

PRATEEK MAYANK

NASA Jack Eddy Postdoctoral Fellow

📍 UCAR CPAESS | SWx TREC, CU Boulder ✉ prateekmayank9@gmail.com

☎ +1 303 994 5873 🌐 prateekmayank.com

PUBLICATIONS

SWASTi-SW: Space Weather Adaptive Simulation Framework for Solar Wind and Its Relevance to Aditya-L1

Mayank P., Vaidya B. and Chakrabarty D.

📄 The Astrophysical Journal Supplement Series (Sept. 2022) 🔗 DOI
Highlights: [Press Releases](#) and [AAS YouTube coverage](#).

Solar flare prediction and feature selection using Light Gradient Boosting Machine Algorithm

Vysakh P. A. and Mayank P.

📄 Solar Physics (Nov. 2023) 🔗 DOI

SWASTi-CME: A physics-based model to study CME evolution and its interaction with Solar Wind

Mayank P., Vaidya B., Mishra W. and Chakrabarty D.

📄 The Astrophysical Journal Supplement Series (Dec. 2023) 🔗 DOI

Using SunRunner3D to interpret the global structure of the heliosphere from in situ measurements

Gonzalez-Aviles J., Riley P., Ben-Nun M., Mayank P. and Vaidya B.

📄 Journal of Space Weather and Space Climate (Aug. 2024) 🔗 DOI

Study of Evolution and Geo-effectiveness of CME-CME Interactions using MHD Simulations with SWASTi

Mayank P., Lotz S., Vaidya B., Mishra W. and Chakrabarty D.

📄 The Astrophysical Journal (Nov. 2024) 🔗 DOI

Simulating the Arrival of Multiple Coronal Mass Ejections that Triggered the Gannon Superstorm

Thampi S., Bhaskar A., Mayank P., Vaidya B. and Venugopal I.

📄 under review 🔗 arXiv

INVITED TALKS

- Solar Cycle Variability
IIT BHU & ARIES, Nainital, India Oct. 2024
- Seminar @ Austrian Space Weather Office
ASWO, Graz, Vienna April 2024
- ASI2024 Workshop on CME propagation
IISc Bangalore, India Jan. 2024
- Seminar @ South African National Space Agency
SANSA, Hermanus, South Africa Oct. 2023
- Aditya-L1 Support Cell Workshop
ARIES, Nainital, India July 2023

CONFERENCES & WORKSHOPS

Talks: 14

Posters: 4

Workshops: 7

AWARDS & FELLOWSHIPS

🎓 NASA Jack Eddy PostDoc Fellowship
By UCAR CPAESS.

🏆 Best Paper Award
At NSSS by ISRO.

🏆 SCOSTEP Visiting Scholar Award
To visit SANSA in 2023-2024.

🎓 Prime Minister's Research Fellowship
By Government of India (2021-2024).

🎓 CSIR Junior Research Fellowship
Granted from 2020 to 2021.

TEACHING ASSISTANTSHIP

🎓 Devi Ahilya Vishwavidyalaya, Indore
Jan. 2024 - April 2024

🎓 Government Holkar Science College, Indore
Feb. 2022 - Aug. 2023

🎓 Indian Institute of Technology, Indore
Aug. 2021 - May 2023

KEY SKILLS

MHD Simulation & Data Visualization

PLUTO code

VisIt

ParaView

GNU Plot

Coding and Scripting Languages

Python

C/C++

Bash

EDUCATION

Doctor of Philosophy (PhD)

🎓 IIT Indore, India (2020-2024)

M.Sc. in Physics & Astrophysics

🎓 University of Delhi, India (2017-2019)

B.Tech in Mechanical Engineering

🎓 ITGGV, Bilaspur, India (2012-2016)

VOLUNTARY ACTIVITIES

- Coordinator of Team [INDUS](#).
- Part of LOC of ASI2023 conference.
- Guiding the bachelor and master students.
- Member of Scientific Societies: ASI, AOGS, AGU & EGU.