# IMPLEMENTATION OF REAL-TIME KINEMATIC DATA TO DETERMINE THE IONOSPHERE TOTAL ELECTRON CONTENT

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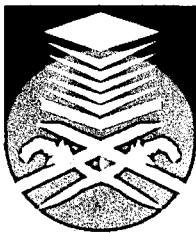
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ABSTRACT

Ionosphere layer is important in communication system. This layer is the uppermost part of the atmosphere, distinguished because it is ionized by solar radiation. It plays an important part in atmospheric electricity and forms the inner edge of the magnetosphere. It has practical importance because, among other functions, it influences radio propagation to distant places on the Earth. In this layer where the total electron content exits, because of ionization by the Sun's extreme ultraviolet radiation, while the night side ionosphere electron content is reduced by chemical recombination. Maximum total electron content (TEC) was detected at Local Time Clock (LTC) 13:00 pm to 14:00 pm (Universal Time Clock, UTC 05:00am – 06:00am) and will decrease gradually and reached its minimum at night Local Time Clock. TEC during the day was higher than at night. The ultraviolet (UV) radiation from the sun ionizes fractions of the neutral atmosphere and forms the ionosphere. The elevation angle of satellite will also influence the TEC value. The higher elevation angle, the value of vertical TEC will also increase. These studied TEC are based on data which in RINEX (Receiver Independent Exchange Format) format collected from JUPEM (Department Of Survey and Mapping Malaysia) at Kuala Lumpur. The data taken from GPS receiver stations located at Arau, Perlis (6° 27min 0.56909 sec) and at Universiti Teknologi Malaysia, Johor (1° 33min 56.93495sec). The important parameter to be studied on ionosphere and need to analyzed more is total electron content (TEC). The analysis TEC is important to monitor behavior of the ionosphere as well as for practical application like satellite tracking, satellite to satellite communication, satellite to ground communication and all communication system by using satellite like satellite TV and satellite telecommunication.

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