

Recent Research Progress in Space Weather in Nepal



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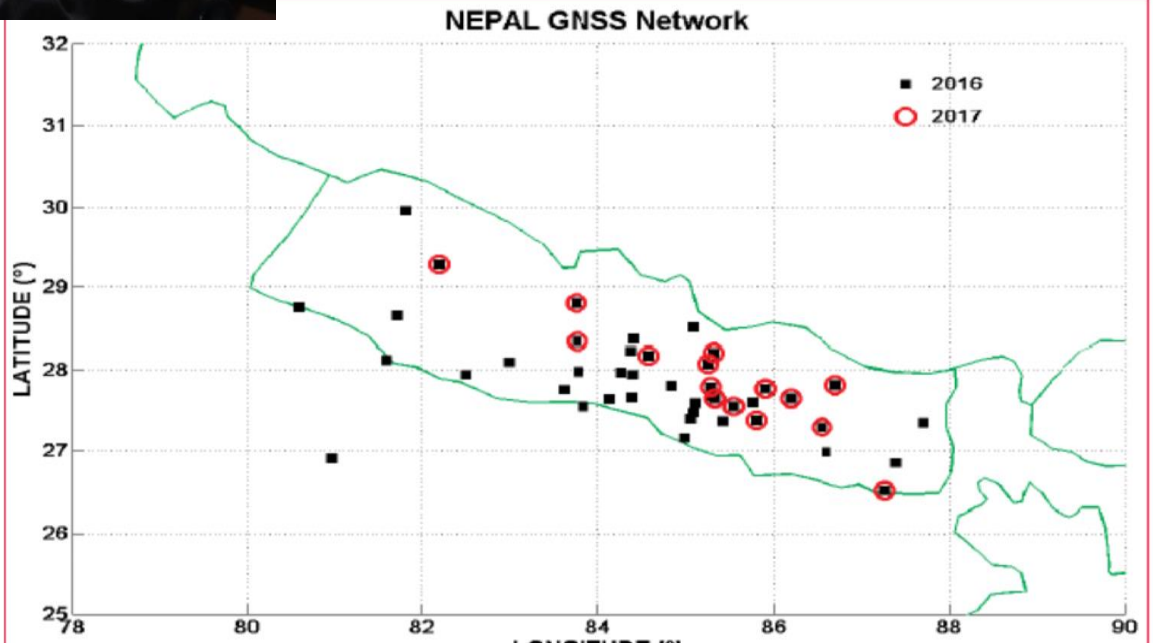
Workshop on Space Weather and Upper Atmosphere Physics (WSWUAP) Kathmandu, Nepal, September 23-27, 2019



Jointly organized by the Department of Physics, Amrit Campus, Tribhuvan University, Kathmandu, Nepal and The Abdus Salam International Center for Theoretical Physics (ICTP), Trieste, Italy

GPS Network in Nepal

UNAVCO



International Conference on Frontiers of Physics – 2022 (e-Conference)

January 22-24, 2022

70 Research Papers 15 Plenary Talks, 16 Invited Talks• 39 Contributed Talks

24 Research Papers in Space and Atmospheric Physics

Plenary Speakers in Space Physics

Dr. Bruce Tsurutani Jet propulsion Laboratory, NASA, USA
Space Weather: A New/Old Plasma Physics Science

Dr. Kazuo Shiokawa, Nagoya University, Japan
Current Outstanding Scientific Topics in the Solar-Terrestrial Physics

Dr. Christine-Amory, Université Pierre et Marie Curie, France
Sun-Earth System And Space Weather: An Historical Approach

Dr. Jason Jackiewicz, New Mexico State University. New Mexico, USA
Seismology of the Sun, Stars, and Giant Planets

Research Group in Space Physics in Nepal



Dr. Narayan Prasad Chapagain

Professor of Physics, TU,
Kathmandu, Nepal



Dr. Binod Adhikari

St. Xaviers' College,
Kathmandu, Nepal

4 PhD Scholars



Drabindra Pandit



Basudev Ghimire



Hari Bahadur KC



Suresh Poudel

Collaborators

25 MSc Students did their Thesis in Space Physics



Dr. Christine Amory-Mazaudier

Senior Scientist
Université Pierre et Marie
Curie, France



Dr. Rolland Fluery

Senior Scientist
National School
Telecom., France



Dr. Yenca Migoya-Orue

Abdus Salam Intern
Center For Theoretic
Physics (ICTP)
Trieste, Italy

Publications

Climatology of ionosphere over Nepal based on GPS TEC data from 2008 to 2018

Drabindra Pandit^{1,6}, Basudev Ghimire^{1,6}, Christine Amory-Mazaudier^{2,3}, Rolland Fleury⁴, Narayan Prasad Chapagain⁵, Binod Adhikari⁶

Study of VTEC above Nepal with different calibration techniques, and comparison with NeQuick 2 model

P. Poudel¹, A. Silwal¹, B. D. Ghimire^{2,3*}, S. P. Gautam³, M. Karki⁴, N. P. Chapagain⁴, B. Adhikari², D. Pandit^{2,3}, C. Amory-Mazaudier^{5,6}

Radio Science

Research Article

Global Positioning System Observations of Ionospheric Total Electron Content Variations During the 15th January 2010 and 21st June 2020 Solar Eclipse

A. Silwal ✉, S. P. Gautam, P. Poudel, M. Karki, B. Adhikari ✉, N. P. Chapagain, R. K. Mishra, B. D. Ghimire
Migoya-Orue

Publications

Annual and Semi-Annual Variations of TEC over Nepal During the Period of 2007 to 2017 and Possible Drivers

***Basu Dev Ghimire^{1,2,4}, Bibek Gautam², Narayan P. Chapagain³, Karan Bhatta⁴**

Variation of GPS- Tec Measurements of the Year 2014: A Comparative Study with IRI - 2016 Model

B. D. Ghimire, N. P. Chapagain, V. Basnet, K. Bhatta and B. Khadka

GPS TEC Scintillations and TEC depletion as seen from Hetauda and NAST, Nepal for 2016

Basu Dev Ghimire^{1,2,3,5,*}, Narayan Prasad Chapagain⁴, Balaram Khadka^{2,3}, Gambir Bidari², Karan Bhatta^{3,5}, Aditay Singh Thapa²

Variation of Total Electron Content (TEC) in the quiet and disturbed days and their correlation with geomagnetic parameters of Lamjung Station in the year of 2015

Basu Dev Ghimire^{1,2,5*}, Narayan Prasad Chapagain³, Vardhan Basnet², Karan Bhatta^{4,5}, Balaram

Publications

Radio Science

Research Article

Variation on Solar Wind Parameters and Total Electron Content Over Middle- to Low-Latitude Regions During Intense Geomagnetic Storms

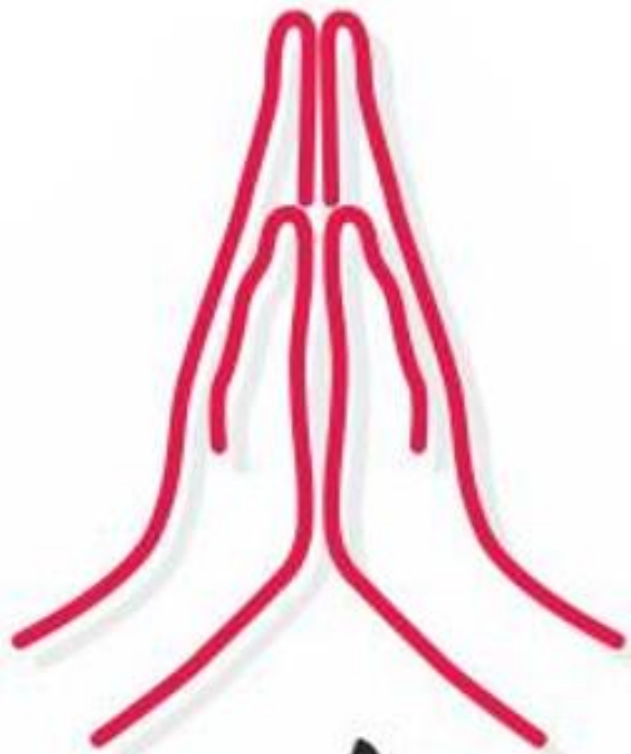
Roshan Kumar Mishra, Binod Adhikari ✉, Narayan Prasad Chapagain, Rabin Baral, Priyanka Kumari Das, Virginia Klausner, Manisha Sharma

Correlation of Alfvén Mach number with field aligned current, polar cap potential and dawn dusk electric field during Quiet and extreme solar wind conditions

Binod Adhikari^{a,c,*}, Drabindra Pandit^{a,c}, Prashrit Baruwal^c, Opendra Thapa^a, Niraj Adhikari^a, Bidur Kaphle^a, Pratik Bhattarai^a, Narayan P. Chapagain^d & Sarala Adhikari^c

Analysis of Tec Variations over Nepal Obtained from GPS Data on Geo-Magnetically Quiet and Disturbed Days of the Year 2015

B. D. Ghimire, N. P. Chapagain, V. Basnet, B. Khadka



Thank you.