LIGHTNING AND SPRITES OBSERVATIONS ON BOARD OF THE INTERNATIONAL SPACE STATION

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The purpose of this paper is to describe an experiment working on board of the International Space Station and dedicated to the observations of the sprites from space. The experiment is composed of two micro-cameras, driven by a PC. The cameras are fixed on a station window for observations at the horizon or at the nadir. One camera is equipped with a filter and measures the emissions from earth in a specific spectral window, the second works in the visible.
The first observations were performed in October 2001, in the frame of the mission Andromede during the stay of the French astronaut Claudie Haignerai on board of the space station. The experiment provides comparative measurements of sprite and lightning emissions for the validation of a measurement concept of sprite from space at the nadir. The first observation of a sprite at the nadir is described. The use of the adapted filter allows its identification. These data will be used for a future micro-satellite mission Taranis