

MEMORANDUM

This dissertation is submitted to the University of Ghana
in support of an application for the degree of Master of Science.

It has not been published elsewhere and is not to be published elsewhere.

**DIURNAL VARIATION OF IONOSPHERIC TOTAL ELECTRON
CONTENT AT LEGON**

The volume contains the work carried out by the author under
the supervision of Professor C.N. Foster of the Department of Physics,
Legon. The work was done between October 1968 and June 1969.

Faraday rotation measurements BY on the radio signals from the
geostationary satellite AFS-6 have been used in conjunction with
total electron content measurements from the beacon satellite S-65
to obtain diurnal variations of ionospheric total electron content
at Legon. The observatory was the Electronics laboratory at the
Department of Physics, Legon, and the equipment used was a specially
designed polarimeter. The various features of the diurnal curves

have been discussed in the light of the relevant theories of the
ionosphere. Ionospheric parameters have also been deduced.

M.B. Owusu

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AUGUST 1969.