

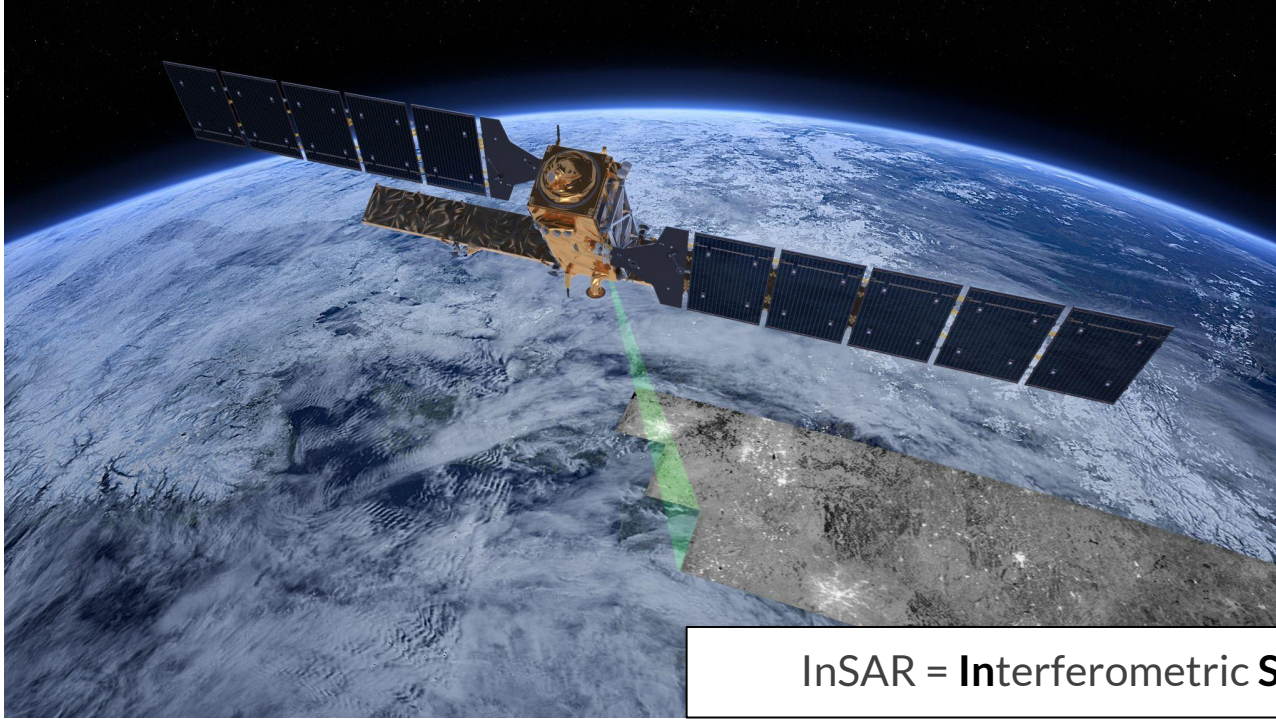
SkyGeo

Interactive displacement map Houston

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InSAR: driving the change how we look at risk

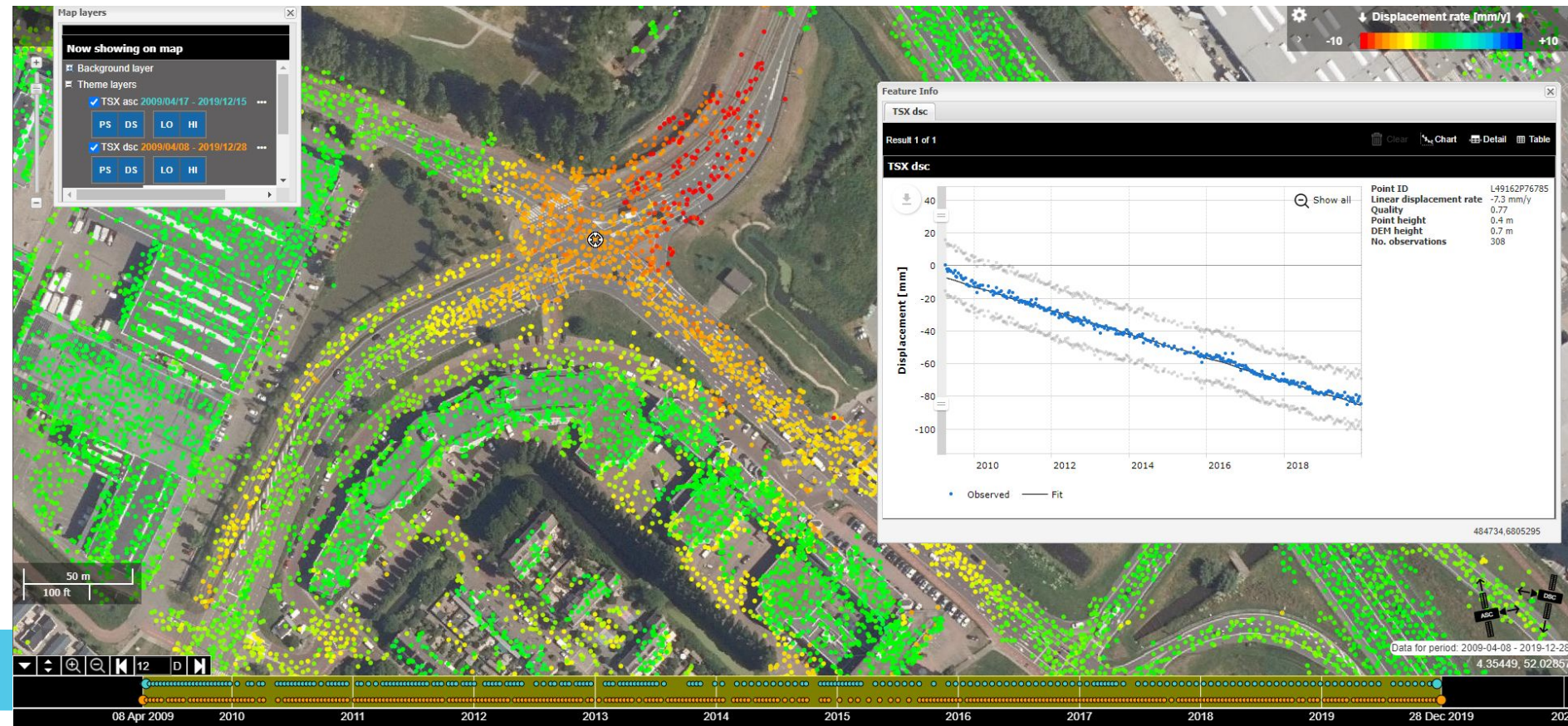


A technique to estimate **mm-scale** displacements

Using a radar satellite - with an archive of almost **30 years** in many places

InSAR = **I**nterferometric **S**ynthetic **A**perture **R**adar

We can estimate how everything is moving on a millimetre scale, on a daily to weekly basis, using InSAR



The SkyGeo logo is a horizontal bar with a color gradient from blue on the left to green on the right. The text "SkyGeo" is written in white, bold, sans-serif font across the center of the bar.

SkyGeo

A long, thin blue arrow pointing to the right, spanning most of the width of the slide.

GLOBAL DATASET

LOCAL DECISION

A horizontal bar with a color gradient from blue on the left to green on the right, ending in a diagonal cut on the right side. The text "SkyGeo" is written in white, bold, sans-serif font on the left side of the bar.

SkyGeo

Examples of business-problems we help with

- Historical investigations for legal disputes
- Prioritizing asset maintenance
- Active monitoring of mine sites where on-site investigation is expensive or too dangerous.
- Conformity and containment assessment for oil-gas-CO2 fields
- Building/bridge foundation investigation
- Landslide monitoring
- ...

Interactive displacement map Houston

- Map purely meant for basic exploration. It is not optimized and therefore not meant for specific geotechnical or civil applications.
- Based on freely available source data: Sentinel-1
- More than 20 million measurement points
 - Each measurement point has a deformation time-series of >150 observations
 - Precision in the order of mm/yr
 - Covering a time period of 2016 -2022

Map Layers

US 290 TX 6 +

Settings gear icon

Displacement rate [mm/year]

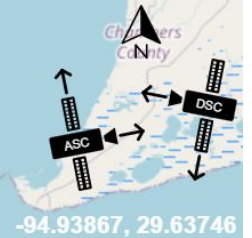
Color scale: -10 (red) to +10 (blue)

In Katy displacements over 20 mm/yr

Hotspot near Mont Belvieu

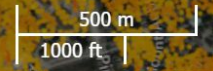
10 km / 10 mi scale bar

Navigation icons: expand, zoom in, zoom out, back, 12, forward, 27 Sep 2016 - 16 Jun 2022



Map Layers +

Local subsidence in Katy



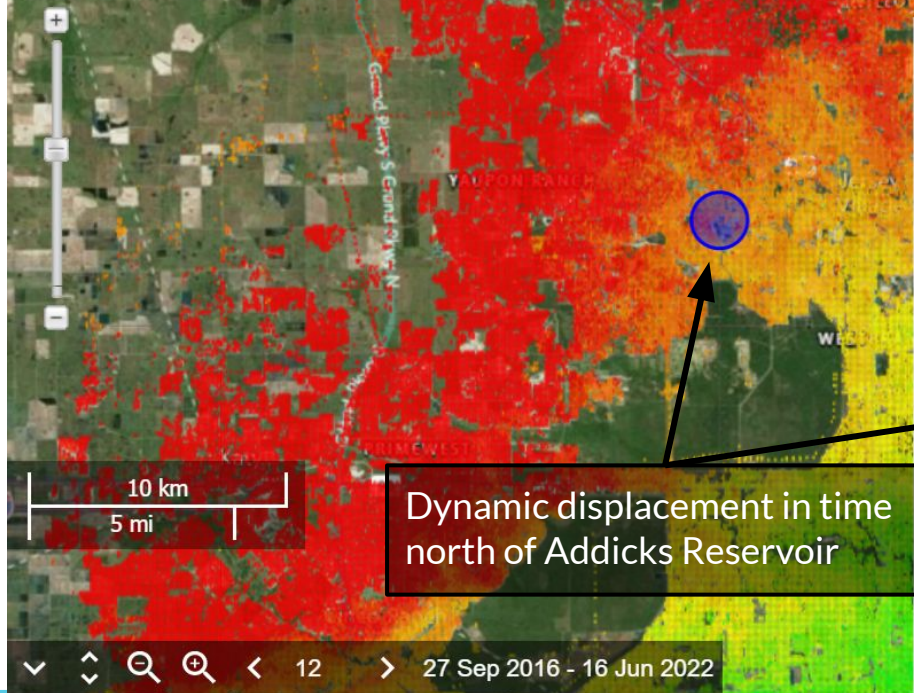
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95.76950, 29.78225

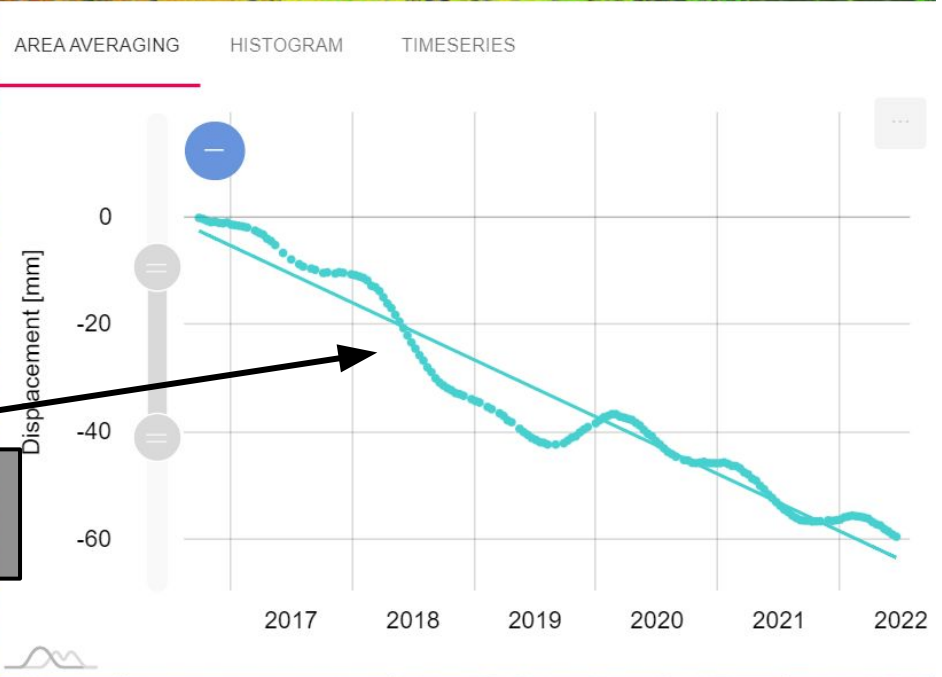
Map navigation icons: back, forward, search, zoom in, zoom out, date range: 22 Sep 2016 - 23 Jun 2022



Map Layers +



Dynamic displacement in time north of Addicks Reservoir



Map Layers +

Displacement rate [mm/year] ↑
-7 [Color Scale] +13

Scale bar: 500 m, 1000 ft

Strong subsidence over recently built neighborhood

Microsoft Bing
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-95.37238, 29.53593



Release of the interactive displacement map

- Do contact me if you would like to get early access
- Public limited release is scheduled next couple of weeks
-

Q & A

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