

2nd BINA workshop “BINA as an expanding collaboration”

(09/10/2018-12/10/2018)



The 2nd BINA workshop took place in the Meridian room of the ROB in Brussels (Belgium) on 09/10/2018-12/10/2018. The Scientific Organizing Committee (SOC) of the workshop consisted of 4 scientists from India and 5 scientists from Belgium (9 members, including 3 women, one of which was also the chairperson).

We had 44 (very interesting) oral presentations during the 3.5 days meeting, 8 posters, one round-table discussion about instrumentation and a summary talk. All the presentations were streamed and recorded via Webex and will be made available to the participants, as well as the corresponding PDF files via a dedicated website. All presentations were highly relevant to the chosen theme(s), and of high quality. The Data & Science sections covered a large diversity of topics ranging from the Solar System (comets, asteroids & NEA's, space debris) via exo-planets (exo-planetary science) to galactic and extra-galactic astronomy. Such a diversity of topics is unusual in most scientific conferences, where the focus generally lies on a specific domain in astronomy. It was furthermore noticed that most of the participants attended all the talks.

The scientific programme consisted of three major sections: (S1) Instrumentation, (S2) Data & Science with the Indo-Belgian Telescopes, (S3) Data & Science with Other Telescopes of Interest. Various invited reviews highlighted the connection between an efficient instrumentation and quality of the scientific output, whether the instruments are equipping larger telescopes (e.g. of 4-m class and larger, see talks by Baes, Pandey, Pasquali, Ramaprakash, Ribas) or smaller telescopes (e.g. talks by Jehin, Van Winckel). The instrumentation currently available and offered at Indian and Belgian telescopes, as well as the recent improvements and future developments & potential upgrades (adaptive optics) were presented against the background of actually very relevant scientific questions. The multi-wavelength (large) coverage of various instruments, both on the ground and in space, was highlighted in many talks. The presentation by AMOS was another example of expertise in high-technological instrumentation for astronomical research. It is clear that several highly performant instruments are/will be available to the astronomical communities in the (nearby) future.

Concerning studies of small bodies of/in the Solar System (comets, asteroids & NEA's, space debris), a variety of observational techniques was discussed. The need for extended observations (when the objects are distant and fainter) and high-resolution spectroscopy (chemical characterization) was highlighted. In stellar physics, the need for (spectroscopic) follow-up of space missions, for chemical tagging (detailed abundance analyses), the influence of binary star evolution and of massive stars, early stellar formation, stellar associations (clusters), stellar rotation (young clusters), as well as (various types of) stellar populations & pulsations were topics of discussion and high interest. The talks about galaxies, their stellar & dust content, their evolution (galactic archaeology), their environments & interactions were both stimulating and inquisitive. In the extra-galactic domain, the results of (multi-wavelength) studies of exotic objects such

as AGN's & blazars, radio galaxies, the search for (strong) gravitational lensing were also nicely presented and summarized. This diversity of topics is well reflected in the accompanying scientific programme. Notwithstanding the broad range of topics (this summary is not all inclusive), the interest of all the participants for the different science cases was genuine, and this was possible thanks to a friendly atmosphere and personal contacts, and the goal of developing scientific collaboration in which the whole workshop was embedded (as the first BINA workshop which was held in Nainital, India). The final impressions provided by Prof. Prugniel (Observatoire de Lyon, France) as an external reviewer confirmed that this workshop has been a success, and should not be the last of its kind.