Tata Institute of Fundamental Research

Homi Bhabha Road, Colaba, Mumbai, INDIA, 400005

Special SET Colloquium

An overview of the Global Navigation Satellite System (GNSS)

Safety of life is the prime aspect in civil aviation and navigation applications, and precise timing and position information are crucial data to the scientific payloads in scientific ballooning applications. The timing and position details are estimated precisely in satellite-based navigation systems without losing even for a fraction of a second when the selective availability (SA), continuity, accuracy, and integrity are addressed. Global Navigation Satellite System (GNSS) is a multi-satellite-constellation network to provide accurate timing and user position information with SA and continuity. In this talk, I will describe the satellite-based navigation system and the importance of GNSS in balloon-borne scientific applications.

Mr. Venkateswara Rao Tanneeru (Balloon Facility of TIFR, Hyderabad)

Mr. Tanneeru Venkateswara Rao is working in the Balloon Facility of Tata Institute of Fundamental Research (TIFR) since the year 2000 in various positions and is currently in the position of a scientific officer. His responsibilities include designing and developing on-board and ground-based telemetry sub-systems and satellite-based navigation sub-systems. He has received the M.E/M.Tech degree in digital systems engineering from the Department of Electronics and Communication Engineering, Osmania University, Hyderabad, Telangana, India, in 2015. Currently, he is pursuing a doctoral degree from Koneru Lakshmaiah Education Foundation, Vaddeswaram, Andhra Pradesh, India in the field of ionospheric studies. His research interests include Global Positioning System (GPS) amplitude scintillations correlation analysis, scintillations prediction, and mitigation algorithms to improve positional accuracy during scintillations periods.

Date & Time: Thursday, 13th April 2023, 4pm (ONLINE)

YT Live: https://youtube.com/live/GvHX7-LkOZk?feature=share