

## **SOLAR DYNAMO, INTERPLANETARY MAGNETIC FIELD, AND TERRESTRIAL CLIMATE**

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Solar dynamo transforms the solar poloidal field into toroidal field and this toroidal field back into poloidal field. Solar agents affecting the Earth are solar irradiance and impulsive solar events like solar flares and coronal mass ejections, both related to the solar toroidal field, and solar wind from open magnetic flux regions related to the solar poloidal field. The solar cycle distribution of these different types of manifestation of solar activity has been changing in the last century as demonstrated by the changing correlation between sunspot number and geomagnetic activity. The magnitudes of the poloidal and toroidal fields generated by the solar dynamo depend on the interplay between the speed of the surface and deep meridional circulation, respectively, and the diffusivity in the solar layers involved in these large-scale motions. We demonstrate how the variations in the action of the solar dynamo determine the solar cycle variations of the geoeffective solar phenomena, and the solar activity influences on terrestrial climate.

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