SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
NEW WORLDS - INNOVATIVE SPACE EDUCATION AND OUTREACH (4)

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AUTOMATIC DETECTION OF SPACE DEBRIS WITH A MEADE TELESCOPE

Abstract

Image processing algorithms are appled to picture frames comming from a Meade telescope camera. Space debris shall be detected in LEO orbit and below, and can be seen only on sunset and sunrise period, where on earth it is dark and the space debris is lightened by the sun. So only a period of approx. 1 hour in the morning and in the evening can be used for observation of space debris. This is not a professional observation like it is done e.g. with the radar used in Wachtberg, Germany for objects with a diameter bigger that 10cm, but it can be used for objects with a diameter bigger than 1m. However, it is educational image processing and navigation applied to space debris. The relevance is also interesting for CubeSat missions.