

Crustal transport and storage of Aleutian magmas and the connection to the slab



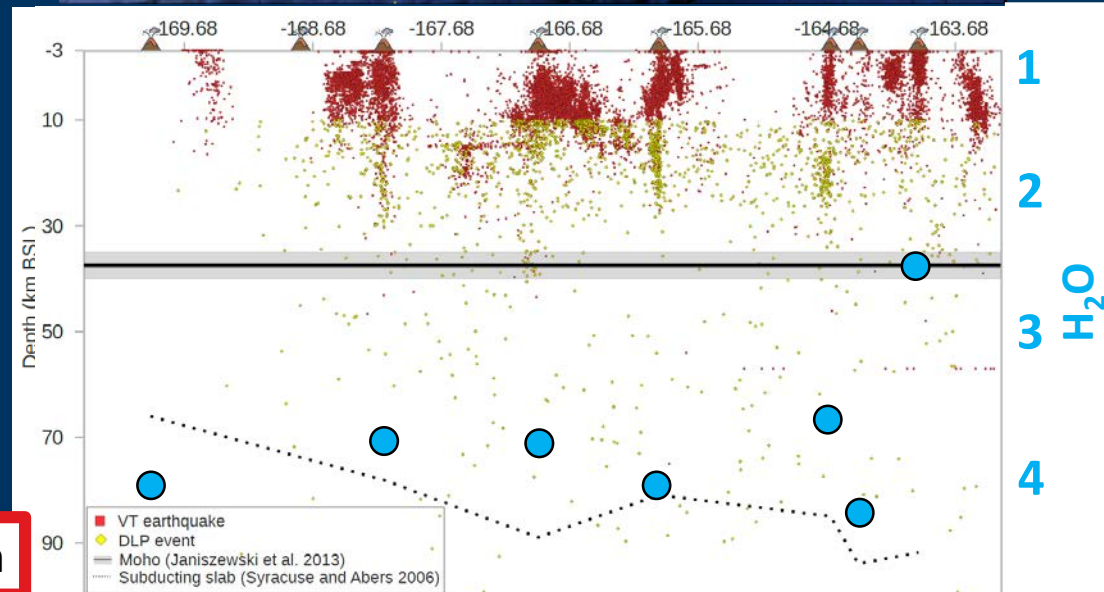
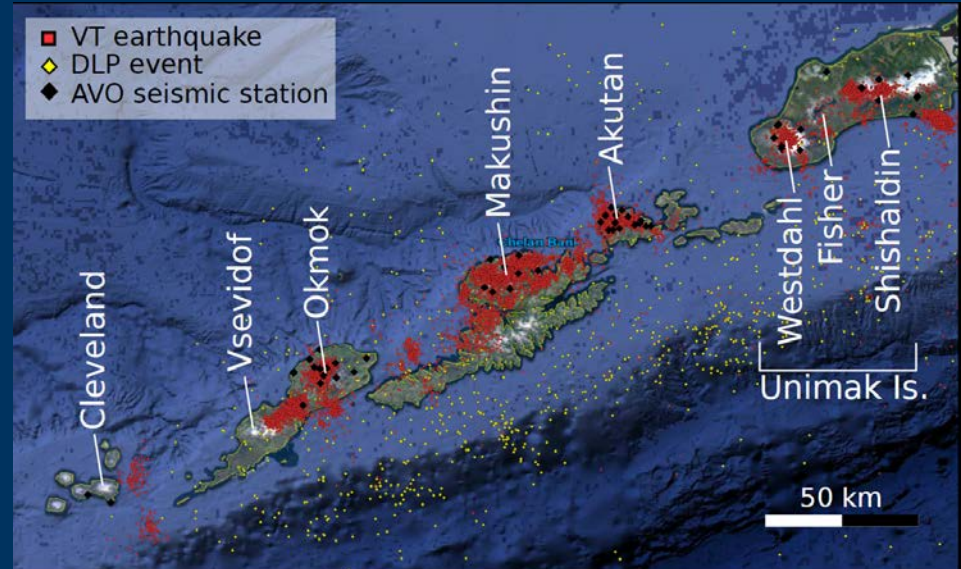
DANIEL RASMUSSEN

Lamont-Doherty Earth Observatory
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...and collaborators at AVO

T11D-2653 8am Mon.; D. Roman



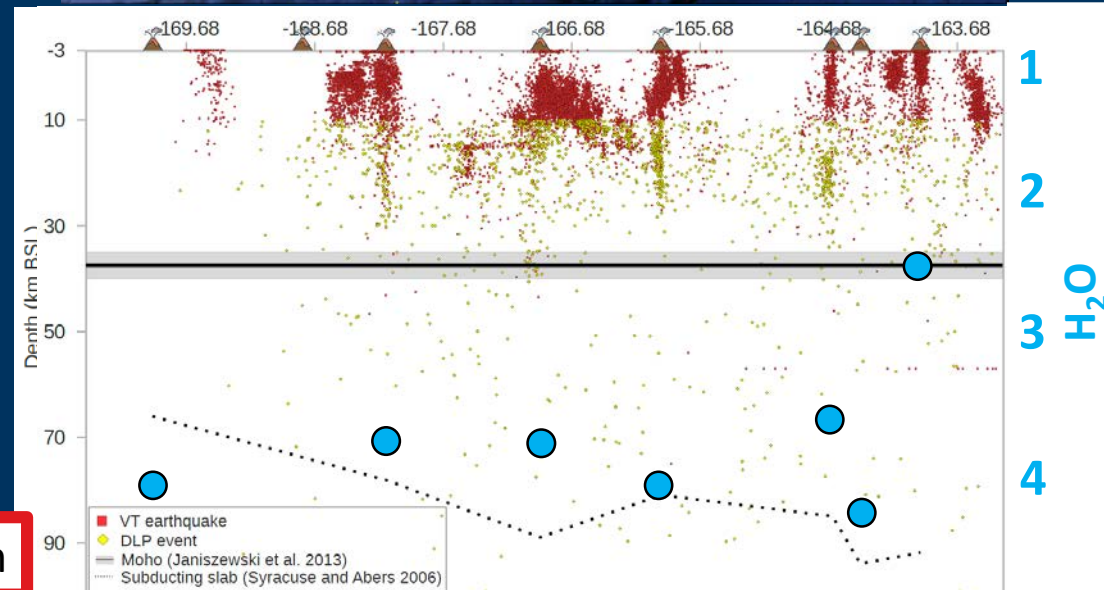
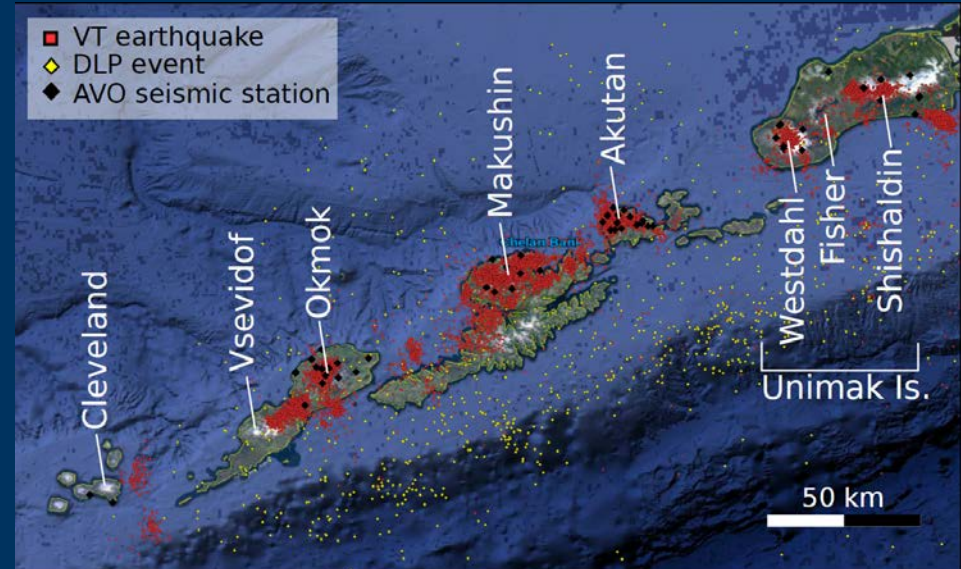
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KEY QUESTIONS

1. Where are magmas prior to eruption?
2. Why?



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SHALLOW STORY

Need to know where
magmas are in TIME
and SPACE

TIME

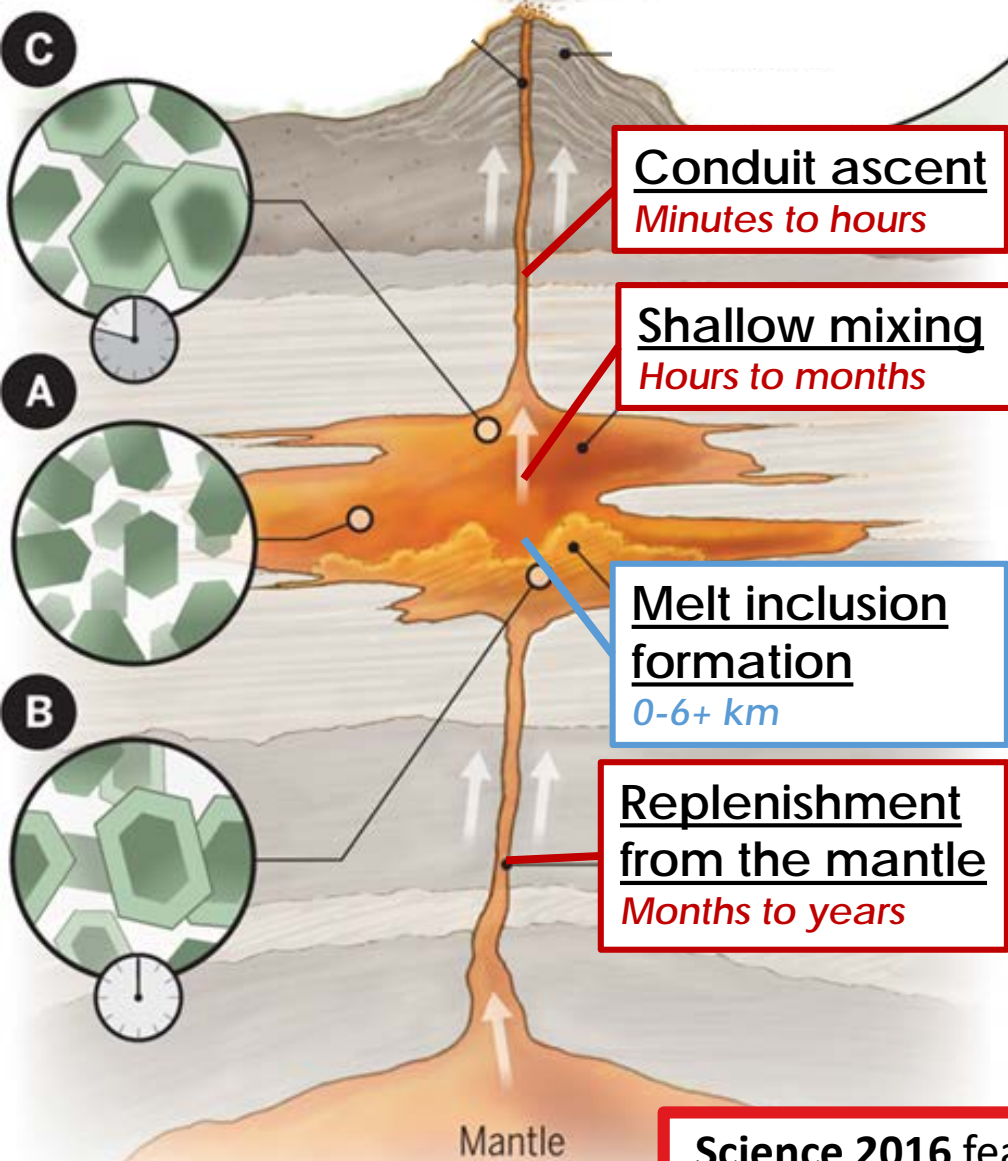
Diffusion chronometry

Time for partial re-equilibration
following a perturbation

SPACE

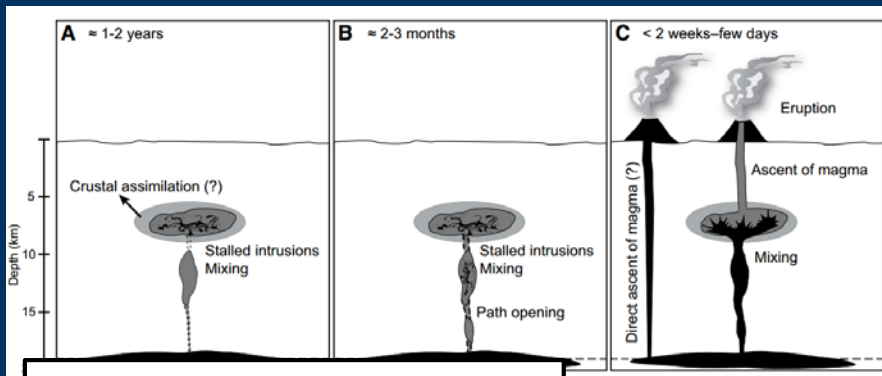
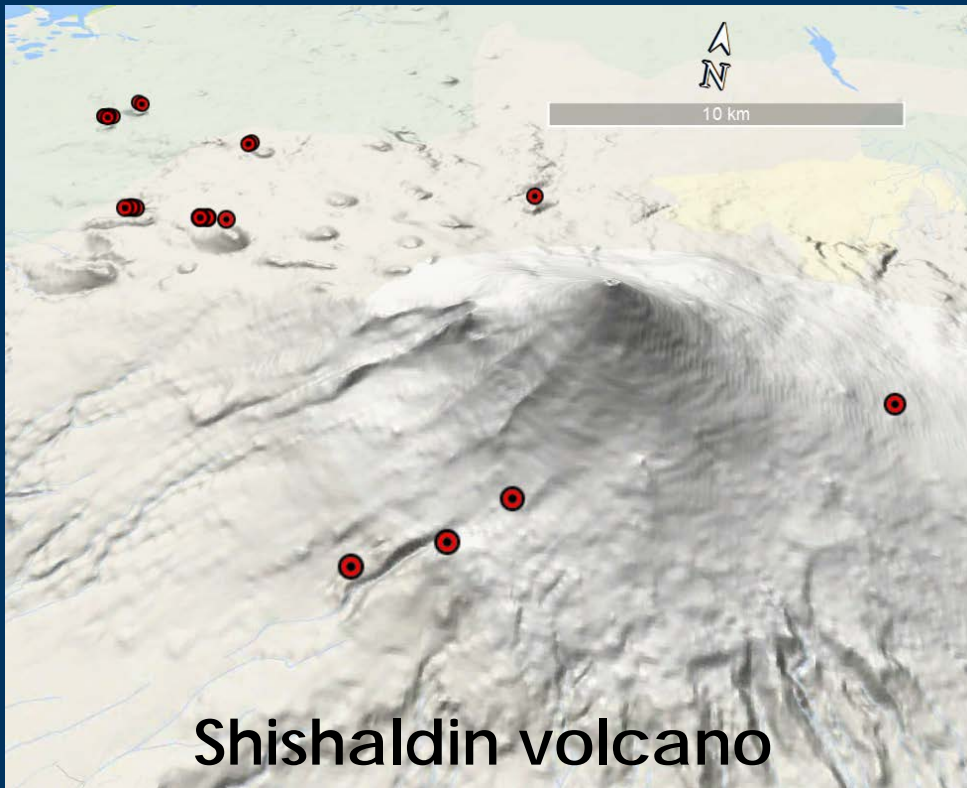
Melt inclusion barometry

Volatile contents record
magma depth



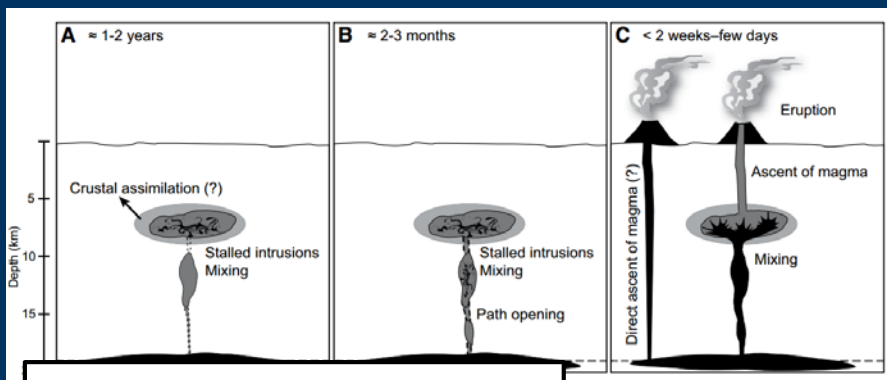
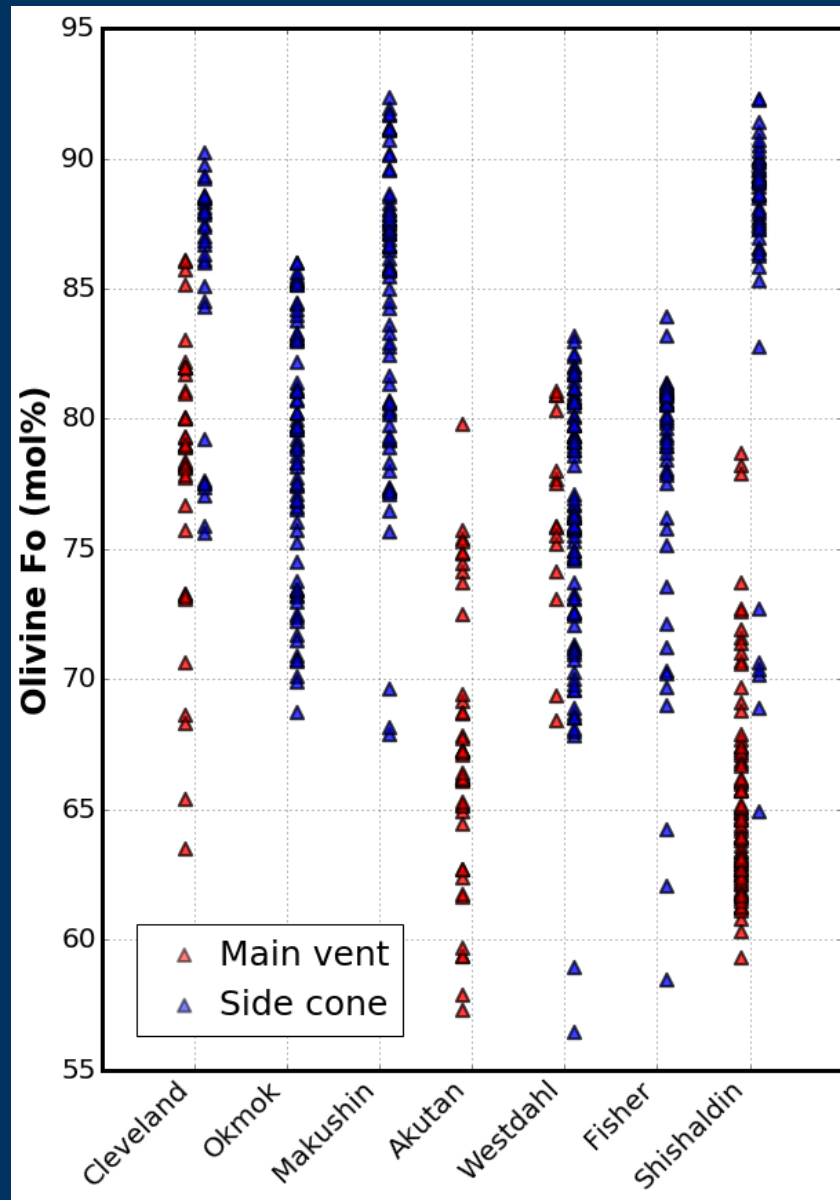
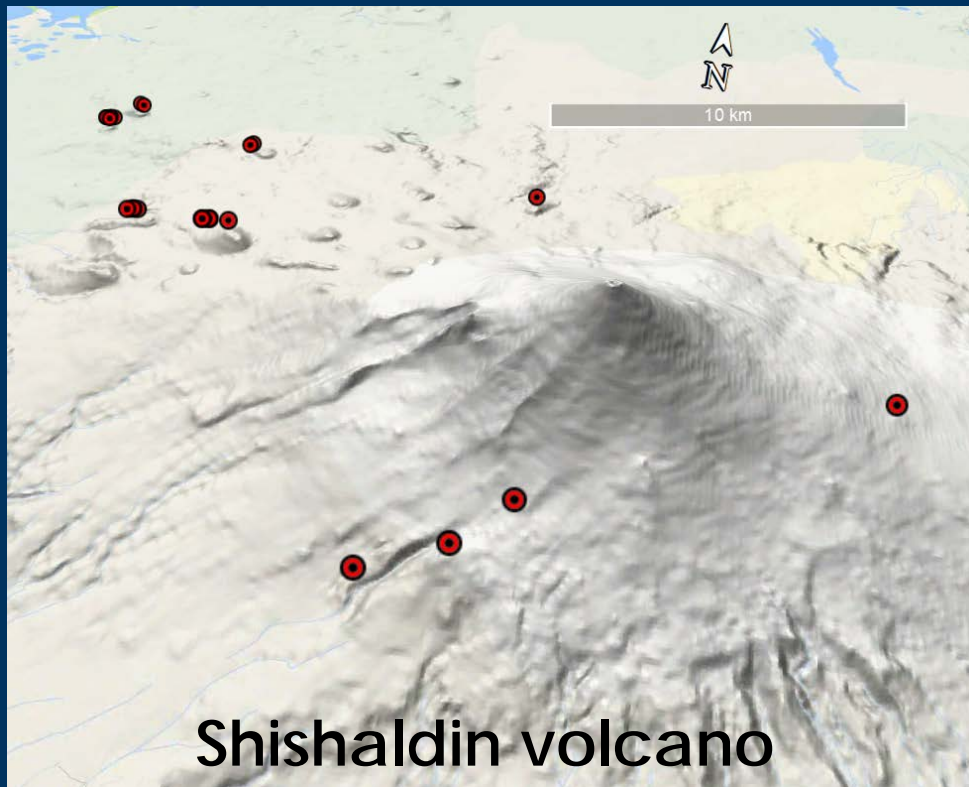
Science 2016 feature
Illustration: C. Bickel

DEEP STORY



Albert et al. (2016, Geology)

DEEP STORY



Albert et al. (2016, Geology)

PROGRESS

First up: *Shishaldin*

Explore linkage between:

- Timing of recharge
- Depth of magma storage
- Precursory activity

Future work

1. Investigate individual volcanoes
2. Broaden scope

T11D-2649 8am Mon.
D. Rasmussen

