Invited Talk

Millimetron: The next FIR/mm Space Observatory

Thijs de Graauw,
on behalf of the Millimetron team,

Astro Space Centre of P.N. Lebedev Physical Institute, Moscow, Russia

Millimetron is an approved mission for a FIR/mm space observatory with a 10-m deployable antenna. It will enable the scientific community to make observations with unprecedented sensitivity and angular resolution. Observations in these bands are indispensable for our understanding the early stages of the Universe, galaxy formation and star formation. The observatory will have two observing modes: as a single-dish telescope and as an element of a Space-Earth interferometer. The antenna will be cooled to a temperature less than 10K while the instrument compartment is to be cooled down to 4 K. With state of the art detector technology (MKID arrays and HEB mixer arrays), it will provide extraordinary performance for imaging and spectroscopic observations in terms of sensitivity and angular resolution. Millimetron will be launched into a L2 orbit.

In this talk I will present the status of the program, the main characteristics of the Millimetron observatory and its instruments with the associated scientific objectives of the mission.