

A Living Catalog of Solar Energetic Particle Events Observed by IMAP

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Launched in September 2025, the Interstellar Mapping and Acceleration Probe (IMAP) is the new NASA mission orbiting the Lagrange 1 point, from where it observes high energy particles of solar origin before they arrive to Earth. To enable the research community to efficiently use the IMAP in-situ energetic particle observations, we have developed a living catalog of energetic particle enhancements observed by the High-Energy Ion Telescope (HIT) which observed ions from few MeV/nucleon to some tens of MeV/nucleon. Other than the standard event timing and peak characteristic values, the list includes information about the response of the solar wind, pickup ions and energetic electrons as they have been observed by the Compact Dual Ion Composition Experiment (CoDICE), the Solar Wind and Pickup Ion (SWAPI) and the Solar Wind Electron (SWE). The corresponding magnetic shock observed by the IMAP Magnetometer (MAG) is also identified. Event identification methodology, information on accessing the catalog, highlights of several events, and a summary of the overall trends are presented.