



## **50 years of space science (Jean Dominique Cassini Medal Lecture)**

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The launch of Sputnik-1 triggered my fascination for space at the age of 20. The past 50 years have allowed me to study the Sun with sounding rockets and satellites, revealing the complexity of our star, contributing to the understanding of its physics, and offering surprising manifestations of its behavior and of its effects on Earth. Building instruments for space astronomy, managing teams of space scientists and engineers, led me to become the science director of the European space agency between 1983 and 2001 where I formulated and managed the Horizon 2000 program, which led Europe to occupy the front row of world space science. The Jean Dominique Cassini Medal Lecture offers me an opportunity, to describe the most spectacular achievements of this long-term plan and to outline some basic principles for reaching success, including the essential role of international cooperation with shared partnership. The Lecture also identifies key problems and controversial issues that space astronomy and exploration will face in the 21st century.