

SMOS - the satellite for water and salt

Voice-over 1:

The sea and the air. Two basic elements which rule our planet. Fundamental and complex.

Voice-over 2:

Among the many ways we measure the Earth from space and the surface of the oceans, the one which is missing is the saline content.

Voice-over 1:

Three-quarters of the globe is covered in water, and its influence is felt everywhere.

Voice-over 3:

Measuring sea temperatures, ice caps, salinity; all these measurements will help us to understand our climate better.

Voice-over 1:

A climate where the strong currents of power are defined by the interaction of water in all its forms.

Mark Drinkwater:

SMOS, ESA's water mission, is one of the most scientifically and technologically challenging Earth observation missions ESA has launched.

Voice-over 1:

The Netherlands, the European Centre for Space Research and Technology, ESTEC. Mark Drinkwater is a specialist in sea and ice. He underlines the importance of SMOS, which stands for the study of Soil Moisture and Ocean Salinity.

Mark Drinkwater:

Today there are very limited tools at our disposal for making measurements of soil wetness and soil moisture. Of course soil moisture determines vegetation growth processes, it er... it drives evaporation from the surface, cloud building processes over land...

What's unique about SMOS, the water mission, is that it will give us a global picture of this from one day to the next and, in doing so, provide a very uniform data set with which to better understand the water cycle.

Voice-over 1:

A cycle whose rhythm is well known: precipitation on the ground, which creates water or humidity, then evaporation, followed by a cooling at altitude, to bring further rain.

Mark Drinkwater:

Soil moisture, in essence, governs the way in which the land surface talks to the atmosphere, and humidity of the soil influences both weather and the climate on Earth.

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