

MAGDAS-II System Development

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This paper describes the development of the MAGDAS II system, which was done in-house here at SERC by staff and students. The primary mission of this new system was to establish a new North-South magnetometer chain in Africa (now called the 96MM Chain) in a short time frame (in less than one year), and to use a triple-axial fluxgate-type magnetometer sensor with a proven track. Other requirements of MAGDAS II: (1) It must send data in real time to SERC. (2) It must record data on data cards at all times (even during power failures). (3) It must get the precise time from GPS. (4) It must perform the sampling rate at once per second. (5) The sampling accuracy must be 16 bits.

During the second half of Year 2008, MAGDAS II units were successfully installed by SERC in Ewa Beach (USA), Lagos (Nigeria), Durban (South Africa), Maputo (Mozambique), Lusaka (Zambia), Dar Es Salaam (Tanzania), Nairobi (Kenya), Khartoum (Sudan), and Aswan (Egypt). The data from these MAGDAS II stations is easily available from the Web (see <http://magdas2.serc.kyushu-u.ac.jp>).