

## Current status of post-K Exploratory Challenge, computational planetary science

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In FY 2016, as one of research project for post-K supercomputer, "Exploratory Challenge 3 Elucidation of the Birth of Exoplanets and the Environmental Variations of Planets in the Solar System" has been started. This FY is the last year for the two-year production phase, even though the post-K computer will not be ready until FY 2021. In this talk, I'll overview this project (we call this project computational planetary science project for short).

The development of post-K supercomputer was started in 2014, and its planed completion year is around 2021, with up to 100 times faster speed on real applications compared to K computer. As one of four "Exploratory Challenges", computational planetary science has been selected, and it is assigned to Kobe University, with other eight research institutes.

The computational planetary science project consists of four sub topics: planetary formation, dynamics and evolution of planets, solar activities and environmental change, and the origin of life. In this talk, I'll overview these topics, computational challenges, and products so far and future prospects.

Keywords: High Performance Computing, Computational Science