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Anisotropies of solar energetic electrons in the MeV range measured with SOLO/EPD/HET

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Solar Orbiter is an ESA-led mission of international collaboration with NASA to investigate how the Sun creates and controls the heliosphere, and why solar activity changes with time. One of its top-level science questions is how solar eruptions produce energetic particle radiation that fills the heliosphere. With its four viewing directions the High-Energy telescope (HET) provides critical information about the sources and transport of high-energy particles.

This study analyses relativistic electron measurements obtained by HET in the energy range from 200 keV to above 10 MeV. The purpose of this study is to analyse anisotropies of relativistic solar energetic electrons utilizing the different viewing directions of HET. Time periods with enhanced fluxes of relativistic electrons, have been identified. A list of these time periods including additional observations such as maximum energy and flux as well as the first order anisotropy will be presented. This is the first time since the Helios mission that anisotropies of high energy electrons have been measured.