

**INFLUENCE OF SOLAR ENERGETIC PHENOMENA ON GPS PWV DURING THE MAJOR STORM OF 2003 AT SCOTT BASE STATION ANTARCTICA**

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The influenced of solar energetic phenomena, solar flare index and extreme ultraviolet (EUV) on precipitable water vapour (PWV) are investigated during the intense 2003 geomagnetic storms at Scott Base station Antarctica for the period between October 22<sup>nd</sup> and 7<sup>th</sup> November 2003. The PWV parameter is obtained from the GPS signals and surface meteorological data (pressure, temperature, and humidity) measured at the site, while the solar flare index (SFI) and Solar EUV are obtained from Kandilli Observatory, Turkey and SOLAR2000 Space Environment Technologies USA respectively. The geomagnetic data during the storm are obtained from World Data Center for Geomagnetism (WDC-C2), Kyoto and NOAA SEC, USA. Analysis of result showed that PWV and Solar EUV have almost similar empirical CDF and that the PWV and solar flare index exhibits an inverse relationship. The standard deviation and empirical CDF gradient of PWV are equal to 0.68 mm and 0.5 per mm respectively and PWV was observed to decrease by about 0.1 mm during this period. This preliminary study is important for the understanding and predicting the Sun's influence on Earth climate.