

R005-10

B会場：11/4 PM2 (15:45-18:15)

16:30~16:45

## トンガ海底火山噴火後の磁気リップルの全球的振幅増大

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## Global enhancement of magnetic ripples after the 2022 Hunga Tonga Hunga Ha'apai volcanic eruption

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After the huge eruption of the Hunga Tonga Hunga Ha'apai submarine volcano on January 15, 2022, a pressure wave so called "Lamb wave" went around the Earth. After the passage of the pressure wave, the Swarm satellites observed amplitude enhancement of magnetic ripples and electron density fluctuations in low and middle latitudes on the dayside, and the enhancement lasted two or three days. At a low latitude observatory in Phimai, Thailand, after the passage of pressure waves, an enhancement of short period oscillations of GPS-TEC and that of geomagnetic field were observed, and they lasted at least a few hours after the passage of the wave front. From these event analyses, it is suggested that the pressure wave which went around the Earth caused short period oscillations of magnetic field and electron density in the upper atmosphere which at least lasted a few hours after the passage of the pressure wave front.

2022年1月15日の04:14UT頃に開始したトンガ海底火山噴火後、2~3日間にわたり、昼間側中低緯度の電離圏F領域では磁気リップルの全球的振幅増大が Swarm 衛星により観測された。他方、タイ・ピマーイでの気圧・地磁気・GPS-TEC 観測では、噴火により発生した気圧波 (Lamb 波) の到達後数時間、気圧波により励起されたと考えられる地磁気変動や TEC 変動が検出された。地球を周回した気圧波と衛星による磁気リップルの観測、地上観測との関係を中心に解析した結果を示す。