

Report on the 11th COSPAR Capacity Building Workshop

The 11th COSPAR Capacity Building Workshop on "Data Analysis of the Fermi Gamma-ray Space Telescope" was held in Bangalore, India during 8-19 February 2010. The principal objective of the workshop was to introduce young scientists to space based Gamma-ray astronomy and to provide them with training and experience on the analysis of data from the Fermi Gamma-ray Space Telescope.

30 participants were selected from about 80 applicants by a five member committee and all 30 selected candidates attended the workshop for the entire duration. 17 of the participants were from India and 13 from the neighbouring countries including China, Egypt, South Africa, Turkey, Indonesia and Korea. There were 13 female and 17 male participants.

The lectures and data analysis training were provided by 15 scientists, including six who are actively involved with Fermi in various capacities. A total of 30 one hour lectures were delivered on basics of high energy and gamma-ray astrophysics, gamma-ray instrumentation and instruments onboard Fermi, and data analysis guidance. The participants learned and carried out data analysis projects on various topics with archival data from Fermi. For the data analysis sessions, running for 4-10 hours every day of the workshop, four groups were formed who worked on different types of objects: Active Galactic Nuclei, Gamma-ray Bursts, Pulsars, and X-ray Binaries. Each group had 2-4 supervisors and at least one instructor for each group was from the Fermi team.

An evaluation of the workshop by the participants clearly showed that the lectures were very useful to the participants for learning high energy astrophysics, gamma-ray astronomy and analysis of Fermi-data. On the last day of the workshop, the participants made presentations based on the data analysis projects. Five presentations were made from the four groups which represented the work carried out by all the participants. All the presentations also included future plan of using data from the Fermi observatory.

The workshop venue was an eco-resort "Out Native Village", at a distance of about 30 km from Bangalore. The lecturers and participants had a pleasant, isolated stay during the workshop. Individual desktop computers were arranged for each participant with moderate internet bandwidth. Most of the data required for analysis was downloaded in advance and the analysis software was pre-installed on each computer. A one-day sightseeing visit was arranged to Shravanabelagola and Belur and a Bharatnatyam dance recital was arranged in one of the evenings.

The workshop was co-sponsored by the Raman Research Institute, COSPAR, IAU, Goddard Space Flight Centre, and United Nations Office for Outer Space Affairs. Overall, it was a very successful workshop and everybody involved in its organisation look forward to see the participants use this expertise in their future research.

Scientific Organising Committee

Dipankar Bhattacharya, IUCAA, India

Ian Corbett, IAU General Secretary

Neil Gehrels, GSFC/NASA, USA

Isabelle Grenier, Saclay, France

Hans Haubold, UN/OOSA

Wim Hermsen, SRON, the Netherlands

Alaa Ibrahim, American Univ. & Cairo Univ., Egypt

Julie McEnery, GSFC/NASA, USA

Mariano Mendez, Univ. of Groningen, the Netherlands

Peter Michelson, Stanford, USA.

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Chris Shrader, GSFC/NASA, USA

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Ravi Subrahmanyam, RRI, India

David Thompson, GSFC/NASA, USA

Peter Willmore, Univ. of Birmingham, UK

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Local Organising Committee

Lakshmi Saripalli

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Participants

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3. Resmi L Tata Institute of Fundamental Research, Mumbai, India
4. Du Yuan Jie National Astronomical Observatories, Beijing, China
5. KK Singh Bhaba Atomic Research Centre, Mumbai, India
6. Richard Britto Tata Institute of Fundamental Research, Mumbai, India
7. Amit Shukla Indian Institute of Astrophysics, Bangalore, India
8. Ahmed El Mezeini The American University in Cairo, Cairo, Egypt
9. Renyi Ma Chungnam National University, Daejeon, Korea
10. Harsha Raichur Inter University Centre for Astronomy and Astrophysics, Pune, India
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18. Liping Xin National Astronomical Observatories, Beijing, China
19. Shu Jin Hou Guangxi Univerrrsity, Nanning, China
20. Reham Mostafa Ayoub Fayoum University, Fayoum, Egypt
21. Chandreyee Maitra Raman Research Institute, Bangalore, India
22. Sunil Chandra Physical Research Laboratory, Ahmedabad, India
23. Partha Sarathi Pal S N Bose National Centre for Basic Sciences, Kolkata, India
24. Broja Dutta Indian Centre for Space Physics, Kolkata, India
25. Ece Kilerci Bogazici University, Istanbul, Turkey
26. Crystal Nuansa Aini Institut Teknologi Bandung, Bandung, Indonesia
27. Nilay Bhatt Bhaba Atomic Research Centre, Mumbai, India
28. Mohammad Basha Cairo University, Giza, Egypt
29. Faith Hungwe Hartebeesthoek Radio Astronomy Observatory, Krugersdorp, South Africa
30. Jincy Devasia M. G. University, Kottayam, India

Lecturers / instructors

1. Pijushpani Bhattacharjee Saha Institute of Nuclear Physics, Kolkata, India
2. Dipankar Bhattacharya Inter University Centre for Astronomy and Astrophysics, Pune, India
3. Varsha Chitnis Indian Institute of Astrophysics, Bangalore, India
4. Valerie Connaughton University of Alabama, Huntsville, Alabama, USA
5. Robin Corbet NASA Goddard Space Flight Center, Greenbelt, MD, USA
6. Gulab Dewangan Inter University Centre for Astronomy and Astrophysics, Pune, India
7. Neil Gehrels (Deputy Project Scientist, Fermi-LAT) NASA/GSFC, Greenbelt, MD, USA
8. Wim Hermsen (Vice-President, COSPAR) SRON, Utrecht, The Netherlands
9. Benoit Lott Université de Bordeaux, Gradignan, France
10. Julie McEnery (Project Scientist, Fermi-LAT) NASA/GSFC, Greenbelt, MD, USA
11. Mariano Mendez (Vice-Chair, COSPAR Panel on Capacity Building) University of Groningen, Groningen, The Netherlands
12. Biswajit Paul Raman Research Institute, Bangalore, India
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