

INVESTIGATION ON THE OCCURRENCE OF GROUND
ULTRA LOW FREQUENCY (ULF) PULSE TO THE
EART QUAKE AREA

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**INVESTIGATION ON THE OCCURRENCE OF GROUND ULTRA LOW
FREQUENCY (ULF) PRIOR TO THE EARTHQUAKE**

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In the name of ALLAH The Most Merciful

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ABSTRACT

Earthquake is an earth event that causes damage and loss human life. This project highlights about the occurrence of ground Ultra Low Frequency (ULF) prior the earthquake event. The ULF observations have been started October 2006. ULF is emission before and after earthquake. The MAGnetic Data Acquisition System (MAGDAS) data that received from Space Environment Research Center (SERC), Kyushu University had been analyzed. In this project data are observed from two of MAGDAS stations which are situated at Manado Indonesia (1.44°N, 124.84°E) and Pare Pare, Indonesia (-3.60°N, 119.40°E) while the earthquakes observation are situated at Pulau Sulawesi, Indonesia (1.290°N, 122.100°E) occurred on 16 November 2008, Java, Indonesia (7.962°S, 110.458°E) occurred on 26 May 2006 and Banda Sea, Indonesia (5.482°N, 128.093°E) occurred on 26 January 2006. The MAGDAS data are consist of three components magnetic field which are known as H, D and Z components. This project is to analyze and different the H, D and Z components about 3 months during earthquake event. In addition, this project is also observing the analysis of polarization ratio Z/G and magnetic storm index K_p to see relationship between them. The data MAGDAS and K_p index process by using the MATLAB version R2008a. . The enhancement on H, D, and Z component within 1 week and 3 to 10 days before the earthquake can be conclude influence earthquake.

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