Work visit of a Belgian colleague to India

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Kaustubh Hakim (ROB/KU Leuven, Belgium; see picture) went to India to work on a project identifying facilities for the multi-wavelength search of exomoons in collaboration with Manoj Puravankara (TIFR, Mumbai). Previous attempts at detecting radio emission from exoplanet-exomoon interactions with the upgraded Giant Metrewave Radio Telescope (uGMRT; Pune, India) were unsuccessful and have set unprecedented upper limits on the exoplanet magnetic field strength. During the visit, the possibility of complementing the exoplanet-exomoon radio emission with other frequencies was investigated. They concluded that simultaneous detection at radio and optical/infrared wavelengths is not necessarily useful because both wavelengths probe different mechanisms. The optical/infrared detections of potentially volcanic species from exomoons of hot Jupiters using facilities including GTC/OSIRIS (La Palma, Canary Islands, Spain) and ESO/HARPS (La Silla, Chile) are rather a stepping stone for selecting exoplanet targets to be followed up at radio frequencies for the detection of magnetic fields. It has been decided that the LOw-Frequency Array (LOFAR; Dwineloo, The Netherlands) is the next radio facility to focus on as it allows the detection of weaker magnetic fields which are out of the reach of uGMRT. Kaustubh Hakim also used this work visit to go to IISER (Pune) to participate in the Exoplanet Conference.