analysis of a compact GRB monitor to fly on a future cubesat. This proposed GRB monitor consists of four hexagonal CsI scintillator detectors of geometric area 12.5 cm^2 encased in 2 mm thick aluminium (Al7075) on the sides and one square detector of area 8 cm^2 on the top. All detectors have a thickness of 0.5 cm. The base of the detector module has a 0.3 mm thick tungsten layer to protect the SiPM from radiation damage. In this study, we prepare 2 simulation models of the instrument using MEGAlib/Geomega - one with 5 detectors (4 hexagonal + 1 square on the top) and the other with only the 4 hexagonal detectors. We run simulations with MEGAlib/Cosima to study the localization capability of such an instrument and how much it can improve due to the presence of the top detector.

Section

High Energy

Primary author: SEN, Kaustubha (PhD Student)

Co-authors: Dr PAL, Andras (Masaryk University); Prof. TSAO, Che-Chih (NTHU); Ms WU, Chih-En (Master Student); Dr LIN, Chih-Hsun (Academia Sinica); Dr HU, Chin-Ping (NCUE); Mr BORCIANI, Edoardo (PhD Student); Prof. MUNZ, Filip (Masaryk University); Dr TAKAHASHI, Hiromitsu (Hiroshima University); CHANG, Hsiang-Kuang; Dr RIPA, Jakub (Masaryk University); Dr BREUER, Jean-Paul (Hiroshima University); Ms DAFČÍKOVÁ, Marianna (PhD Student); Dr OHNO, Masanori (Hiroshima University); Prof. WERNER, Norbert (Masaryk University); Dr LIU, Tsung-Che (NYCU)

Presenter: SEN, Kaustubha (PhD Student)

Session Classification: Poster-HE