



Chronology of the 2014 volcanic eruption on the island of Fogo, Cape Verde

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Twenty seven historical eruptions have occurred at Fogo Island since its discovery and settlement (Ribeiro, 1960; Torres et al., 1997). This summary covers the events of the 27th eruption, which started on November 23, 2014, in Cha das Caldeiras, Fogo Island, along a NNE-SSW fissure on the east flank of the 1995 Pico Novo vent with the appearance of four eruptive vents and emissions of gases, pyroclastic rocks and lava. The eruptive column reached an estimated altitude of 6000 m, with aa lavas spilled over and ash fall in Cha das Caldeiras and other locations in the islands of Fogo and Brava (which lies 17km from Fogo).

The Hawaiian style fissural stage originated about seven craters with gas and lava emission, that formed two lava flows of aa and pahoehoe style who started the destruction of Portela village, with average speeds of 1-3 meters/hour to 8-10 meters/hour with faster paces up to 1 meter/3 minutes, with thicknesses ranging between 1.5 meters to 10 meters, and temperatures of around 800 ° C.

The Strombolian stage, gave rise to a main crater (from the coalescence of small craters) and three small craters or emission vents, which released aa lava flows with development of lava fronts from one or two lava tubes at the base of the volcanic cone which also reached maximum lengths of 300 to 500 meters at estimated speeds of 20-30 meters/minute to 8-10 meters/minute, that destroyed the Portela and Bangaeira villages. Loud explosions and strong rumbling was also heard at the eruption site.

A pahoehoe lava flow developed to the Ilhéu de Losna site, at an average speed of 1 meter/2minutes and a width of about 3 m which was divided into two fronts (north and south of this location) having buried all crop fields (vineyards and other crops) and some houses.

The eruption is ongoing in the main vent, with the emission of gases and ash (dark color fumaroles), scoria, spatter and ballistics up to 30-40 feet high, forming eruptive columns with height of 200-1000 meters.

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