

Assessment with portal tools

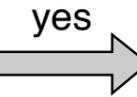
Question

Interpretation



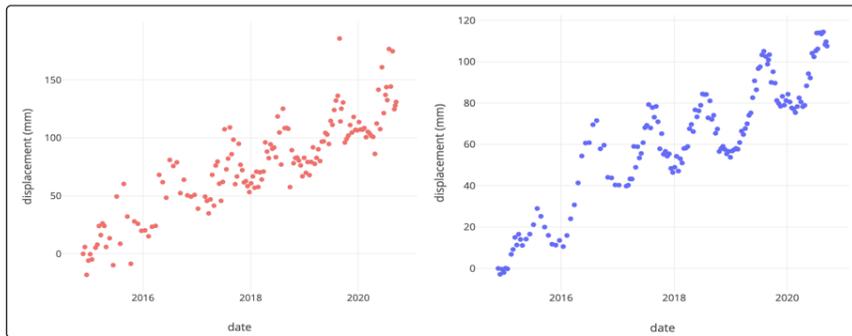
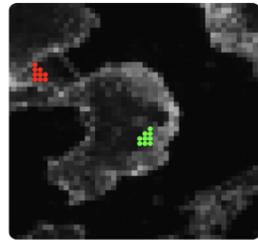
Use the **profile** and **surface plot** tools to compare apparent displacement profiles with underlying topography

correlated with topography?



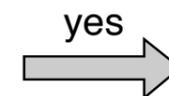
Could indicate **atmospheric** contribution from stratified tropospheric water vapour, especially where there is no obvious signal in the time series. Examine the individual interferograms to identify acquisitions likely to be dominated by water vapour.

unfiltered filtered

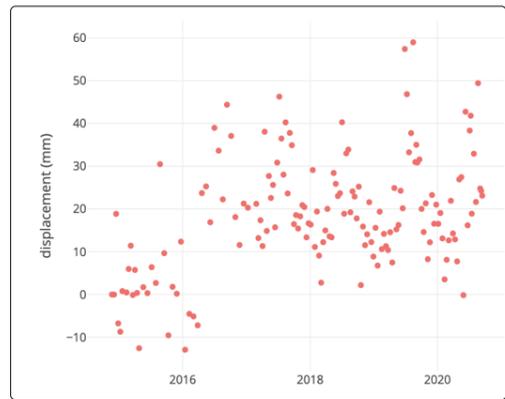
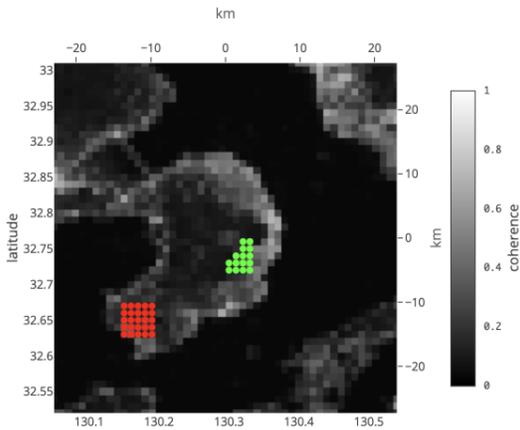


Reduce noise using **spatiotemporal filtering** to identify temporal structure

seasonal trends?

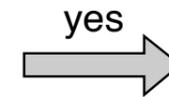


Regular patterns correlated with local seasons are likely to be caused by **atmospheric** phase delays and could be mitigated by atmospheric correction



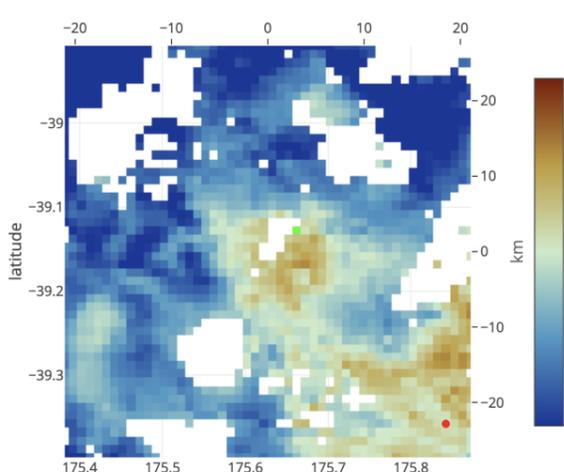
Test the impact of different **reference pixels or areas** on the patterns of the signal in space and time. Plot **average coherence** and a composite **Sentinel-2 image** to help select a stable reference area.

sensitive to reference pixel?



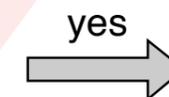
If apparent signals disappear when a more stable reference pixel is selected then they are likely to be affected by **local noise at the reference point** or area

displacement coherence
points to plot reference area



Compare the **spatial pattern of cumulative displacement** to land cover in the Sentinel-2 imagery and average coherence plots

signal correlated with land cover?



Time series with apparently steady long term trends may be affected by '**phase bias**', where small contributions to phase in individual, short time-period interferograms (e.g., perhaps from moisture changes or unwrapping errors) create a long term bias in time series. You can check for this by examining the spatial pattern of the apparent signal - we expect phase bias to be correlated with land cover, especially vegetated areas.

potential volcanic deformation

displacement coherence plot sentinel-2 map