

**GEOMAGNETIC STORM AND TRAVELLING IONOSPHERIC  
DISTURBANCES (TIDs) EFFECT ON GEOMAGNETIC DATA**

**This is presented in partial fulfillment for the award of the**

**Bachelor of Electrical Engineering (Hons.)**

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**MAY 2010**

## ACKNOWLEDGEMENT

First and foremost, I would like to convey my greatest gratitude to ALLAH S.W.T that gives me an opportunity to be able to complete my final year project and thesis.

My deepest thanks and appreciations go to my project supervisor, Ms.Noor Hafizah Bt Abdul Aziz for the consistent help and guidance as well as prevision of her valuable time, encourage and patient in completing this project.

Special gratitude goes to Mr. Mohamad Huzaimy bin Jusoh for helping me and guides me throughout completion of my final year project and thesis. Besides, special thanks to Space Environment Research Centre (SERC), Kyushu University Japan for supply MAGDAS data.

Also thanks to Ms. Nani Fadzlina Naim and Mr. Muhammad Adib Haron for their willingness to evaluate my project presentation.

Last but not least, thanks to my family, friends and anybody who involved directly and indirectly for their support, understanding, help and advice.

Thank you.

## ABSTRACT

A geomagnetic storm is a temporary disturbance of the Earth's magnetosphere. In one respect the solar storms themselves shield the Earth. They reduce the intensity of cosmic rays, energetic particles reaching the Earth from the Galaxy. Travelling ionospheric disturbances (TIDs) were said to occur depends on the present of geomagnetic storm. This project focused on the correlation between geomagnetic storms with travelling ionosphere disturbances (TIDs) and their effects on geomagnetic data. The geomagnetic data is based on Magnetic Data Acquisition System (MAGDAS). The geomagnetic data can be measured by using magnetometer, which is usually operating non-mechanically, that are capable of measuring the amplitude (strength) of the magnetic field, or of a component of the field. MAGDAS Data which are H, D, Z and F from Manado (Indonesia) station from 6 to 15 December 2006 were chosen to analyze the geomagnetic storm events, travelling ionospheric disturbances (TIDs) events and also geomagnetic storm with travelling ionospheric event. Travelling ionospheric disturbances can be assigned to large-scale travelling ionospheric disturbances (LSTIDs), medium-scale travelling ionospheric disturbances (MSTIDs) and small-scale travelling ionospheric disturbances (SSTIDs). The data were supplied by Space Environment Research Centre, Kyushu University Japan. The data have been selected based on Kp Index from 6 to 15 December 2006 and all these data are then analyzed by using MATLAB program. The results obtained gave a new knowledge and new finding about magnetic activities that relates to space activities.

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