

# ANU B SREEDEVI

Research Scholar, Department of Physics, Indian Institute of Technology (BHU), Varanasi

## PERSONAL DETAILS

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**Date of Birth:** 15/09/1995

**Address:** Poruthayil Mana, Vishnu Nagar, Puranattukara PO, Thrissur, Kerala, 680551

**Email:** anubsreedevi95@gmail.com, anubsreedevi.rs.phy20@itbhu.ac.in

## EDUCATION

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**Indian Institute of Technology (BHU), Varanasi**

Department of Physics

Doctor of Philosophy in Physics

*January 2021 - present*

Current CGPA: 9.75/10

**Amrita School of Arts and Science, Kollam, India**

Amrita Vishwa Vidyapeetham

Department of Physics

Integrated MSc Physics

*2013 -18*

CGPA: 9.51/10

**Kendriya Vidyalaya, Thrissur**

Central Board of Secondary Education.

Class XII

*2012-13*

Percentage: 83.7

**Kendriya Vidyalaya, Thrissur**

Central Board of Secondary Education.

Class X

*2010-11*

CGPA: 10/10

## CAREER OBJECTIVE

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To pursue a research career in the field of Solar and Space Physics and contribute to science at a global level.

## RESEARCH EXPERIENCE

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**January 2021 - present: Long-term study of different proxies of solar activity and their implications in dynamo modelling**

Study of various long-term proxies of the solar cycle such as sunspots, magnetic field using the data obtained from ground based solar observatories and space borne instruments (Helioseismic and Magnetic Imager (HMI) and Michelson Doppler Imager(MDI)) using statistical and ML/DL techniques for better understanding of long term variation of 11 year solar cycle and further to constrain the processes in the dynamo model.

**April 2019- December 2020: A Study on the Effects of Ionospheric variabilities on the Usability of NavIC/GAGAN Using Observations and Models**

Electrodynamics of Equatorial Ionization Anomaly, Thermosphere-Ionosphere coupling was studied and an ionosphere model, showing magnetic equator anomaly, from first-order principles was successfully modelled and depicted. A study on the effects of various solar events on the ionosphere and its effects on satellites in High Earth Orbits and Middle Earth Orbits was conducted by monitoring the TEC values from Global Positioning System data.

## January 2018- July 2018: Spectroscopic Studies of Solar Chromosphere using Kodaikanal Data

Spectroscopic analysis of solar chromosphere was conducted by studying Ca-K line profiles obtained from solar spectrum using Ca-K filters from Kodaikanal solar observatory. The line profiles of 3 years were studied, which helped in understanding north-south asymmetry in chromospheric emission and magnetic flux exchange happening over the solar surface.

## TECHNICAL STRENGTHS

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|-----------------------------|---------------------------|
| <b>Operating System</b>     | Windows, GNU/Linux        |
| <b>Typesetting</b>          | LaTeX, MS Office          |
| <b>Programming Language</b> | C, C++, Python, IDL       |
| <b>Packages</b>             | Matlab, Solarsoft, Origin |

## WORK EXPERIENCE

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**Indian Institute of Space Science and Technology** April 2019 - December 2020  
*Junior Research Fellow*

Project: A study on the effects of Ionospheric variabilities on the usability of NavIC/GAGAN using observations and models.

## ACADEMIC ACHIEVEMENTS

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Qualified GATE (Graduate Aptitude Test in Engineering) 2020 Physics.

Qualified IELTS English Proficiency Test. Mark: 8/9

Second Rank in Integrated M.Sc. Physics (2018) from Amrita Vishwa Vidyapeetham, Amritapuri, Kerala.

## WORKSHOPS AND PRESENTATION

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### Attended Workshops:

*First Summer School on Space Research, Technology and Applications for young scientists and PhD students*, conducted by National Astronomical Observatory Rozhen, Bulgaria through 5-11 July 2021. [Online Mode]

*Solar activities and their influences in the Heliosphere and Planetary Atmospheres*, sponsored by SERB, High-End workshop conducted by NIT, Calicut through 8-14th March 2021. [Online Mode]

*Inspire Partners Meeting*, Organised by Small-spacecraft Systems and Payload Centre (SSPACE) conducted by Indian Institute of Space Science and Technology, Valiamala, Trivandrum, through January 29-30, 2020

### Presentations:

*Tracking of Bipolar Magnetic Regions Using an Automatic Algorithm: Initial Results of Tilt, Flux and Field Strength*, presentation at 40<sup>th</sup> Annual Meeting of the Astronomical Society of India (ASI) workshop on Long-term study of solar activity on 25<sup>th</sup> March 2022 at IIT Roorkee, India.

*Tracking of Bipolar Magnetic Regions Using an Automatic Algorithm: Initial Results of Tilt, Flux and Field Strength*, poster presentation at 40<sup>th</sup> Annual Meeting of the Astronomical Society of India (ASI), during 25-29 March 2022 at IIT Roorkee, India.

*Study on the effects of Ionospheric Variabilities on usability of NavIC/GAGAN*, presentation at Navic Gagan Utility Program Workshop-2019 in September 2019, at Space Application Centre, Ahmedabad, India.

## REFERENCE

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**Dr.Bidya Binay Karak**

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**Dr.Raju KP**

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