Update on the SATIRE Model

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The main goals of the irradiance models are to understand the mechanisms of the irradiance changes and to extend the available records of direct measurements in wavelength and time domains. It is now recognized that the irradiance variability on all observable time scales longer than one day is dominated by the solar surface magnetism. Thus, the most direct way of modelling the irradiance variability is through the employment of the observed surface distribution of the solar magnetic features (i.e. the magnetograms). This underlies the concept of the SATIRE model over the space era, while going back in time is only possible with proxies of solar magnetic activity. We will describe the current status of the model, compare the output with the available observations and alternative models and discuss the remaining uncertainties.