

Magma Dynamics and Cooling in Sub-volcanic intrusions: Insights on eruption potential from Finite Element Modeling

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SUPPLEMENTARY INFORMATION

TABLE 4

Table listing the performed models with a link to a video of the simulation showing the sub-volcanic intrusion growing (only for the ‘intruded’ models) and post-growth phase (all models). Gray color indicates the host rock domain and magma is illustrated with a color scale representing the \log_{10} (effective viscosity) (Pa s) as calculated in Supplementary Information Table 3. Magma influx velocity (v_{influx}) and the times at which the sub-volcanic intrusion reaches the maximum thickness of 200 m ($t_{200\text{m}}$) are also indicated. Years in the last two columns are approximated to the nearest integer.

Model	v_{influx} [m s⁻¹]	t_{200m} [sec, years]	Video
<i>instant_ conduction</i>	0	0	https://doi.org/10.5281/zenodo.17296793
<i>instant_ convection</i>	0	0	https://doi.org/10.5281/zenodo.17296882
<i>intruded_ 1month</i>	1×10^{-2}	3.98×10^6 , 0.13	https://doi.org/10.5281/zenodo.17296931
<i>intruded_ 1year</i>	1×10^{-3}	4×10^7 , 1.3	https://doi.org/10.5281/zenodo.17296952
<i>intruded_ 12years</i>	1×10^{-4}	4×10^8 , 12.7	https://doi.org/10.5281/zenodo.17296977
<i>intruded_ 25years</i>	5×10^{-5}	7.99×10^8 , 25.3	https://doi.org/10.5281/zenodo.17297055
<i>intruded_ 127years</i>	1×10^{-5}	4.00×10^9 , 126.8	https://doi.org/10.5281/zenodo.17297002