



Investigation of the Earth Ionosphere during extreme solar events based on two different observation methods

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The first approach is based on observations from ground stations to GNSS. Apart from global TEC maps also regional maps were determined and compared to those offered by different analysis centres within the IGS. Beside a solution based on smoothed code also one with double differenced carrier phase were calculated. The research covered not only the present quiet conditions but also periods of extreme solar events like the Halloween events in 2003. The other approach used accelerometer data from LEO like CHAMP and GRACE to calculate the thermospheric density in about 400km height. Results were compared with state of the art models like the Jacchia Bowman 2008.