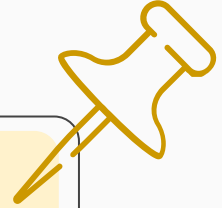


MY JOURNEY AS A YOUNG RESEARCHER

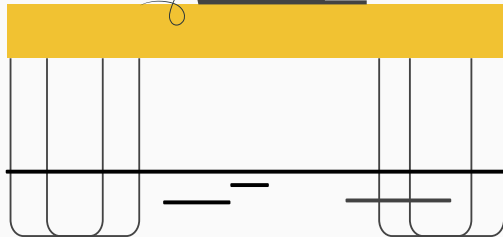
By Bushra Gul
bushraagul3@gmail.com

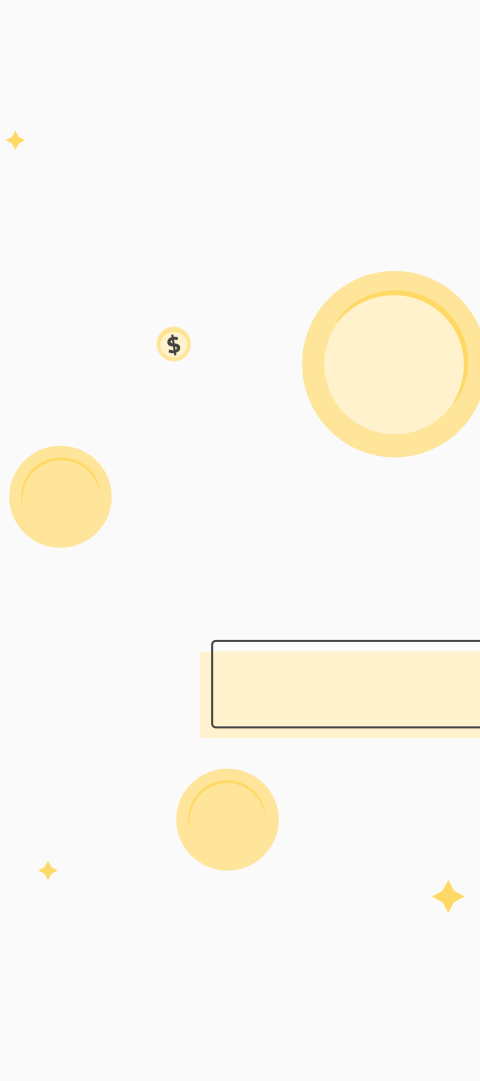


INTRODUCTION



- **Completed Bachelor's degree in Applied Physics from NED University Karachi**
- **Currently pursuing an MPhil program at University of Karachi**
- **Actively preparing for upcoming thesis defense**
- **Concurrently serving as a lecturer at the high school level**
- **Demonstrating dedication to advancing in academia**
- **Engaged in rigorous research within the ionospheric field of space weather**
- **Actively involved in women empowerment activities within STEM fields under ISMWS uok campus**



The slide features several decorative yellow circles of varying sizes and small four-pointed stars scattered across the background. One circle on the left contains a dollar sign (\$).

“Physics isn't just a subject for classrooms; it should be a topic of discussion at our evening teas. From the mysteries of why the sky is blue to the wonders of everyday phenomena, let's make physics
✦ a common language in our homes and embrace the curiosity that fuels our understanding of the world.”

—DR SULTANA NAHAR

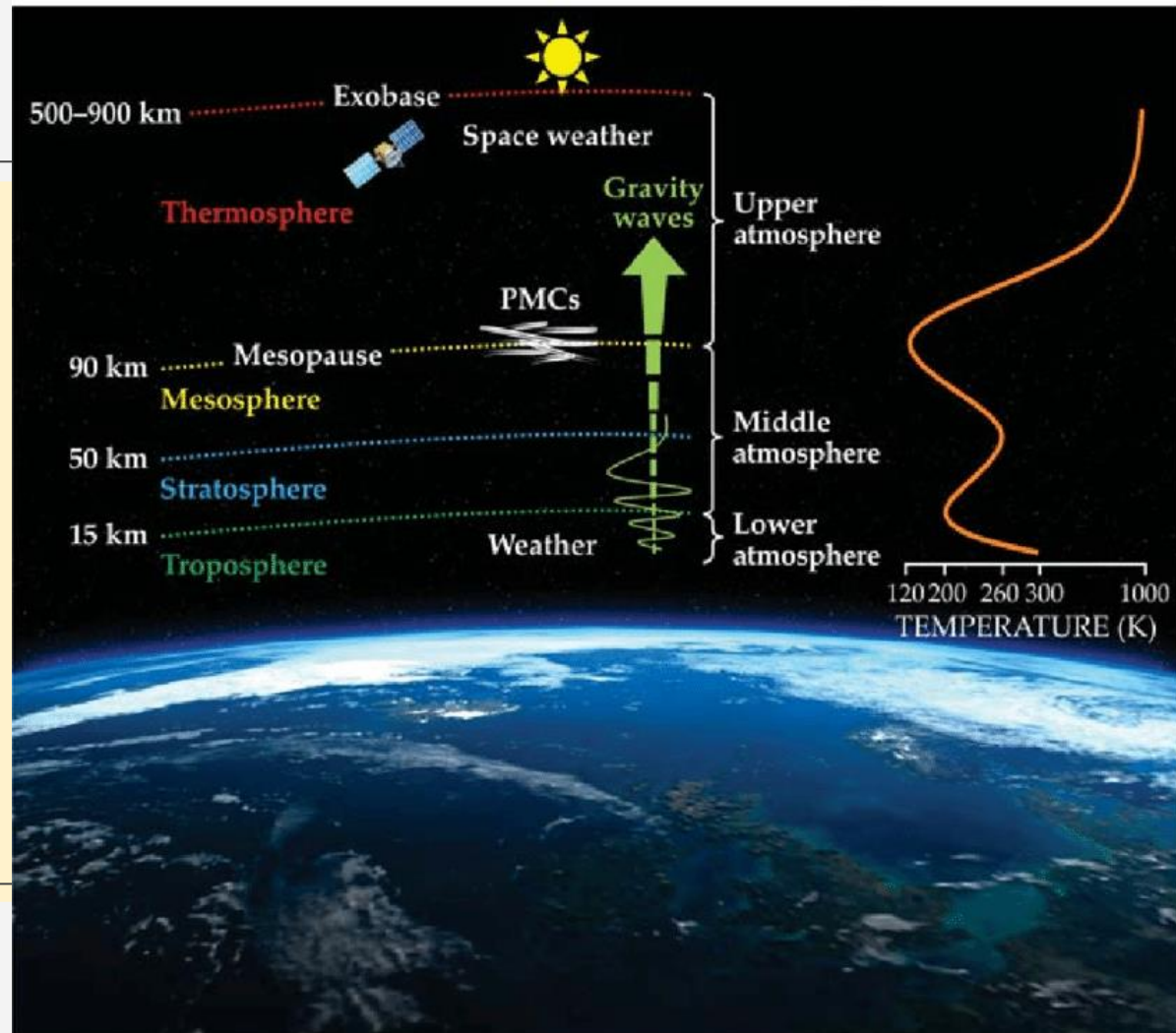
ABOUT MY RESEARCH

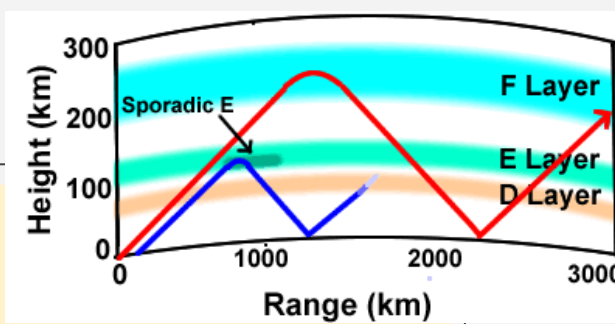
Space weather



Earth's neutral atmosphere is structured into layers based on temperature

Space weather processes, driven by the Sun, primarily affect the upper atmosphere.



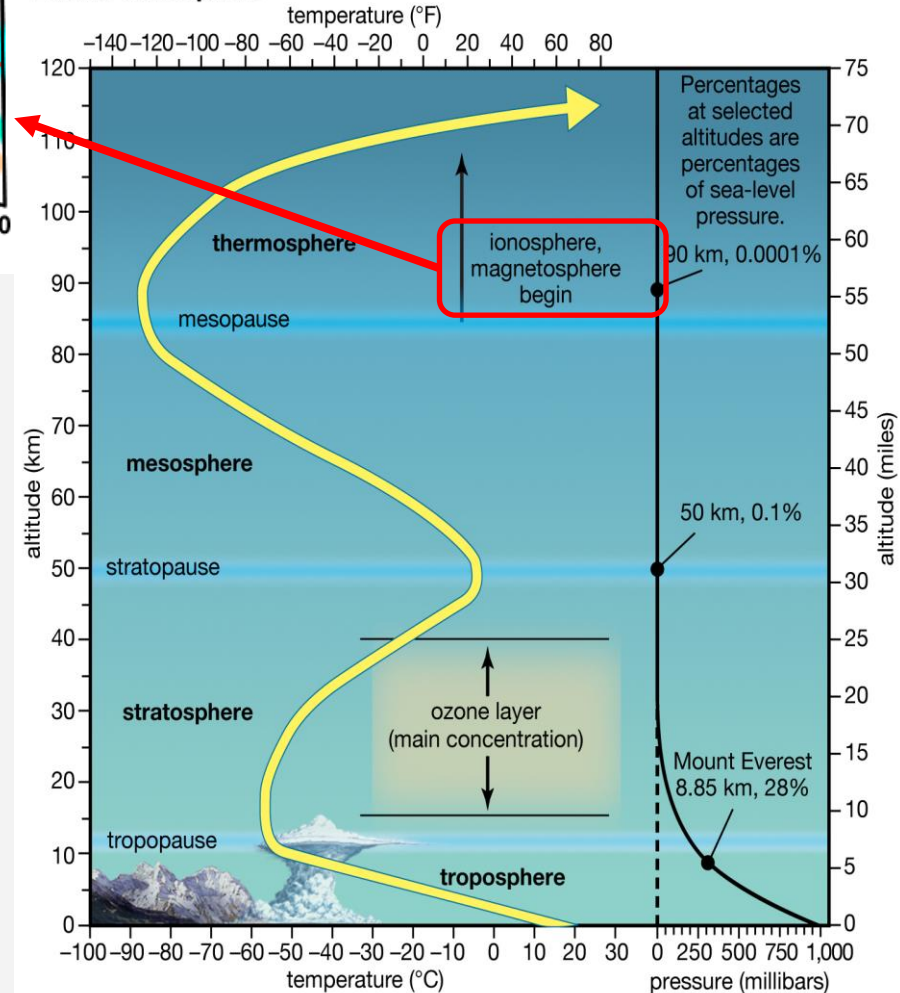


Es layers are one of the most important phenomena.



significantly affect radio communication and broadcast systems with high-frequency (HF) and very high-frequency (VHF) radio waves.

recent studies also suggest that Es layers have a potential impact on air-navigation systems, which use VHF radio waves

Earth's atmosphere




Correlation between f_oE_s and zonal winds over Rome, Okinawa and Townsville using Horizontal Wind Model (HWM14) during solar cycle 22

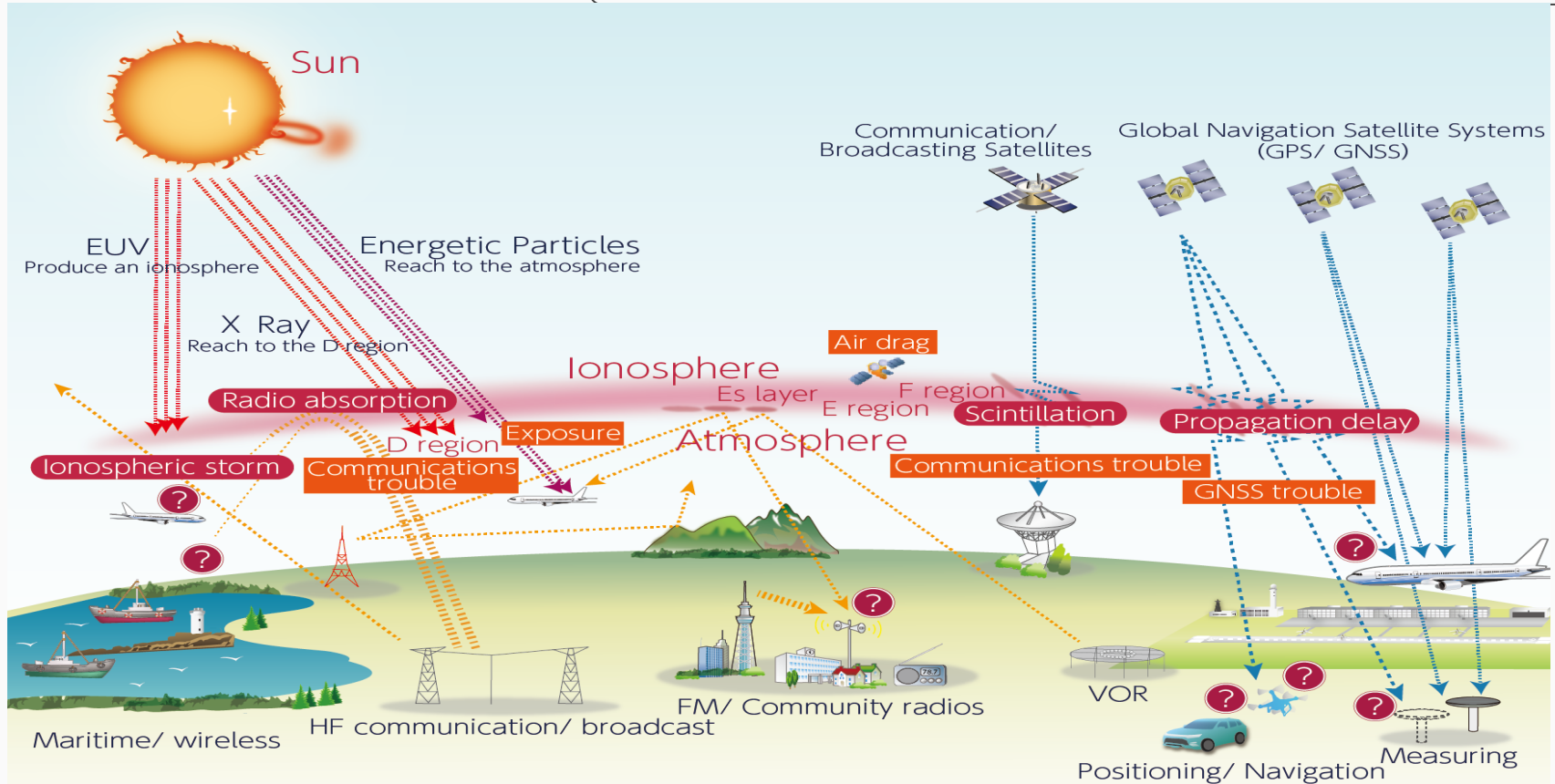
Bushra Gul^a   , Muhammad Ayyaz Ameen^{a b} , Tobias G.W. Verhulst^c

Show more 

Modelling of f_oF_2 using artificial neural network over Equatorial Ionization Anomaly (EIA) region stations

Muhammad Ayyaz Ameen^{a b}   , Afnan Tahir^{a c} , Madeeha Talha^{a d} ,
Haqqa Khursheed^a , Imran A. Siddiqui^b , Syed Tanweer Iqbal^b , Bushra Gul^b

STUDY OBJECTIVES FOR THE FUTURE



CONFERENCES ATTENDED

African Capacity-Building Workshop on Space Weather Effects on GNSS



Workshop on NeQuick Ionospheric Electron Density Model:
Latest Developments and New Implementations

8 - 11 October 2019, Miramare - Trieste, Italy



CLOSING REMARKS

- **GRATITUDE TO MENTORS**
- **THERE'S A LOT TO LOOK FORWARD TO**
- **ITS NEVER TOO LATE**
- **OPPORTUNITIES FOR CONTINUED LEARNING, GROWTH, AND CONTRIBUTION TO THE FIELD**





Members of ismws uok chapter successfully hosted phy camp for girls 3.0 with major sponsorship from APS and Dr. Sultana Nahar

We are also hosting a workshop on scientific writing at undergrad level soon.

Physics Camp for Girls (2021)

PHYSICS CAMP FOR GIRLS 2023

Mark Your Calendars
18 November 2023

Timings
9:30 AM - 2:30 PM

Commecs College, Karachi

COMMCECS COLLEGE
Advancing Physics

APS
Advancing Physics

physicscampforgirls
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physicscampforgirls.pk



8 Astronomy
Hamza Hanif
17:47

9 Newton's L
(2021)
Hamza Hanif
42:30

10 Magnetism
Camp for G
Hamza Hanif
7:02





**Make your research pay for your
dream destinations
Thank You**