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## Locating magma chambers during the 2011 eruptions of Kirishima volcano, southwest Japan, by using strain data obtained i

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Disaster Prevention Research Institute, Kyoto University, has been observing crustal deformation by using invar extensometers and water-tube tiltmeters in a vault at Isa Station in Kagoshima Prefecture. This station is placed approximately 18 km away from Shinmoe-dake (Kirishima volcano group), which has made several major eruptions since 26th January, 2011. Data at Isa station show clear variations in strains accompanying with the series of eruptions. By assuming a negative pressure source in a homogeneous crust (i.e., Mogi model), we can estimate the direction along which the source locates. First, horizontal direction to the source is determined from a principal axis of the strain tensor. Then transverse strain to radial strain provides information on the dip angle from the horizontal plane to the source. We apply this procedure to data obtained during three eruptions occurred on May 26th and 27th, 2011. We will present the results of estimation, together with the latest data which will have been obtained until the 2011 JpGU meeting.

Keywords: extensometer, observation in vaults, Shinmoe-dake, Kirishima Volcano, eruption, Mogi model