Name of research institute or organization:

DALSA

Title of project:

Study of the influence of cosmic rays on the reliability of solid-state image sensors

Project leader and team:

Prof. dr. ir. Albert J.P. Theuwissen

Project description:

60 high-quality CCD image sensors (with 500,000 pixels each) were stored during 3 months at the station at an altitude of about 3500 meters. All devices were very carefully characterized before they were brought up to the station and after they came back. The measurements before and after the exposure to the cosmic rays were analyzed on a pixel-to-pixel basis. The outcome of the measurements confirms the theory about cosmic rays. They really have a negative influence on the quality and reliability of these image sensors. The effects measured on the devices stored at Jungfraujoch were an order of magnitude worse than the effect obtained on devices stored at sea-level during the same time.

Key words:

Image sensors, cosmic rays

Internet data bases:

Collaborating partners/networks:

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