Forecasting energetic electron flux at geostationary orbit

P. Wintoft, H. Lundstedt, and L. Eliasson Swedish Institute of Space Physics

The energetic electron flux at geostationary orbit exhibits large variations on time scales from weeks, through days, and down to hours and below. During times of high flux levels the electron can cause internal charging on spacecraft. In this work we present results on how the electron flux level can be predicted by models driven by measured solar wind data. The electron flux data have been analysed through wavelet transforms obtaining filtered data capturing variations on the different time scales. We will discuss the model performance, prediction horizon, and the wavelet filtered electron data.