



A textural study of lavas from Stromboli emitted during the period June 2002-April 2004.

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We are studying petrological and textural features of recent Stromboli lavas. Petrological study reveals an evolutionary trend from earlier pumice-like samples to intermediate density scoria to dense lava. Scoriae emitted from June 2002 to February 2003 shows an important increase in crystallinity which could be connected with a variation of degassing efficiency, consistent with an increase in seismicity. Sample STR 12-02a (from the first lava flow started by outpouring from NE crater, on 28-12-02), shows evidence of magma mixing, which could be connected with the arrival of an important batch of undifferentiated magma. Crystallinity variation and occurrence of STR 12-02a samples may contribute to explaining the collapse of the Sciara del Fuoco, due to arrival of a large batch of hot primitive magma. Another study carried out on these samples concerns Crystal Size Distributions of Plagioclase; we observed two distinct processes of crystallization characterized by different time scales (hrs/months).