## Sun and interplanetary medium

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## Résumé

The Sun is our closest star. Owing to the energy it liberates since 4milliards years now, life has developed on Earth. But the relationships with our star is still very important for our today life. Of course it is one of the main driver of the Earth climate, it is also a large regulator of space weather.

Following the definition of the World Meteorological Organization, "Space Weather" designates the physical and phenomenological state of the natural space environment, including the Sun and the interplanetary and planetary environments. The associated discipline aims at observing, understanding and predicting the state of the Sun, of the planetary and interplanetary environments and their disturbances.

During this lecture, the different aspects of the Sun activity will be described as well as the impacts in the interplanetary medium. The rôle of electromagnetic radiations ,from radio to X-rays, as well as the propagation of particles will be detailed. The methods used to study this environment (instruments and modelling) will also be tackled.

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