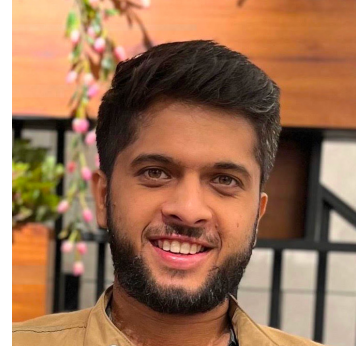


Work visit of an Indian colleague to Belgium

(30/09/2023-03/11/2023)

The second BIPASS visit has been done by the young post-doctoral [Aravind Krishnakumar](#) (PRL, India; see picture), who visited the team [Emmanuel Jehin](#) (ULiège, Belgium) for one month. In addition to an oral presentation, given at the 1-day BINA meeting held at the Royal Observatory of Belgium in Brussels (10/10/2023), [Aravind Krishnakumar](#) had important scientific discussions with [Emmanuel Jehin](#) regarding the different on-going collaborative research projects and future possibilities of using different telescope facilities for large scale monitoring of comets. They both worked on a collaborative research paper about the comet C/2022 E3 focusing on the long-term monitoring of the comets activity using different telescope facilities like the 2.5-m telescope of PRL at the Mount Abu InfraRed Observatory (MIRO) (Gurushikhar, India), the 2-m Himalayan Chandra Telescope (HCT) of the Indian Institute of Astrophysics (IIA) at the Indian Astronomical Observatory (Hanle, India), and the 0.6-m Transiting Planets and Planetesimals Small Telescopes at the La Silla Observatory (TRAPPIST-South; La Silla, Chile) and the Oukaïmeden Observatory (TRAPPIST-North; Morocco).



They also initiated a research paper to report about the detection of ionic emissions for the great comet C/2020 F3 which was observed using the 2-m HCT. Efforts are being done with [Emmanuel Jehin](#) to look for the possibility of finding any unknown emission lines within the comet's tail spectrum obtained using the Indian telescope facilities. During his stay, [Aravind Krishnakumar](#) got involved in a research project being led by a research student in the TRAPPIST group, to analyse the activity of five long-period comets. As part of it, spectra of comets obtained from 1.2-m telescope of PRL and the 2-m HCT of IIA were provided to compliment the TRAPPIST data set.

Furthermore they started a collaboration with the Multi-purpose InSTRument for Astronomy at Low-resolution (MISTRAL) instrument group to submit a proposal on the 1.93-m telescope of the Observatoire de Haute Provence (Saint-Michel-l'Observatoire, France), along with the TRAPPIST group, to obtain spectra of Jupiter family comets to analyse their composition. Finally, they had intensive discussions regarding an on-going work to analyse the carbon depletion in Jupiter Family comets. While the major data set are from the TRAPPIST telescopes, spectra obtained from Indian facilities for the comets of interest are being provided to compliment the data set.