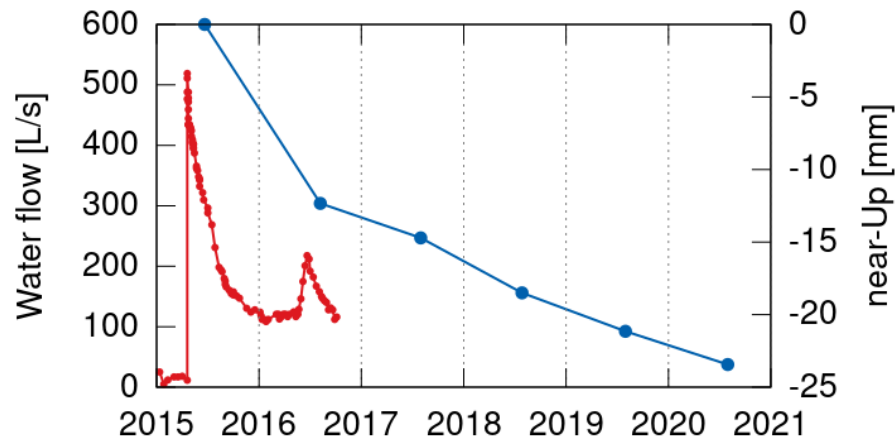


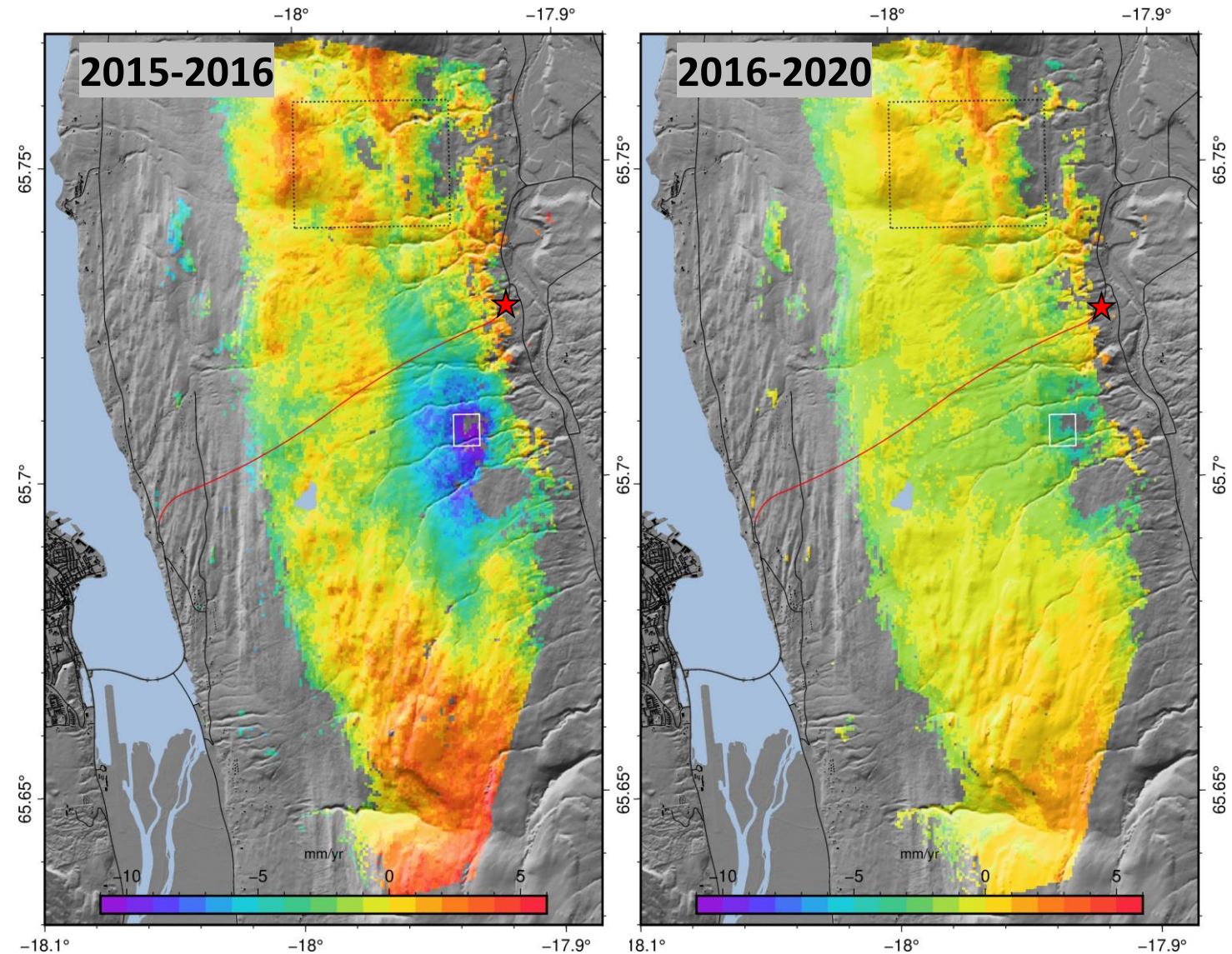
Potential link between mountain subsidence and water discharge from a tunnel in north Iceland

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- The tunnel is 7.4 km long and goes through the Vaðlaheiði mountain at maximum depth of about 500 m. Its drilling started in 2013.
- Both warm and cold water were encountered when drilling the tunnel.
- Cold water was encountered in April 2015 when drilling from the East and the initial flow was over 500 L/s.
- Sentinel-1 interferometry shows subsidence on the east slope of the mountain, mostly between summer 2015 and summer 2016.
- Envisat interferometry shows no subsidence in this area between 2004 and 2010.



Time-series of cold water flowing out of the East entrance of the tunnel in red, and subsidence at the maximum of the deformation in blue (see locations on the maps).



Average vertical velocities between summers derived from Sentinel-1 InsAR. Reference area is shown with the dotted line, sampling area for time-series is shown with white lines. Background shows shaded topography, east entrance of the tunnel (red star), roads (line), and water (unsaturated blue).