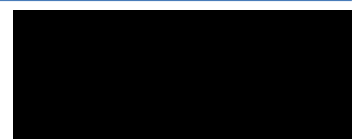


44/2017

Improved Representation of Solar Variability in Climate Models New reference data set for model intercomparison studies published

3 July 2017/Kiel. For upcoming climate model studies, scientists can use a new, significantly improved data set for solar forcing . An international science team led by the GEOMAR Helmholtz Centre for Ocean Research Kiel and the Instituto de Astrofísica de Andalucía (CSIC) in Granada (Spain) has now published the details of the new reconstruction of this reference dataset in the journal Geoscientific Model Development. A significantly enhanced influence of solar cycle effects is expected, particularly in the stratosphere.

How much do solar cycle variations influence our climate system? Could the rising Earth temperatures due to anthropogenic effects partly be compensated by a reduction of solar forcing in the future? These questions have been in the focus of climate research for a long time. In order to answer these questions as precisely as possible, it is required to know the fluctuations of solar forcing on the timescale of the 11-year sunspot cycle as precisely as possible in order to use these as input parameters for climate model simulations. An international research team led by the GEOMAR Helmholtz Centre for O



temperatures”, Dr. Funke continues. However, regional effects should not negligible. In addition, for the first time a quantification of solar irradiance and particle effects will be possible.