

## Crystal settling in Nosappumisaki dolerite sill, Nemuro, Hokkaido

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Processes of crystal settling in cooling magma bodies are key to understanding magma fractionation and evolution of crust. A crystal settling model for the Nosappumisaki dolerite sill, Hokkaido, Japan is proposed in the present study. There are petrological evidence that the sill had undergone extensive settling of augite crystals. The model include Stokes settling of spherical grains and conductive cooling with limitation of closed packing, and presents a good explanation for augite distribution. It suggests that settling limited by interaction of crystals is crucial for the formation of the body.