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**CubeSat design using SrI2 and 6LiInSe2 scintillators for planetary gamma-neutron spectroscopy** ELON PRICE[1], ARNOLD BURGER[2], LIVIU MATEI[3], Fisk University, NASA CUBESAT COLLABORATION[4] — Asteroid mining and its economic potential has been in discussion for many years. More recently, a bill was passed by the Science and Transportation Committee (H.R. 2262–SPACE Act of 2015) outlining commercial space development and ownership of materials mined from outer space. In addition, a new generation of planetary gamma-ray spectroscopy has been developed and is promising for detecting gold, platinum, rare earths and etc. The CubeSat platform would allow for a small (1 unit (u) is 10 x 10 x 10 cm^3) and low power (less than 3W) design. This CubeSat would also utilize SrI2 (Eu) (grown at Fisk University) as the scintillator component which doesn't require cryogenics and vacuum technology used with High Purity Germanium (HPGe), making it the more efficient option. This poster will highlight spectra from SrI2 as well as the 6LiInSe2 scintillator used for neutron detection. It will also include schematics depicting the implementation of these scintillators using the CubeSat guidelines.

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