Sulfur dioxide emission rate of the 2000-2001 Miyakejima volcanic activity

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To understand degassing processes during the 2000 Miyakejima volcanic activity, we conducted emission rate measurements of sulfur dioxide by COSPEC since August 26. The sulfur dioxide emission rate increased in mid September to be from thousands to tens of thousands tons in a day. The average sulfur dioxide flux after mid September to the present is greater than 40 ktons/day . The mass rate of the magma degassing is estimated as 20 Mtons/day and the total volume of the degassed magma is calculated to be 1km3 so far. The continuous magma degassing without eruptions would occur at shallow environment by convective transport of magma from a chamber to a magma head through conduits.