The Fluorescence Telescope on board EUSO-SPB2 for the detection of Ultra High Energy Cosmic Rays

Executive summary

The contribution describes the Fluorescence Telescope on-board the Extreme Universe Space Observatory on a Super Pressure Balloon II (EUSO-SPB2).

The Fluorescence Telescope is a second-generation instrument and represents the status of the art for this kind of technology. It is an important step to demonstrate the possibility to study Ultra High Energy Cosmic Ray from Space.

The construction of the telescope sub-systems is now underway and the whole instrument is on the way for a scheduled launch in early 2023 from Wanaka, New Zealand. The upgrades introduced on the optics, on the focal surface and on the general architecture with respect to the telescopes which flew on previous missions, should allow for the first observation of extensive air showers using the fluorescence technique from suborbital space.