SSS012-P11 　　　　会場:コンベンションホール 　　　　時間: 5月24日17:15-18:45

地殻変動に関連する地磁気異常の研究：2007年ペルー沖地震のケーススタディ

Study of Geomagnetic Anomalies Related to Tectonic Activities: Case study: Pisco Earthquake, Peru 2007

Takla Emad Moris Henry[1*], 湯元 清文[2], イシツカ ホセ[3], ロサレス ドミンゴ[4], ドゥトラ セヴェリノ[5], 魚住 禎司[2], 阿部 修司[2]

Emad Moris Henry Takla[1*], Kiyohumi Yumoto[2], Jose Ishituka[3], Domingo Rosales[4], Severino Dutra[5], Teiji Uozumi[2], Shuji Abe[2]

[1]九州大学大学院理学府地球惑星科学専攻, [2]九州大学宙空環境研究センター, [3]ペルー地球物理研究所アンコン観測所, [4]ペルー地球物理研究所ワンカイヨ観測所, [5]ブラジル国立宇宙研究所

[1]Dept. Earth Planet. Sci, Kyushu Univ., [2]SERC, Kyushu Univ., [3]IGP, Ancon Observatory, [4]IGP, Observatorio de Huancayo, [5]National Space Research Institute,Brazil

It seems possible to obtain a significant signal linked to the tectonic activities, since many studies confirmed the relation between the geodynamic activity and the anomalous variations of the Earth's geomagnetic field. In addition, several observations of geomagnetic variations have been convincingly interpreted as a result of changing magnetic rock properties under varying tectonic stress. Where, the change of stress field in the seismic region can cause changes in the electric conductivity structure of the Earth.

Geomagnetic data recorded at Ancon (ANC), Huancayo (HUA) and Eusebio (EUS) stations were analyzed in order to clarify if there is a relation between the geomagnetic variations and the tectonic activities at Peru during 2007. Our obtained results indicate both short and long term anomalous geomagnetic variations (D and Z components) in relation with the seismic activity. In addition, there are anomalous ULF signals a few months before the onset of seismic activities. The cause of such anomalous geomagnetic variations may be explained as a result of Piezomagnetic effect, where the perturbations of the crustal stress maybe the cause of the variations in the intensity and/or rotation of the geomagnetic vectors.