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Subsidence in Askja Caldera between 2015 to 2021

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Iceland is in a Mid Ocean Ridge, where the North American Plate is moving far away from Eurasian Plate at a relative rate of 18-19 mm/yr. The boundary between plates is marked by an active neovolcanism expressed by different volcanoes centres and fissures swarms. Askja volcano is located in the North Volcanic Zone of Iceland. It has an area of 45 km³ and hosts three calderas. Three main eruptions have been observed during different periods: i) 1874 to 1876, ii) 1921-1929, and iii) 1961. Monitoring data have shown a period of alternance between subsidence and uplift between 1966 to 1972. Thereafter, since at least 1983 the caldera has been subsiding at a rate of 5 cm/yr, but this rate has been decaying slowing with time. Additionally, tomography data has revealed a possible deeper zone (between 9 and 15 km depth) below the volcano where melting is storage and also the seismicity between 20 and 25 km depth may be interpreted like a magma movement in this area. However, there are still questions about what is producing the subsidence at Askja. In this work, we present Interferometry Synthetic Aperture Radar (InSAR) results during the period of 2015 to 2021 in Askja. This data will help to constraint what is it causing the subsidence at Askja Caldera.