

Mt. Etna 2011 Lava Fountains events have been selected when ground data have been available and satellite SO₂ product has been retrieved. From the comparison each of SO₂ product IASI, MODIS and GOME-2 can be considered validated if the product SO₂ mass values are within the ground Flame errors. The Cross-correlation on Cloud detected area evidence small difference in retrieval algorithm for IASI, MODIS and GOME-2 while a difference of 50% on Column Amount for MODIS is derived. Cloud altitude cross-correlation shows large difference.