



Contribution ID: 897

Type: **Poster contribution**

## Towards a SiPM based fluorescence camera for JEM-EUSO

*Tuesday, August 4, 2015 4:00 PM (1 hour)*

The steady development of semiconductor devices in the last years lead to highly improved photon detectors (called SiPM) and with that its applicability for astroparticle physics experiments. Here, we discuss particularly the application at cosmic ray air-shower fluorescence telescopes in space (JEM-EUSO telescope). For this, improvements of the newest generation of SiPM are needed concerning the dark current rate, pixel cross-talks, and afterpulse rate. In addition, to be applicable for large-scale experiments in space like JEM-EUSO, temperature stability, operation temperature, the fluorescence light sensitivity, as well as the capability of arrays of SiPM to cover large areas need to be rigorously tested. The JEM-EUSO collaboration started a comprehensive R&D program for the development of a focal surface based on SiPMs optimized for measurements of the fluorescence emission of extensive air showers from space.

### Collaboration

JEM-EUSO

### Registration number following "ICRC2015-I"

313

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