

The Eyes of LISA

Tuesday, 24 October 2023 09:00 (15 minutes)

The Dutch contribution to the Laser Interferometer Space Antenna (LISA) covers both hardware and data analysis. Focusing on the hardware, the Netherlands will deliver 'The Eyes of LISA', known as the Quadrant Photo-Receivers (QPRs), made up of segmented InGaAs photodiodes with read-out electronics in an ultra-stable housing. Furthermore, The Netherlands is developing the Point Ahead Alignment Mechanism (PAAM), consisting of a nanorad-accurate steerable mirror pointing the outgoing laser beam to meet the advancing opposite spacecraft during the light travel time. In addition, The Netherlands will provide the Mechanism Control Unit, i.e. special electronics to readout and control the PAAM as well as host electronics for other adaptable optics in LISA. The QPR is a joint development program by Nikhef and SRON, Dutch industry, KU Leuven and the Albert Einstein Institute in Hannover. This talk will focus on the challenges on delivering 120 QPR systems for flight, spares and tests, that meet the requirements that are demanded by the mission.

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