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**Positioning of ground-based Global Light System stations around the World for the JEM-EUSO mission** ZACHARY NORMAN, Colorado School of Mines, JEM-EUSO COLLABORATION — The astrophysical origins of the Extreme Energy Cosmic Rays (EECRs - E $> 10^{20}$ eV) remain a matter of debate. Data obtained on EECRs is sparse, due to the very low flux reaching the Earth. The Extreme Universe Space Observatory on board the Japanese Experiment Module (JEM-EUSO) on the International Space Station (ISS) will measure the properties of EECRs by recording the UV light produced by the air showers in Earth's atmosphere from space. At these extremely high energies, there is no way to calibrate the detector and test its operation with man-made accelerators. However, it is possible to induce the detector to see a similar amount of light by using an array of Global Light System (GLS) stations, which will use xenon flashers and lasers. The GLS locations need to be representative of the different climates around the World, because the development of the air showers depends upon the general properties of the atmosphere where it occurs. In this context, a program was developed to predict when a given GLS station is able to fire test shots within the field of view of the JEM-EUSO detector as the ISS flies over. This program takes into account the trajectory of the ISS, the relative positions of the Sun and the Moon, as well as the average cloud cover over the candidate sites.

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