Bibhuti Kumar Jha

Senior Research Fellow, IIA, Bangalore & ARIES, Nainital

Education

2011–2014 **B.Sc. (Bachelor of Science) in Physics**, *Dyal Singh College, University of Delhi*, Delhi, India.

2014–2016 **M.Sc. (Master of Science) in Physics**, *Hindu College, University of Delhi*, Delhi, India.

2017–2019 **PhD in Astrophysics**, *Indian Institute of Astrophysics*, Bangalore, India.

2020– **PhD in Astrophysics Conti.**, *Aryabhatta Research Institute of Observational Sciences*, Nainital, India.

Area of research

My primary interest is Solar Astrophysics. Primarily, I work on century long archived data to understand the long term variation in the Sun. I am also involved in developing automatic algorithm to extract different solar feature from such a large volume of data and finding the physical parameters from them. Apart from that I am also interested in Solar Dynamo theory to understand the magnetic cycle of the Sun.

Computer Skills

Programming C, C++, Python, UNIX Shell Scripting, IDL, Rust, Julia and R.

Markup HTML, LaTeX

Style Sheet CSS

Other Adobe Photoshope

Visits

1. Visiting Student at Indian Institute of Technology, Banaras Hindu University, Varanasi, India; December 2018

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2. Visiting Student at Max Planck Institute for Solar System Research, Göttingen, Germany; Feb - May, 2019

Conferences and Meetings

1. Presented a poster titled "Long-term variation of sunspot penumbra to umbra ratio: A study using Kodaikanal white-light digitized data.",IAUS340,19 - 24 February, 2018, Jaipur, India
2. Attended "Heliophysics Summer School", 23 - 20 July, 2018 - Boulder, Colorado, USA
3. Presented an oral talk titled "Magnetic field dependency of Bipolar magnetic region tilt angle : A study from SOHO/MDI data", Young Astronomers Meet, 24-28 September, 2018, PRL, Ahmadabad, India
4. Attended "Solar Physics Summer School at Raman Science Center",10 - 16 June, 2019, Leh, India
5. Presented a poster titled "Solar Differential Rotation in last century: A study from Kodaikanal white light digitised data", Young Astronomers Meet, 23-27 September, 2019, Kodaikanal Solar Observatory, IIA Kodaikanal, India
6. Presented an oral talk titled "An update on Kodaikanal Digital Archived Data" in a meeting entitled "Reconstructing Solar and Heliospheric Magnetic Field Evolution Over the Past Century", ISSI Team led by Alexei Pevtsov; 12 - 15 February, 2019

Publications

1. Long-term variation of sunspot penumbra to umbra ratio: A study using Kodaikanal white-light digitized data; Bibhuti Kumar Jha, Sudip Mandal, & Dipankar Banerjee 2018, Proceedings of the International Astronomical,Union, 13, 185–186
2. Study of Sunspot Penumbra to Umbra Area Ratio Using Kodaikanal White-light Digitised Data,Bibhuti Kumar Jha, Sudip Mandal, & Dipankar Banerjee, Sol Phys (2019) 294: 72
3. Delving into the Historical Ca II K Archive from the Kodaikanal Observatory: the Potential of the Most Recent Digitised Series; Theodosios Chatzistergos, Ilaria Ermolli, Sami K. Solanki, Natalie A. Krivova, Dipankar Banerjee, Bibhuti K. Jha, Subhamoy Chatterjee; Sol Phys (2019) 294: 145
4. Magnetic field dependence of bipolar magnetic region tilts on the Sun: Indication of tilt quenching; Bibhuti Kumar Jha, Bidya Binay Karak, Sudip Mandal, Dipankar Banerjee; APjL (2020) 889:L19
5. Measurements of Solar Differential Rotation Using the Century Long Kodaikanal Sunspot Data; Bibhuti Kumar Jha, Jha, Bibhuti Kumar; Aditya Priyadarshi; Sudip Mandal; Subhamoy Chatterjee; Dipankar Banerjee; Sol Phys (2019) 296: 25