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## Study of a Ground-Based Calibration System for Orbital UV Telescopes

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One essential requirement for the accurate and precise detection of Extensive Air Showers (EAS) produced by Ultra-High Energy Cosmic Rays (UHECR), both with present and future space-based UV telescopes (e.g. TUS, KLYPVE EUSO), is the instrument in-orbit periodic calibration.

Here, we present the preliminary results of an extended study performed for finding the optimal configuration of a ground based calibration system for several of such telescopes.

For this purpose we used an in-house custom developed software package, capable to simulate different orbital detector geometries and operational parameters as well as different light sources.

Since one very important aspect of the calibration in the case of orbital telescopes is to understand the entire Earth's atmospheric effects, from 0 to up to 500 km in the exosphere, we included several atmospheric models in our software and we computed the amount of light transported from the source to the telescope input aperture in various atmospheric conditions. We also investigated possible types of light sources for the calibration and focused on finding the most efficient one, both from cost and mobility point of view.

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