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SEP events during solar activity cycle N. 24

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Long-term SEP forecast deserves special attention particularly in space mission planning. Models for long-term prediction techniques were initiated during the 1970s (King, J.H., J. Spacecraft Rockets, 11 (6), 401, 1974). Currently, there are several models in use. For the next solar activity cycle (N. 24), we started the evaluation of the expected SEP fluence distribution as a function of the solar activity level, by using Nymmik model (Proc. 25^{th} ICRC, 6, 268 and 280, 1999). The model applies to solar proton fluences in the range 10**6 – 10**11 protons/cm**2 for particles energies greater than 30 MeV. The obtained results are discussed taking into account the occurrence of the Gnevyshev Gap (Feminella and Storini, Astron. and Astrophys., 332, 311, 1997 and references therein) during the maximum activity phase of each solar cycle.