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Sommario/riassunto

Interferometric synthetic aperture radar (InSAR) is a relatively new remote sensing tool that is capable of measuring ground-surface deformation with centimeter-to-subcentimeter precision at a spatial resolution of tens of meters over an area of hundreds to thousands of square kilometers. With its global coverage and all-weather imaging capability, InSAR has become an increasingly important technique for studying volcanoes in remote regions such as the Aleutian Islands. The spatial distribution of surface deformation data derived from InSAR images enables the construction of detailed mechanical models to enhance the study of magmatic processes. InSAR Imaging of Aleutian Volcanoes:

- Provides a theoretical framework for InSAR observations and capabilities
- Discusses state-of-the-art InSAR analysis techniques
- Describes the structure, eruptive history, and magma composition of volcanoes along the entire Aleutian arc
- Presents conceptual models for the magma plumbing systems of Aleutian volcanoes based on InSAR results combined with geophysical, geological and geochemical observations.
- Synthesizes observations of deformation along the Aleutian arc and compares those results to other active arcs around the world.
- Is illustrated throughout with high-resolution color satellite radar images.
