Workshop 3 on CME propagation in the interplanetary space to predict Bz

New conference Hall, ISRO Headquarters, Antariksh Bhavan

Jan 31, 2024

Program

08:45 - 09:30 - Registration

09:30 - 10:30 - Welcome address and story of Aditya-L1 (Joint session with WS1)

10:30 - 11:00 Tea Break

11:00 - Introduction to the **Workshop 3 theme** by Nandita Srivastava

Session 1. 11:05-12:15 (Chair: Piyali Chatterjee)

Theme: *CME initiation and its characteristic evolution in the low corona*

11:05 - Formation and eruption of magnetic flux ropes during the active region evolution - **P. Vemareddy**

11:25- CME initiation and its characteristic evolution in the low corona - **Ramit Bhattacharyya**

11:45 - Calculation of reconnection fluxes during CME initiation: Observations versus numerical simulation -**Samriddhi Sankar Maity**

12:00 - Advancing solar and heliospheric science with radio observations -**Anshu Kumari**

Session 2. 12:15-13:00 (Chair: Dibyendu Nandi)

Theme: *Influence of background solar wind on the interplanetary evolution of CMEs*

12:15 - Featuring Space Weather Adaptive SimulaTion (SWASTi) framework in the era of Aditya L1 - **Bhargav Vaidya**

12:35 - Importance of different CME magnetic field orientations on atmospheric mass loss from magnetized exoplanets-**Gopal Hazra**

13:00-14:00 lunch break

Session 2 (contd). 14:00-14:30 (Chair:Dibyendu Nandi)

14:00 - Impact of observations on reconstructing the solar wind and Coronal Mass Ejections -**Nishtha Sachdeva**

14:15 - Influence of solar wind medium on the propagation of Earth impacting Coronal Mass Ejections - **Sandeep Kumar**

Session 3. 14:30-15:30 (Chair: Bhargav Vidya)

Theme: *Understanding the ICME dynamics from L1 point*

14:30 - ICME and impact on Magnetosphere-Ionosphere system - **Dibyendu Chakrabarty**

14:50 - Early predictions of near-Earth Characteristics of CME flux ropes - **Dibyendu Nandy**

15:10 - Study of CMEs using MWA - **Divya Oberoi**

15:30-16:00 tea break

Session 3. Contd. (Chair: Bhargav Vaidya)

16:00 - Unveiling the characteristics of ICMEs through multipoint in-situ observations - **Wageesh Mishra**

16:20 - Understanding the thermodynamic evolution of CMEs through analytical modeling **-Soumyaranjan Khuntia**

Session 4. 16:35-17:30 (Chair: Wageesh Mishra)

Theme: *Space weather forecasting capabilities to predict Bz*

16:35 - Space weather event of 24 April 2023 - **N. Gopalswamy**

16:55 - Prediction of Bz using INFROS model - **Ranadeep Sarkar**

17:15 - Exploring geo-effectiveness of CME-CME Interactions: New insights into Bz and Dst estimation - **Prateek Mayank**

17:30-18:00: Discussion and Summary