

SUNRISE: high-resolution UV/VIS observations of the Sun from the stratosphere

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SUNRISE is a balloon-borne solar telescope with an aperture of 1m, working in the UV/VIS optical domain. The main scientific goal of SUNRISE is to study the structure and dynamics of the magnetic field in the atmosphere of the Sun at high spatial resolution. SUNRISE will provide diffraction-limited images of the photosphere and chromosphere with an unprecedented resolution down to 35km at wavelengths around 220nm. Focal-plane instruments are a UV filter imager, a Fabry-Perot filter magnetograph, and a spectrograph/polarimeter. Stratospheric long-duration balloon flights of SUNRISE over the North Atlantic and/or Antarctica are planned. SUNRISE is a joint project of the Max-Planck-Institut fuer Sonnensystemforschung (MPS), Katlenburg-Lindau, with the Kiepenheuer-Institut fuer Sonnenphysik (KIS), Freiburg, the High-Altitude Observatory (HAO), Boulder, the Lockheed-Martin Solar and Astrophysics Lab. (LMSAL), Palo Alto, and the spanish IMAx consortium. The presentation will give an overview about the mission and a description of the instrumentation, now, at the beginning of the hardware construction phase.