

口絵 3 : 三宅島火山 2000 年活動に伴う全磁力変化と自然電位の異常

Pictorial 3 : Changes in the Geomagnetic Total Intensity and Self Potential Anomaly Associated with the 2000 Activity of Miyake-jima Volcano

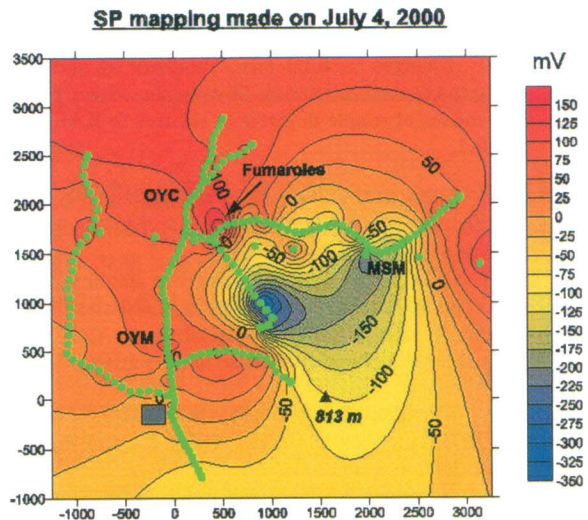
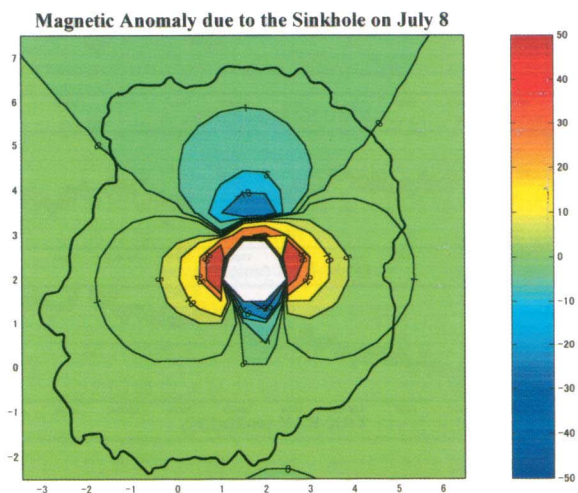


図 1 7月8日の山頂陥没に伴う全磁力変化のモデル計算 . 陥没地形を円板で近似したもので単位は nT . 三宅島の地表面での値を示す .

Fig. 1 Computed magnetic anomaly due to the sinkhole produced by the steam explosion on July 8. The hole is approximated as a circular disk. Total intensity values at the ground surface are shown. Unit is nT.

図 2 7月4日に測量した山頂カルデラ内の自然電位分布 . 4日後に形成された陥没孔の中心付近( 柵形山と東隣の大穴火口 )で強い負異常が検出された .

Fig. 2 The distribution of electric self-potential (SP) within the summit caldera as revealed by area survey conducted on July 4. A strong negative anomaly appeared near the center of the forthcoming depression.

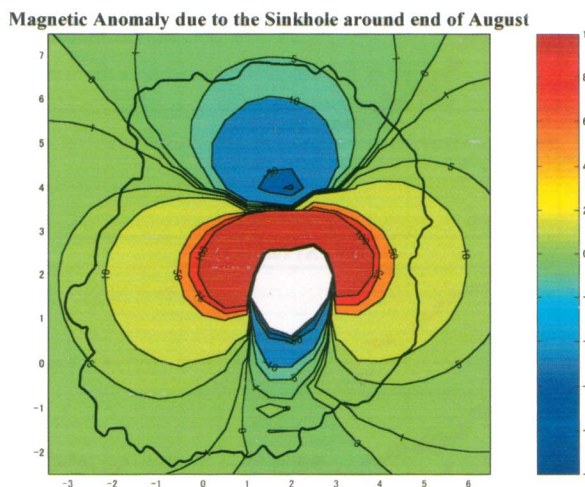
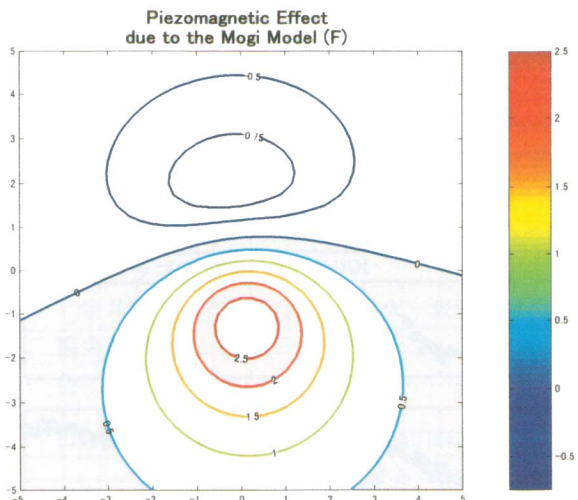


図 3 深さ 3 km に圧力源を持つ茂木モデルに伴うピエゾ磁気変化 (全磁力) . 単位 nT .

Fig. 3 Piezomagnetic field changes (total intensity) associated with the Mogi model whose pressure source lies at a depth of 3 km. Unit is nT.

図 4 8月下旬の陥没孔を近似した円板モデルに伴う全磁力変化 . 単位 nT .

Fig. 4 The computed total intensity changes associated with the sinkhole around the end of August, which was approximated as a circular disk. Unit is nT.

図 5 ( ) 1995 年 10 月から 2000 年 5 月までの三宅島南北中心軸上の観測点における全磁力変化 . 柿岡 ( KAK ) を基準とした全磁力単純差の 5 日平均 .

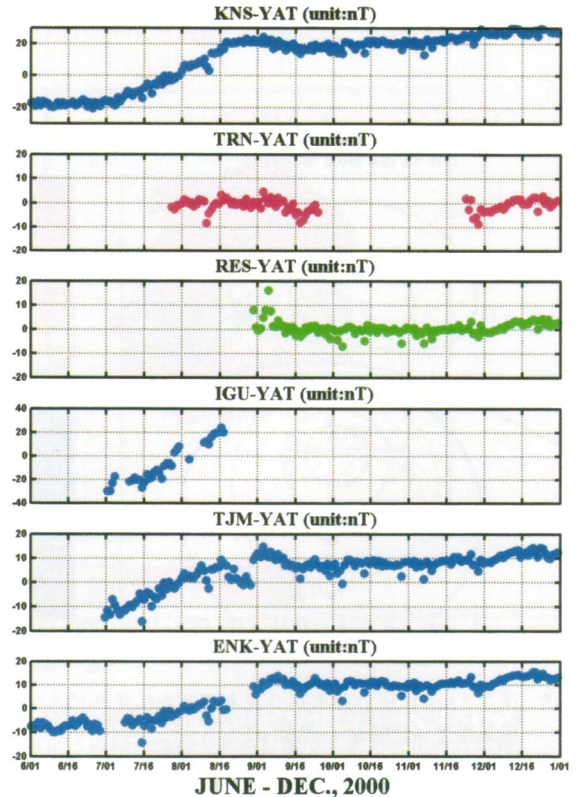
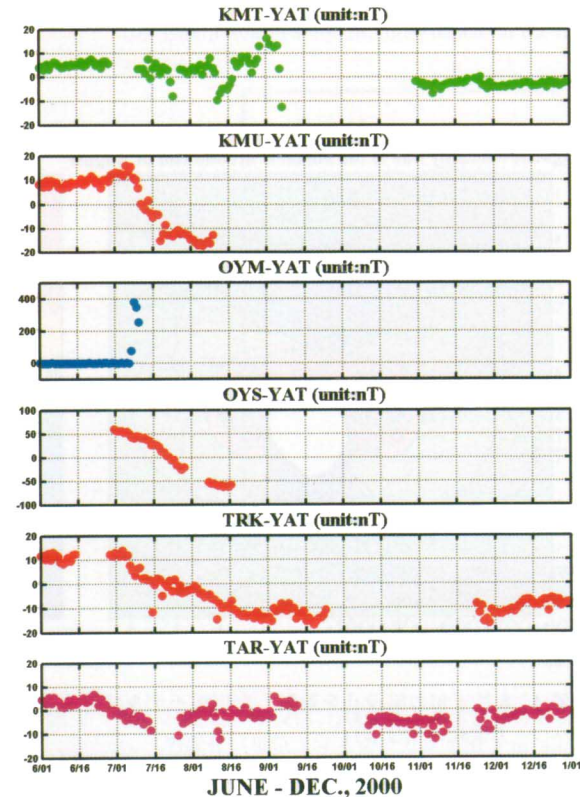
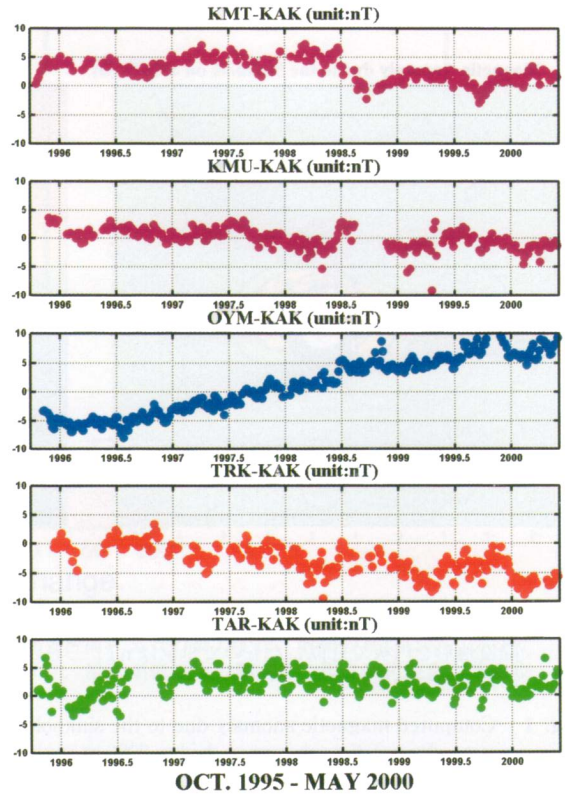
Fig. 5 ( ) Changes in total force intensity at stations along the central N-S line on Miyake-jima island. Five-day means of simple differences relative to KAK are plotted.

図 6 ( ) 三宅島火山の南北中心線上の観測点における全磁力変化 . 八ヶ岳 ( YAT ) を基準とした単純差日平均 . 2000 年 6 月 12 月 .

Fig. 6 ( ) Changes in the total intensity at stations along the central N-S line of Miyake-jima volcano. Daily means of simple differences relative to YAT are plotted for the period from June to December 2000.

図 7 ( ) 三宅島火山の主として東西両側の観測点における全磁力変化 . 八ヶ岳 ( YAT ) を基準とした単純差日平均 . 2000 年 6 月 12 月 .

Fig. 7 ( ) Changes in the total intensity at stations mostly on the east and west sides of Miyake-jima volcano. Daily means of simple differences relative to YAT are plotted for the period from June to December 2000.



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