

# TOWARDS A NEXT SPACE PROBE FOR CMB OBSERVATIONS AND COSMIC ORIGINS EXPLORATION

17-20th May 2016 | <http://cern.ch/cmb2016>

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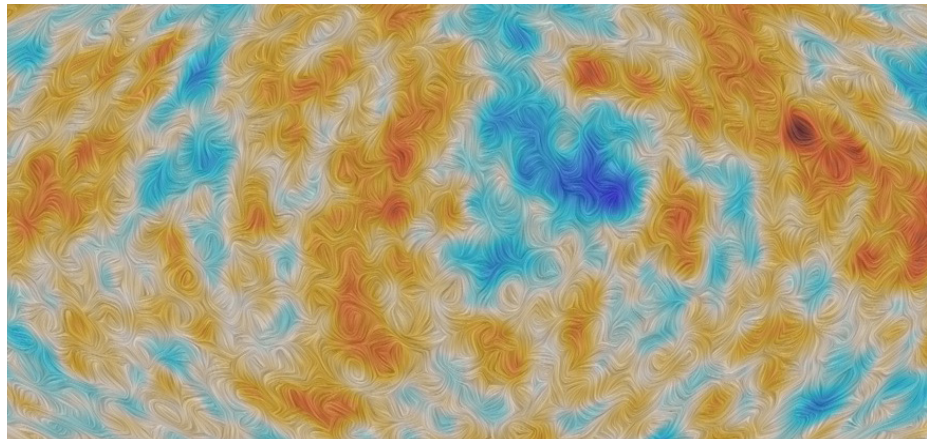


Image ESA

The outstanding success of three generations of space missions dedicated to the study of the Cosmic Microwave Background (CMB) has led to the establishment of the standard model of cosmology. Yet fundamental questions remain open: What are dark matter and dark energy? What is their nature? Did the initial seeds of structure result from an inflationary phase? What are the mechanisms of inflation?

Future observations of the CMB will challenge this model and answer these open questions. To exploit this exceptional potential, instruments must be designed to measure CMB polarisation with unprecedented performance.

**We invite the scientific community to discuss the important challenges of such a program during a four-day workshop at CERN.**

### 17-18th May 2016

Discussion of science case, design & synergy with other experiments for a future European or international CMB polarisation space mission.

### 19-20th May 2016

Proposal preparation for the upcoming call by the European Space Agency.