## **ASEPS: ASia-Europe Physics Summit**



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## The next-generation infrared astronomy mission SPICA

We present an overview and the current status of SPICA (Space Infrared

Telescope for Cosmology and Astrophysics), which is an astronomical mission with a cryogenically cooled 3-m class telescope optimized for midand far-infrared astronomy. Because of its high spatial resolution and unprecedented

sensitivity in the mid- to far-infrared, SPICA can address a number of key problems in current astrophysics, ranging from the starformation history of the universe to the formation of planets. SPICA is a joint JAXA-ESA mission, and the Europea participation to SPICA has been discussed under the framework of the "ESA Cosmic Vision". To reduce the mass of the whole mission, SPICA carries no cryogen. SPICA will be launched at ambient temperature and cooled down on orbit by mechanical coolers on board with an efficient radiative cooling system. This combination enables a 3-m class cooled (<6 K) telescope in space. The target year of the launch of SPICA is 2018.

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