

Solar Energetic Particles and Space Weather

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Abstract. The term ‘space weather’ refers to the conditions on the Sun, in the interplanetary space, terrestrial magnetosphere and atmospheric layers that may influence technological systems in space and on ground and may pose risk on human health and life. Among the various space weather agents, the solar energetic particles (SEPs) are believed to affect mostly satellite equipment and in addition can expose astronauts (and aircraft passengers to a lesser extent) to elevated radiation doses. In our study we survey and catalog SEP events over the last 20 years in order to provide a reliable solar proton list that can be used for modeling, statistics and forecasting purposes. We present the main scientific results from the newly compile SEP list and describe the online version of this catalog.