

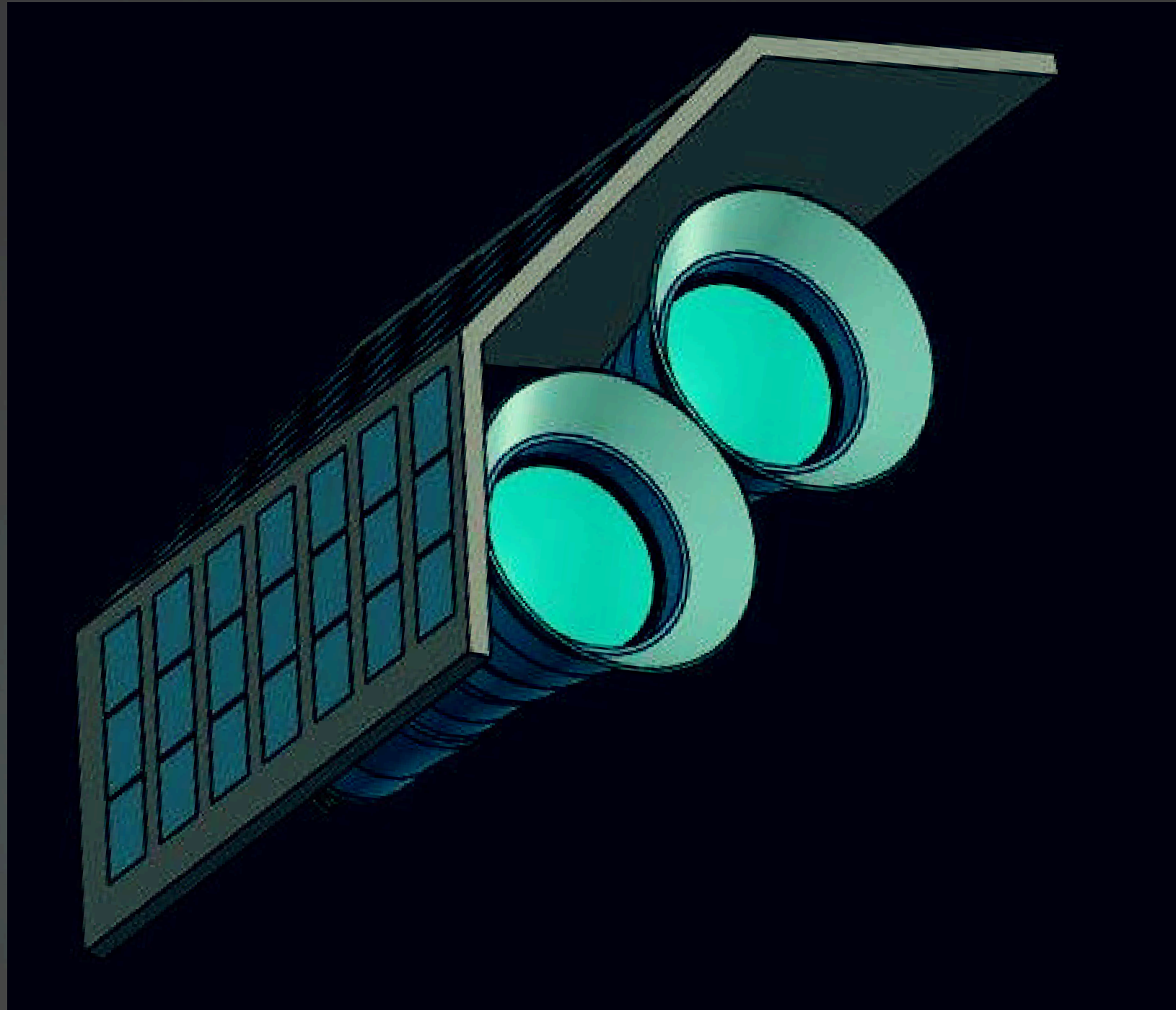


One-day Online Meeting on Bhaskaracharya Observatory for the Search of Exoplanets (BOSE) Towards the Discovery of Earth-Twins

Date : 9th December 2025

Mode : Online

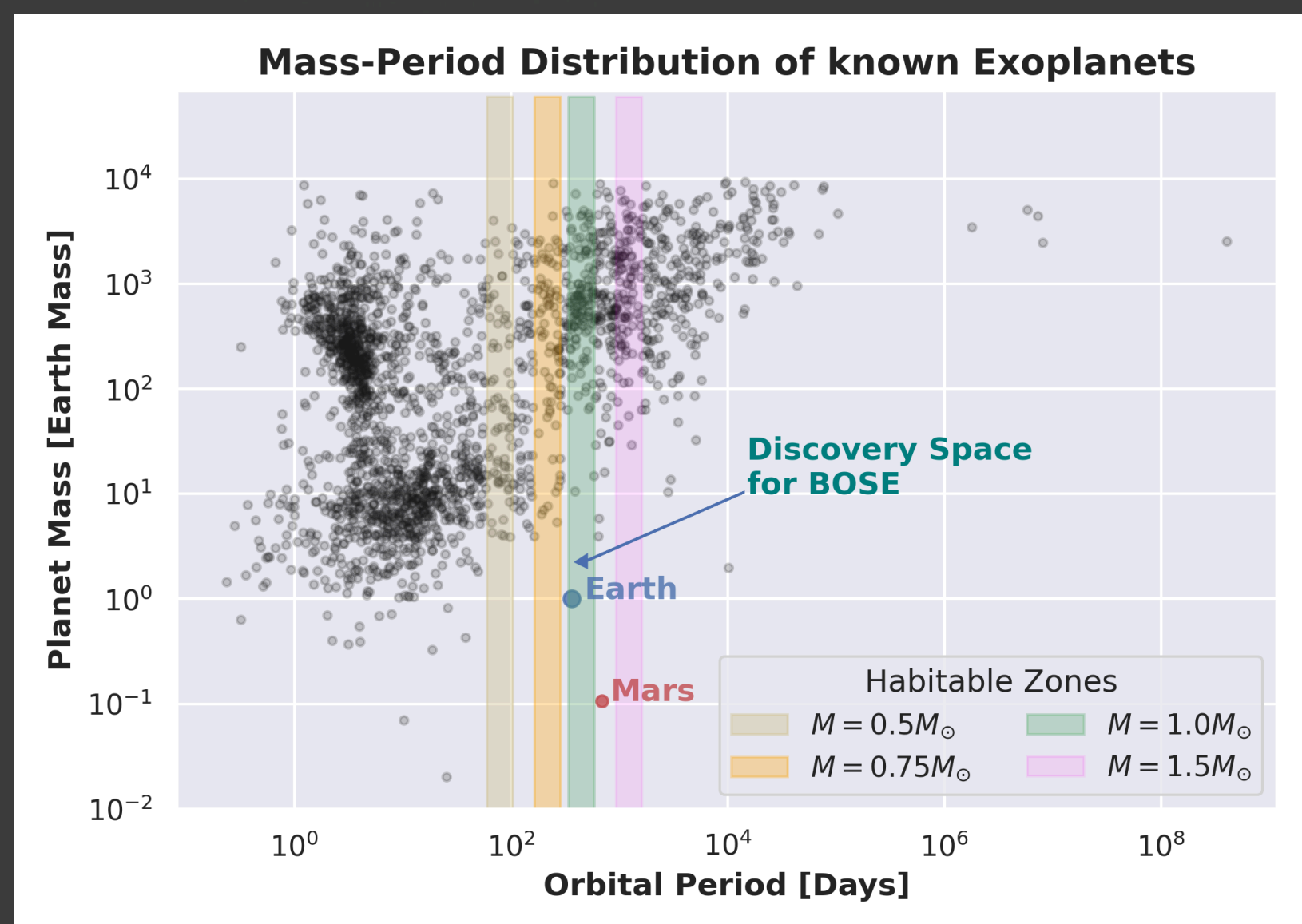
A one-day online meeting on the Bhaskaracharya Observatory for the Search of Exoplanets (BOSE) mission is organised by the Physical Research Laboratory, with the aim of bringing together observers, instrumentation experts, theorists and scientific enthusiasts to foster discussions on the opportunities offered by the upcoming next-generation space mission, the BOSE, proposed by the Physical Research Laboratory, Ahmedabad.



The BOSE mission, envisioned as India's first discovery-legacy exoplanet space mission, is designed to push the limits of transit photometry in the search for Earth-size planets and Earth-twins around Sun-like stars.

The primary goal of this program is to build a collaborative network of researchers across India working in exoplanet detection, instrumentation, stellar astrophysics, and time-domain sciences, and to exchange ideas that advance our understanding of planetary system architectures and habitability.

BOSE features a twin-telescope design, each with 500mm clear aperture and operating in the 500-1000nm wavelength range with an effective FoV of 400 square degrees. It will be positioned at the Sun-Earth L2 point.



The Mass-Period distribution of known exoplanets along with the discovery space (indicated by the arrow in teal) of the BOSE mission highlights the unique standpoint of BOSE.

KEY QUESTIONS TO ADDRESS

- Detecting Earth-size planets and Earth-twins using transit photometry
- Overcoming observational bias in current exoplanet surveys
- The advances in photometric sensitivity and spatial resolution essential for detecting long-period Earth-size planets
- Stellar astrophysics, astroseismology and time-domain astronomy
- Future missions and the role of BOSE in advancing exoplanet science

Scientific Organising Committee (SOC)

- Dr. Yogesh Joshi – ARIES, Nainital
- Dr. Liton Majumdar – NISER, Bhubaneswar
- Dr. Priyanka Chaturvedi – TIFR, Mumbai
- Dr. Kinsuk Acharyya – PRL, Ahmedabad
- Dr. Arvind Singh Rajpurohit (Chair) – PRL, Ahmedabad
- Neelam JSSV Parsad (Convenor) – PRL, Ahmedabad

Local Organising Committee (LOC)

Churchil Dwivedi (Convenor), Kapil Kumar Bharadwaj, Rishikesh Sharma, Kevikumar Lad, Nikitha Jitendran (PRL, Ahmedabad)



Registration Deadline
21st November 2025



Contact Us
bosemission.prl@gmail.com



Visit website for registration & more details
<https://sites.google.com/view/bose-meeting-2025/home>

