THE EFFECT OF CALIBRATION OF E.D.M. AND ANCILLARY EQUIPMENT ON THE PRECISION OF GEODETIC MEASUREMENTS

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This thesis is my original work and has not been presented for a degree in any other University.

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This thesis has been submitted for examination with my approval as University supervisor.

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ABSTRACT

Only two geodetic EDM instruments are considered namely the Tellurometer and Geodimeter; exemplifying microwave and electro-optical equipment respectively. After outlining the development and design and operating principles of both instruments, their calibrations are examined.

Suitable instruments, base lines and observing techniques to be used in calibration are considered. The effects of lack of calibration are emphasized throughout and the study is illustrated with experiments which were carried out by the author and others in Sweden.

Finally the study is summed up with conclusions and recommendations.