



Graduate Physics Seminar
Monday, 12 March 2012 from 4 PM
University of Nova Gorica
Vipavska 13, Rožna dolina, Nova Gorica
SP-1 Lecture room

Dorđe Stevanović

University of Nova Gorica, Center for Atmospheric Research

Study of Small Scale Plasma Irregularities in the Ionosphere

Abstract

Charged particles outflowing from the solar coronal plasma interact with the Earth magnetic field in the ionosphere giving rise to a number of conditions known as space weather. The ionosphere is the part of the upper atmosphere (from 60 till about 1000 km) where free electrons occur with sufficiently high densities to have an appreciable influence on the propagation of radio waves. Inhomogeneities in the spatial distribution of the electron density may cause the radio waves to undergo a number of disturbances which can result in the disruption of satellite based technologies.

This seminar will introduce space weather, its effects on ionospheric electron density structures and satellite based applications such as the Global Navigation Satellite Systems (GNSS). Results from a short measurement campaign performed at EISCAT UHF radar facility at auroral latitudes in Northern Europe will also be presented as well as my future activities related to the modeling of small-scale electron density structures at low and high latitudes.