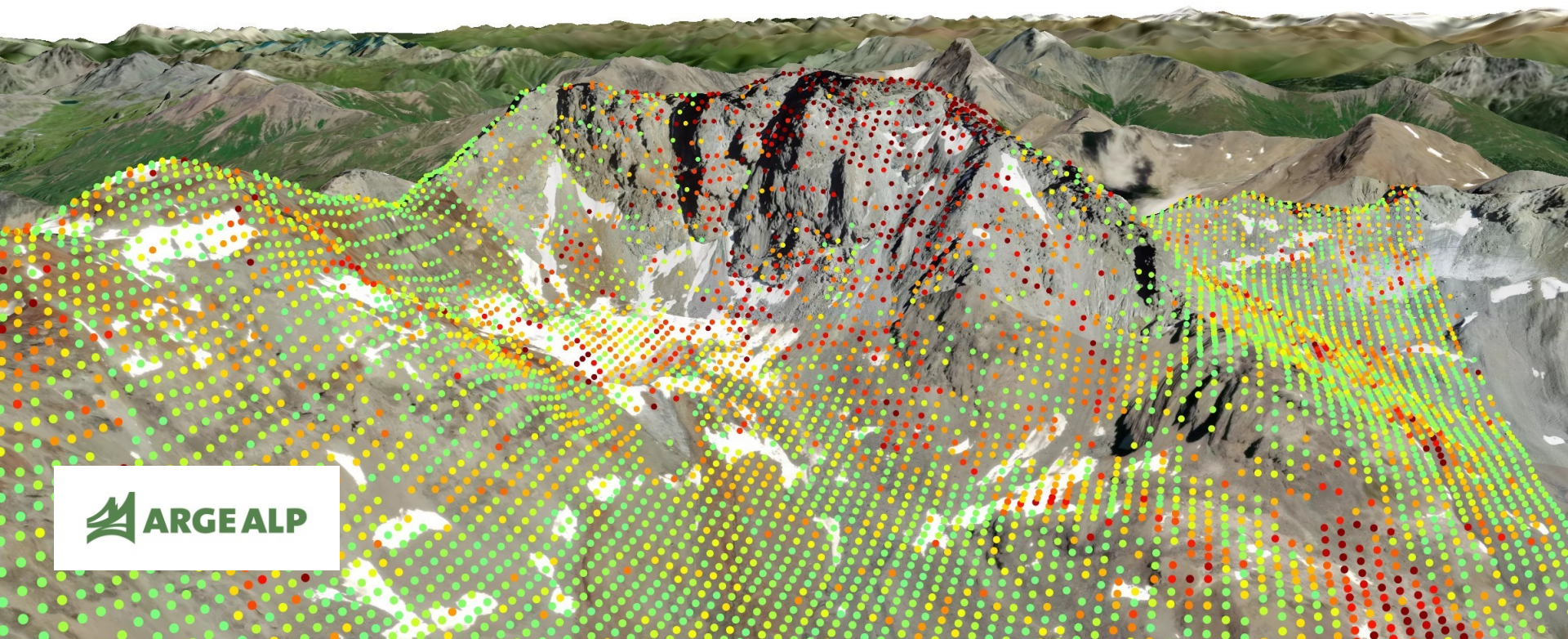
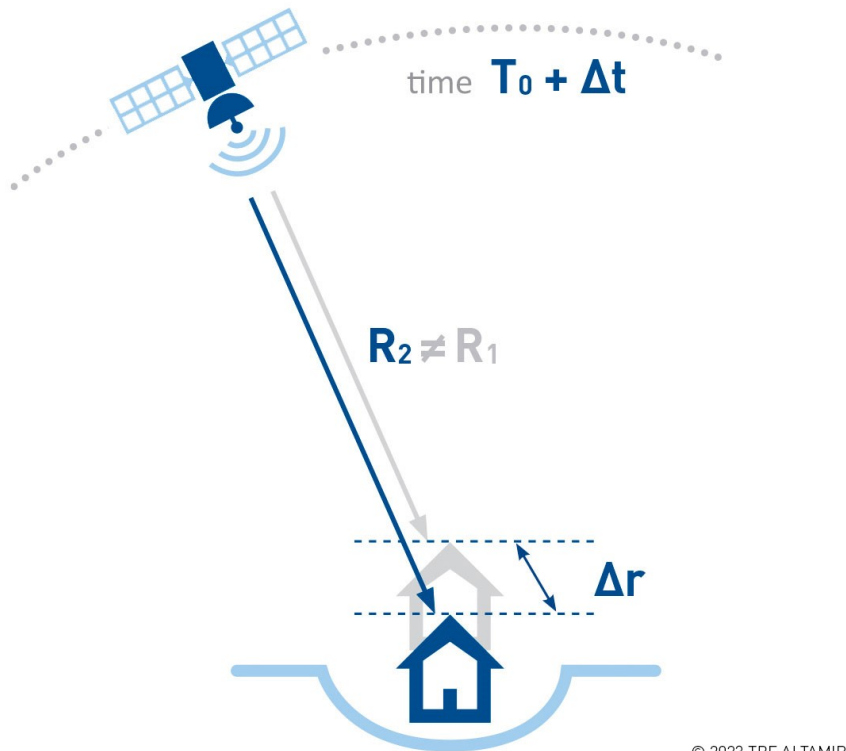


Monitoring und Vorhersage von großen Massenbewegungen und Felsstürzen im Hochgebirge durch Auswertung von Satellitendaten



 ARGE ALP

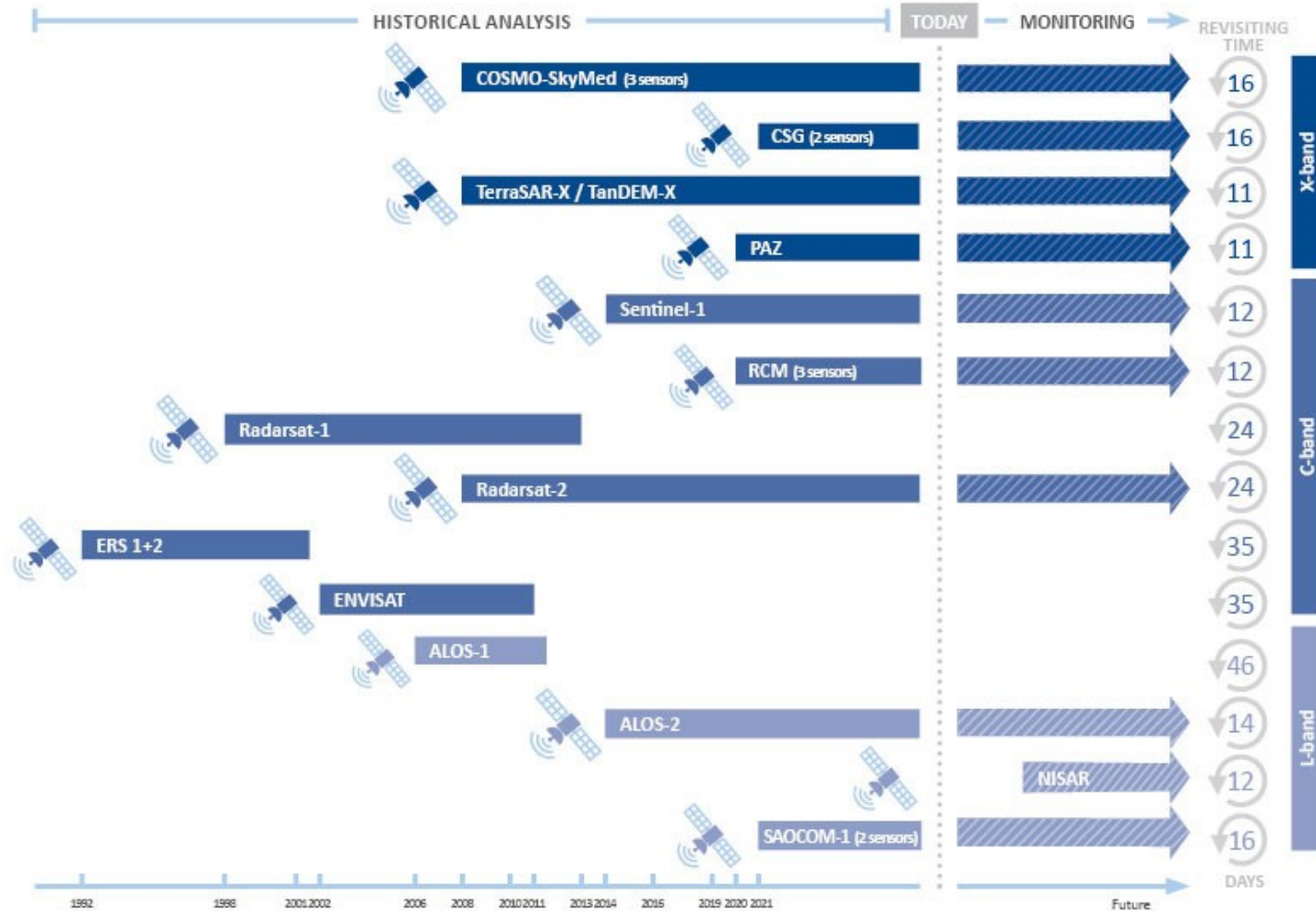
Grundlagen



- **SAR-Synthetic Aperture Radar:** Radarwellen werden ausgesendet und deren Reflektionen analysiert
- Über **Laufzeit und Phasendifferenz** wird die Entfernung berechnet
- Beachte die Geometrie: **Ascending-Mode** (W-E) und **Descending-Mode** (E-W)
- Ergebnisse in der **Line of Sight**
- **Präzision** bei 30 Bilder und nach 2 Jahren: $< 1 \text{ mm/a}$



Grundlagen





LAND
SALZBURG

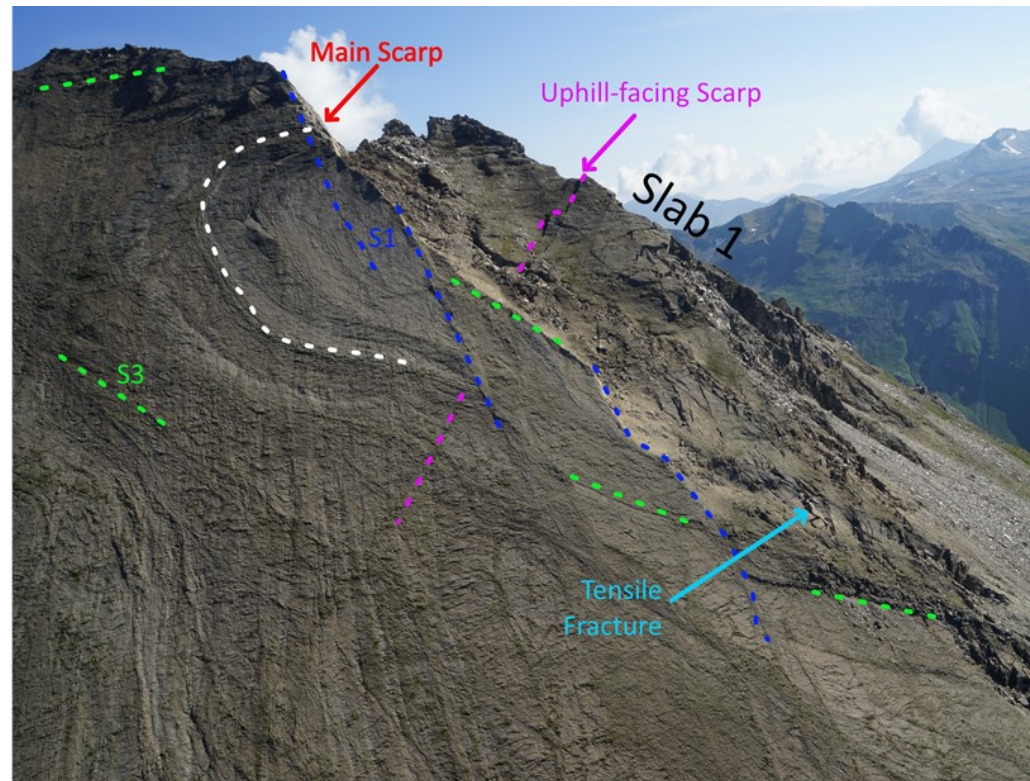
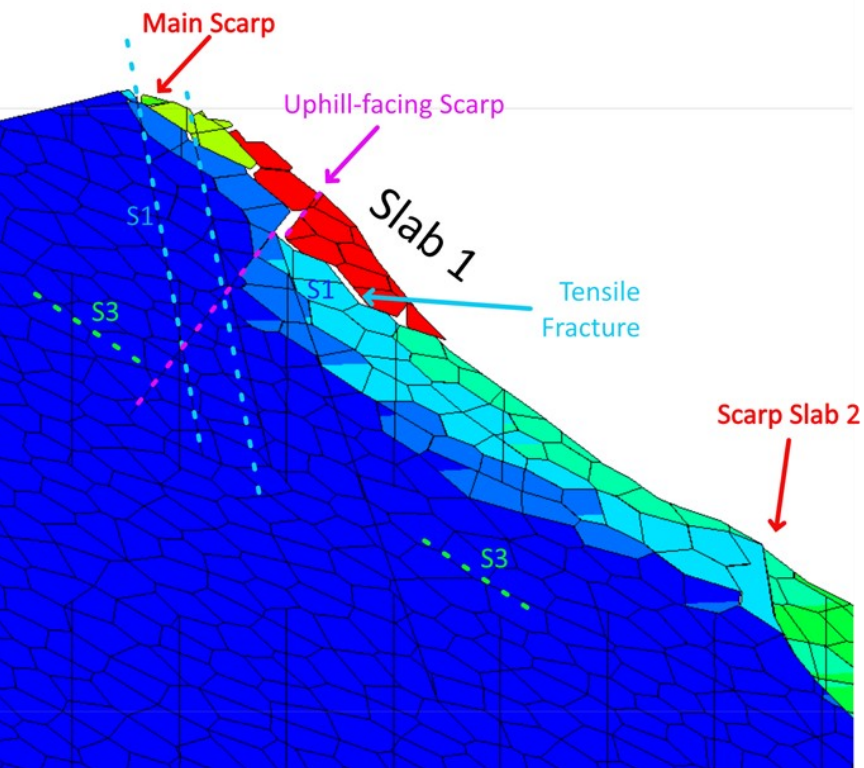
Wasserradkopf



Wasserradkopf 3.023 m
Kalkglimmerschiefer,
Serpentinit, und Grünschiefer
(Penninikum des Tauernfenster)

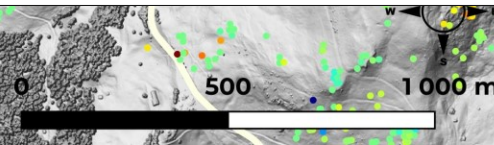
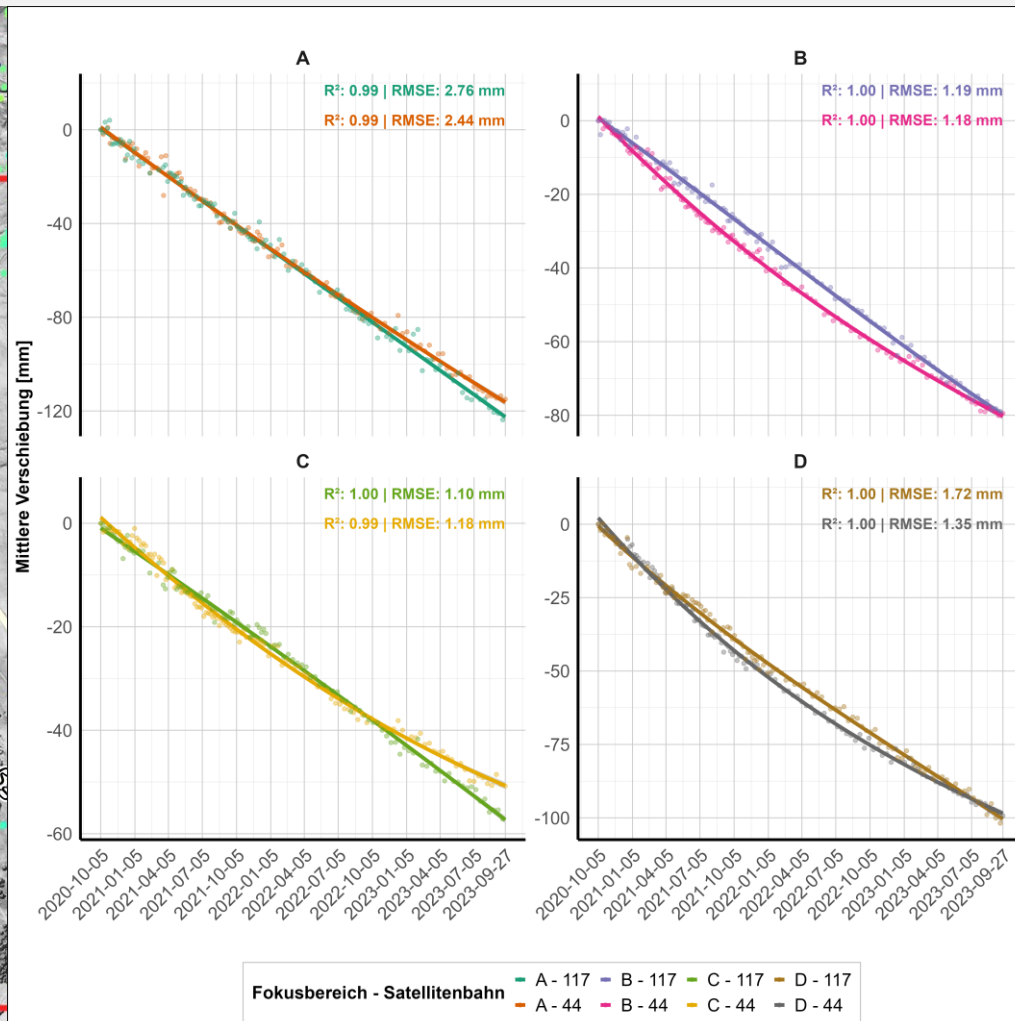
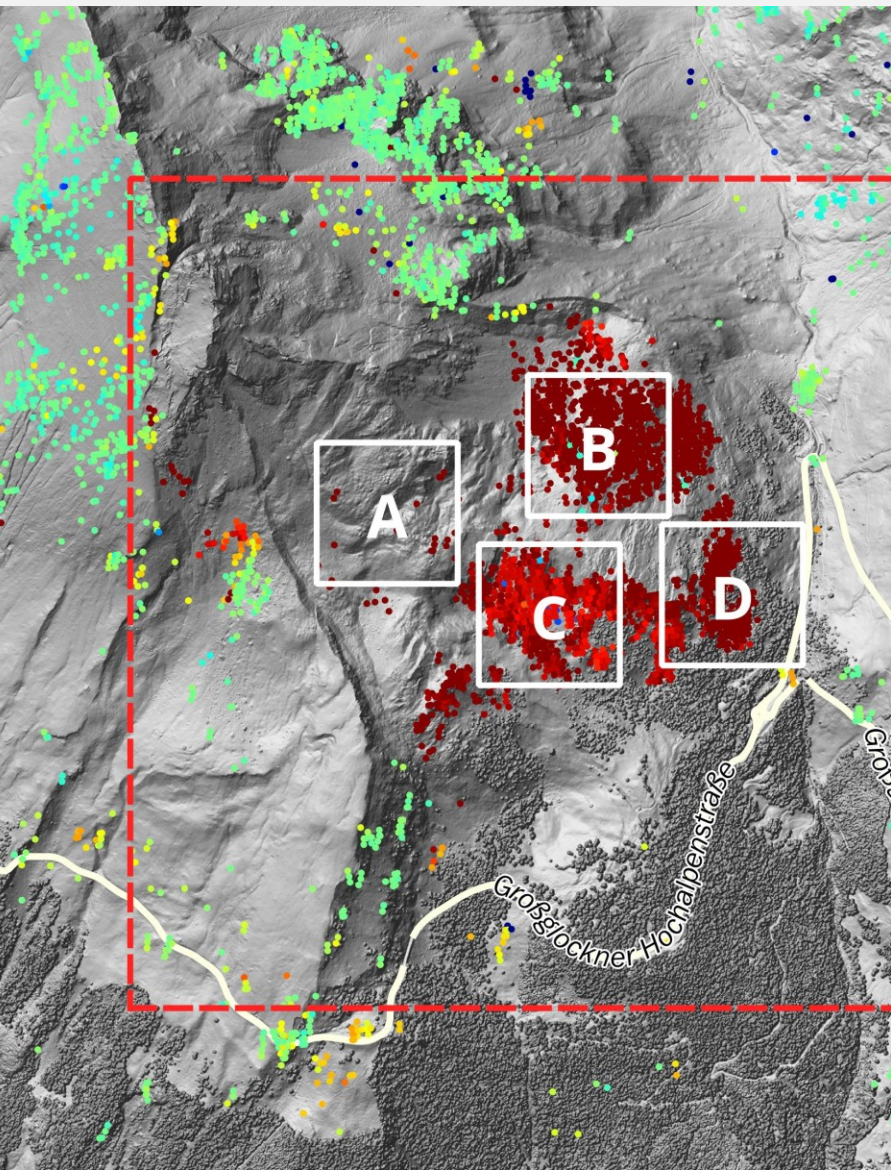


Wasserradkopf



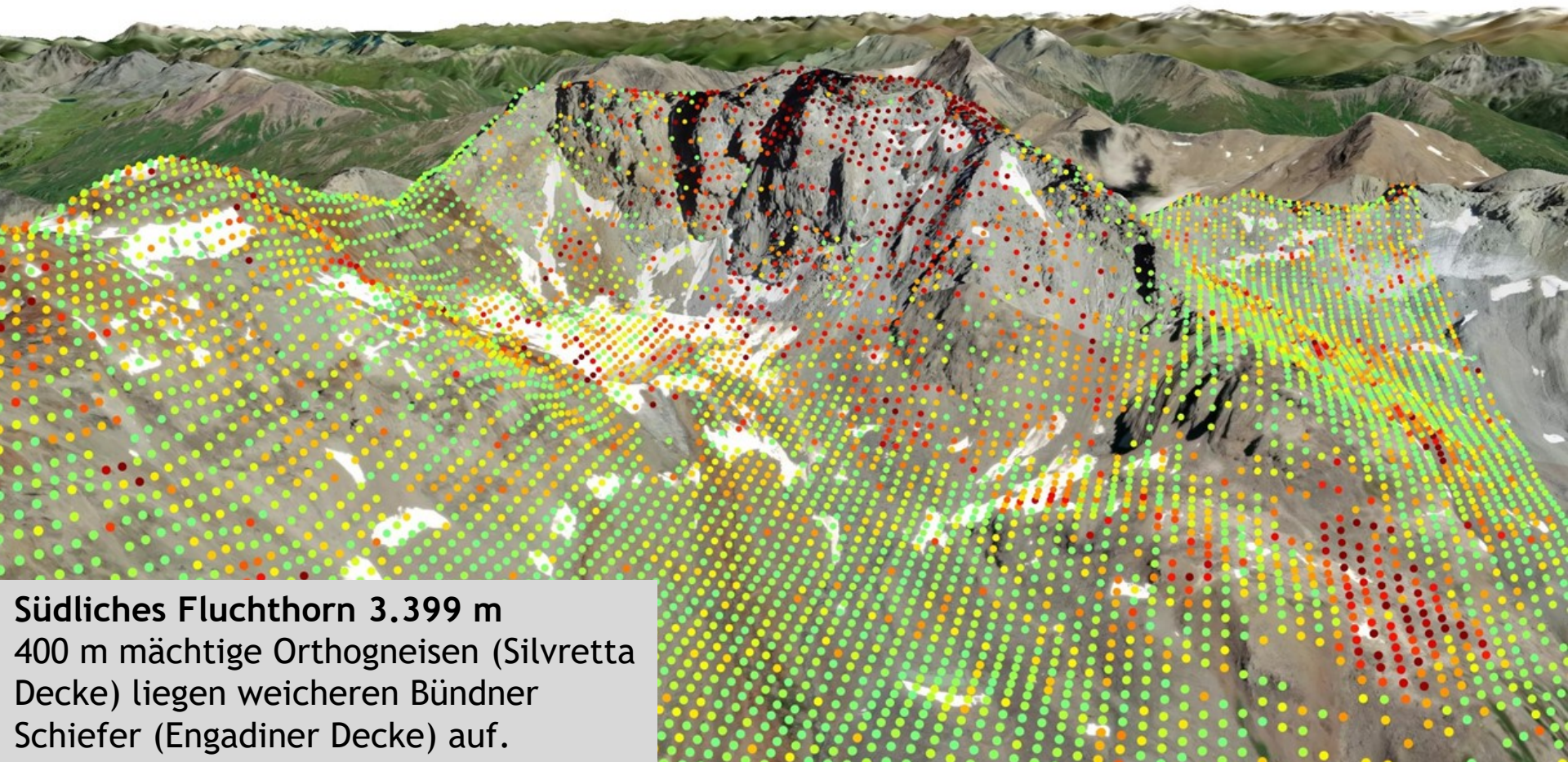


LAND SALZBURG





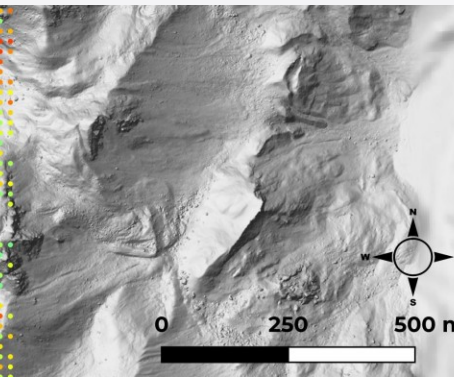
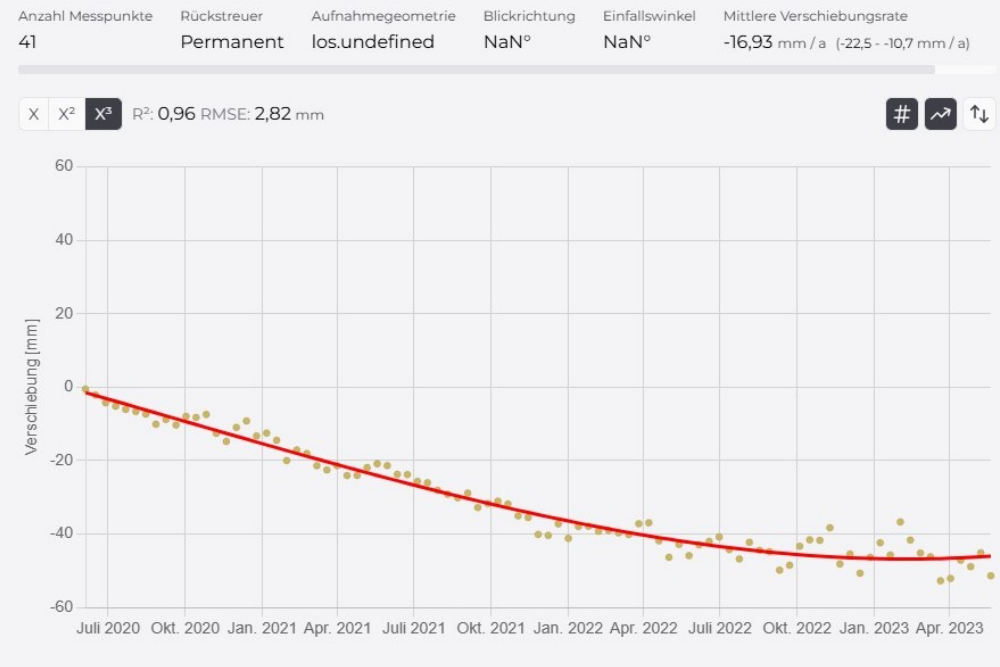
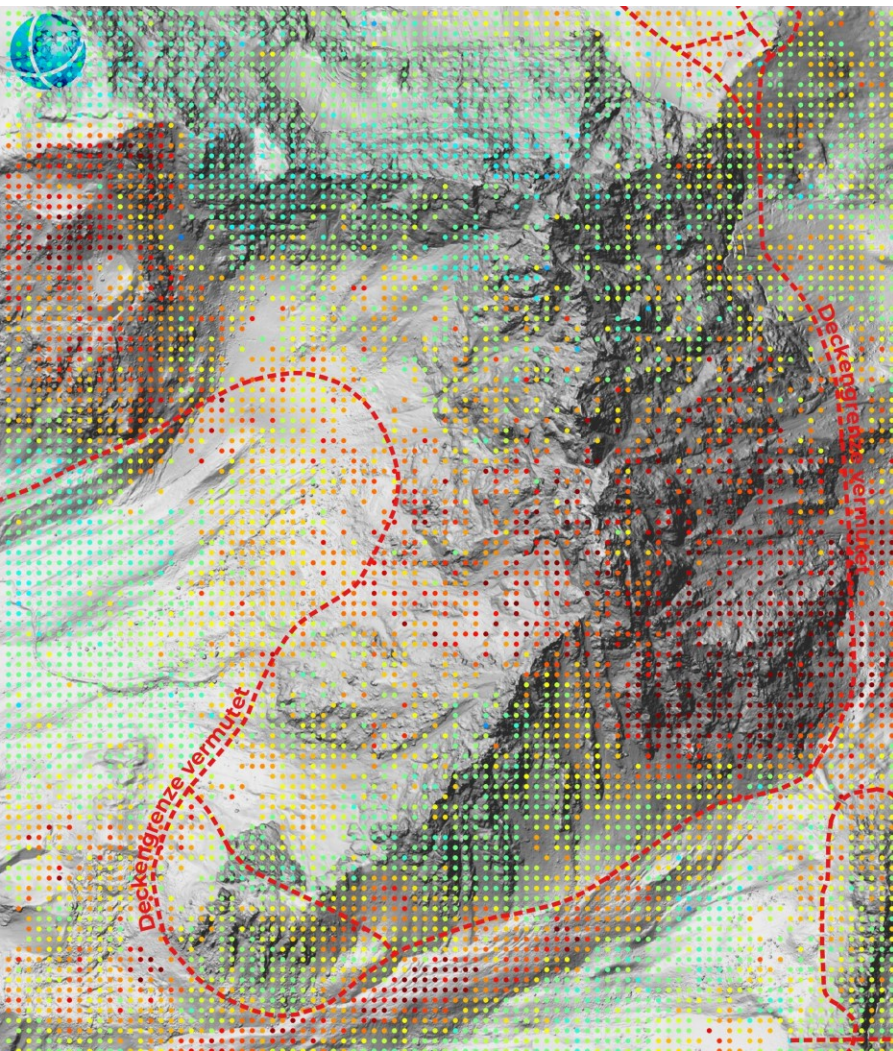
Fluchthorn



Südliches Fluchthorn 3.399 m
400 m mächtige Orthogneisen (Silvretta Decke) liegen weicheren Bündner Schiefer (Engadiner Decke) auf.



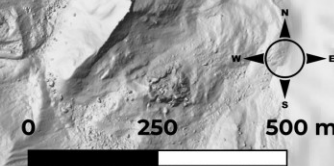
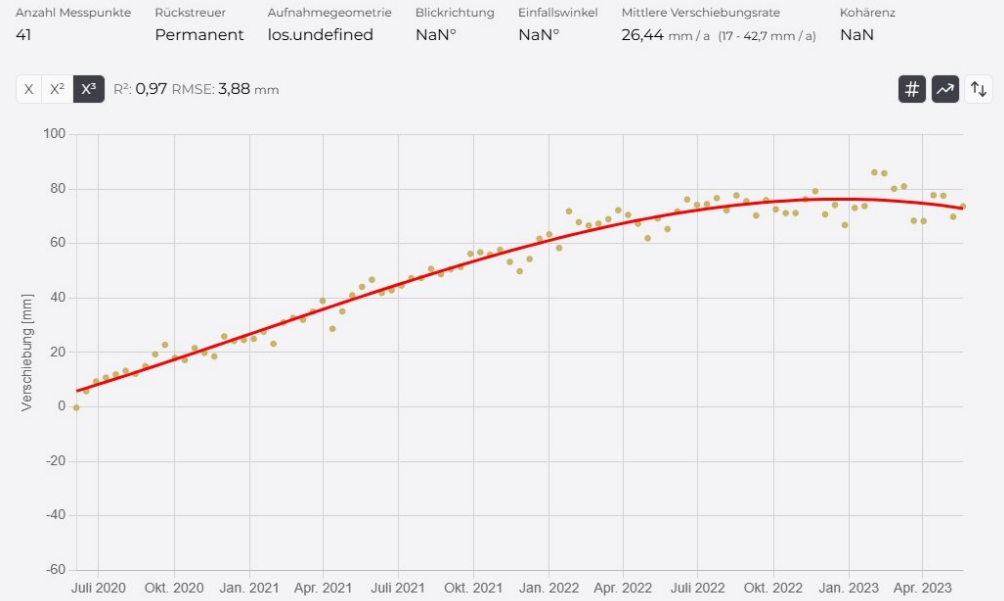
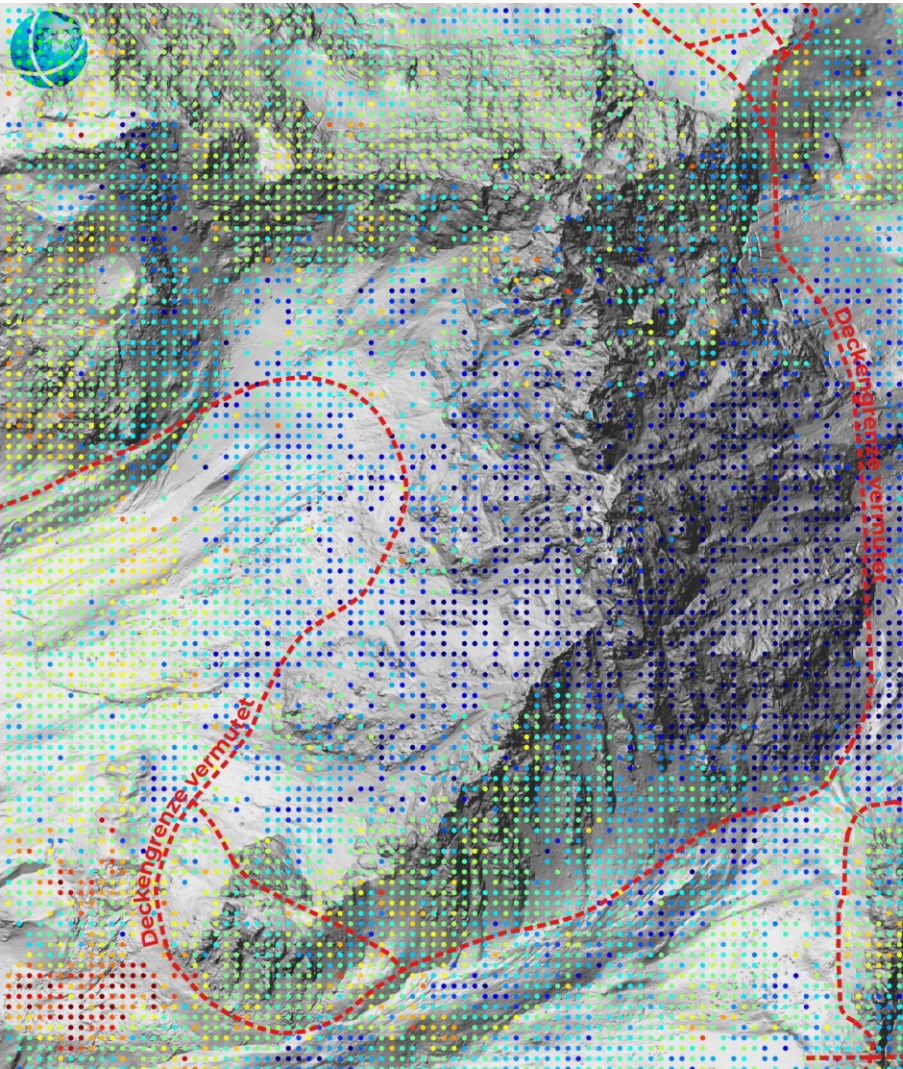
Fluchthorn





LAND SALZBURG

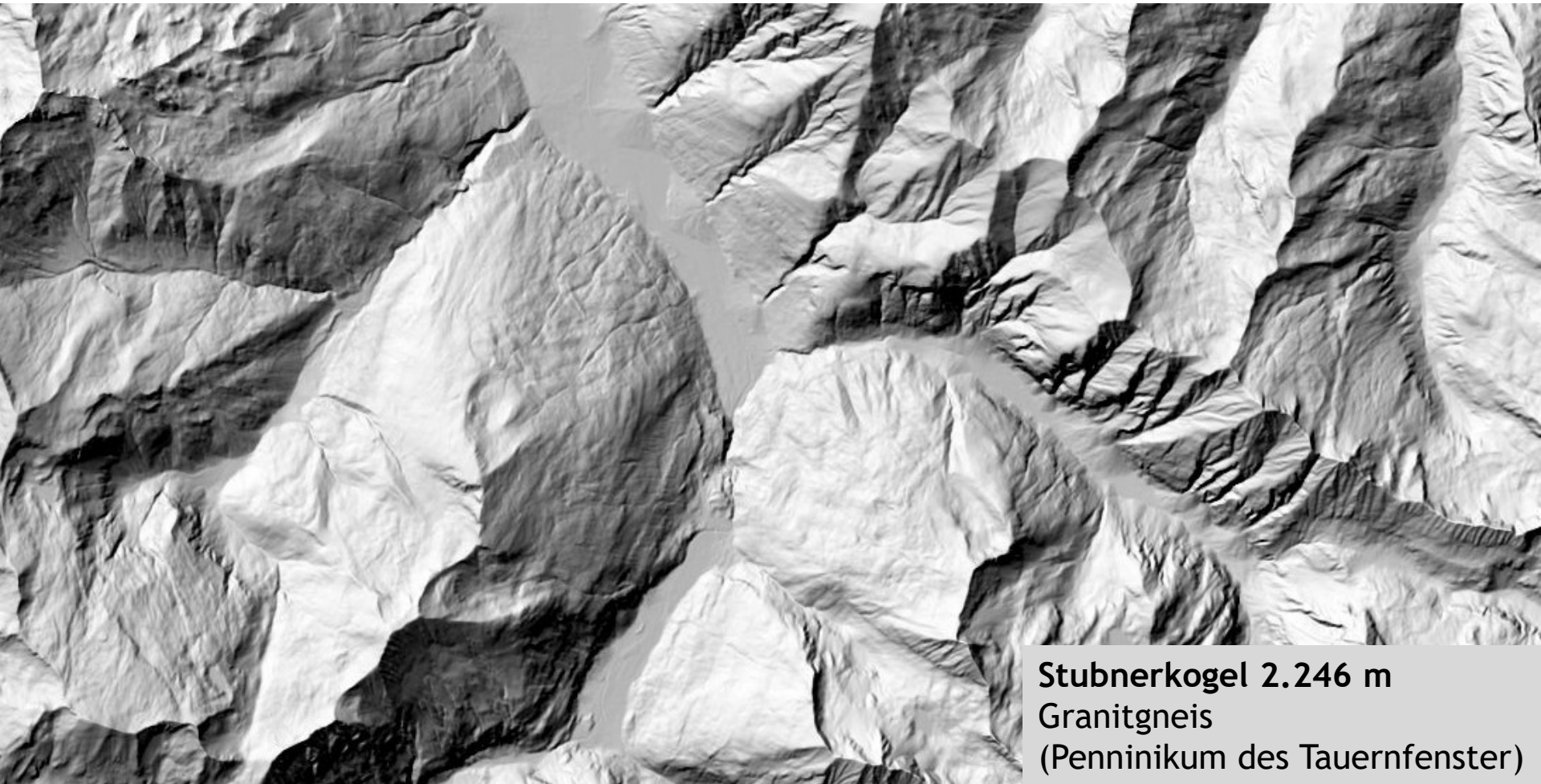
Fluchthorn





LAND
SALZBURG

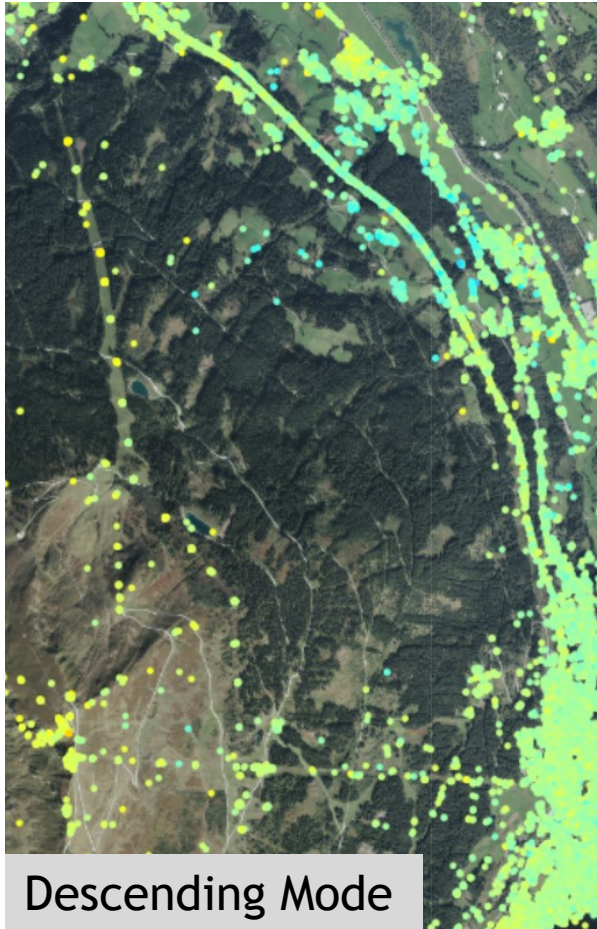
Stubnerkogel



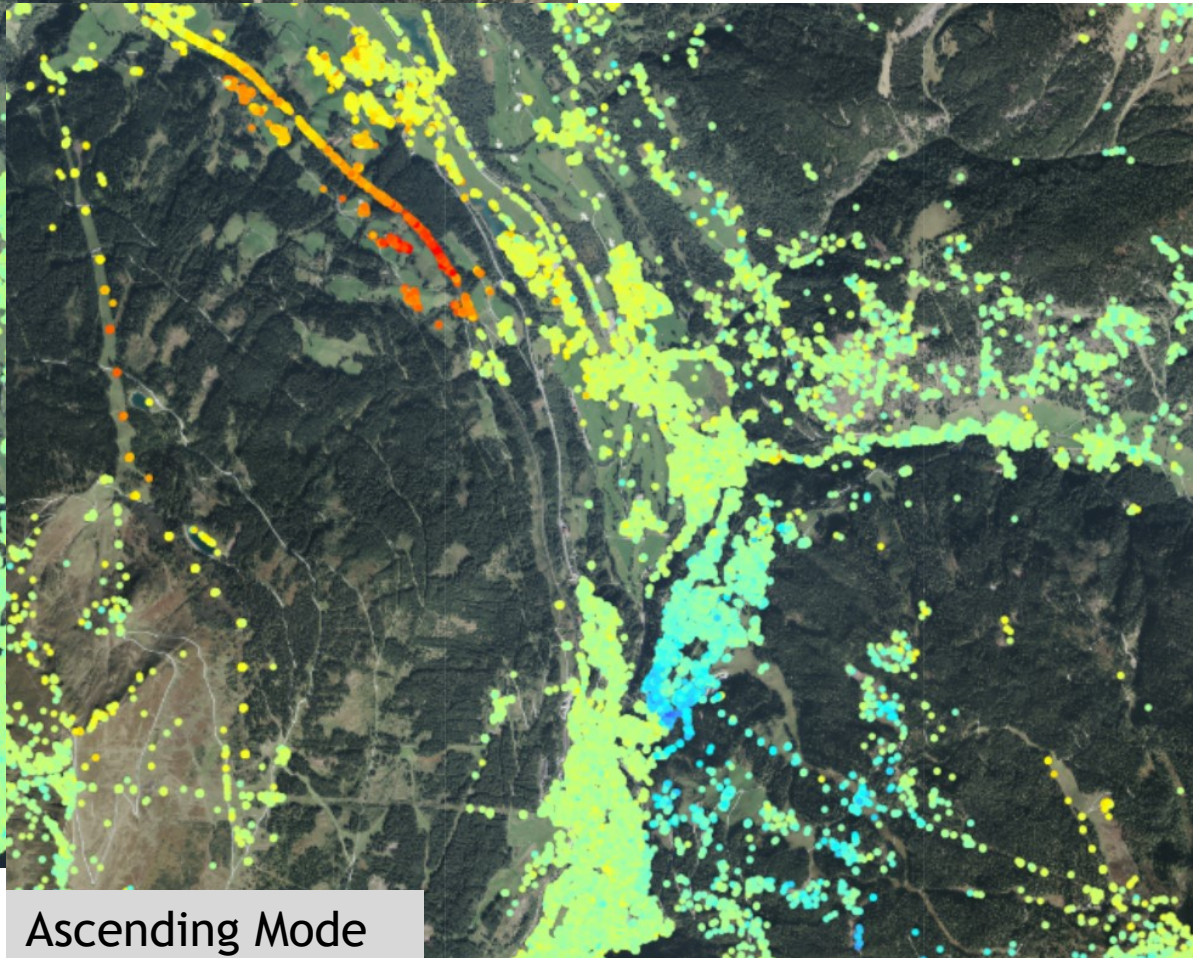
Stubnerkogel 2.246 m
Granitgneis
(Penninikum des Tauernfenster)



Stubnerkogel



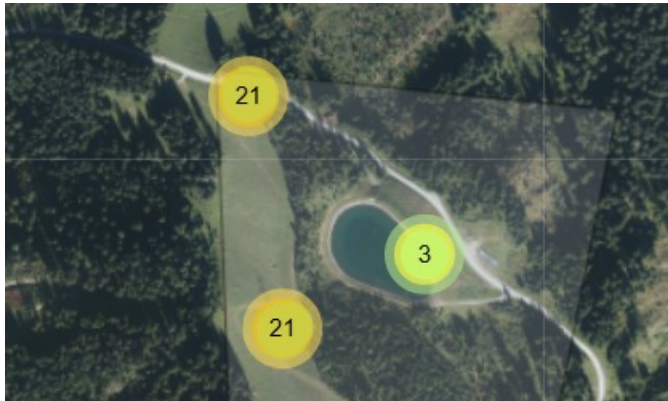
Descending Mode



Ascending Mode

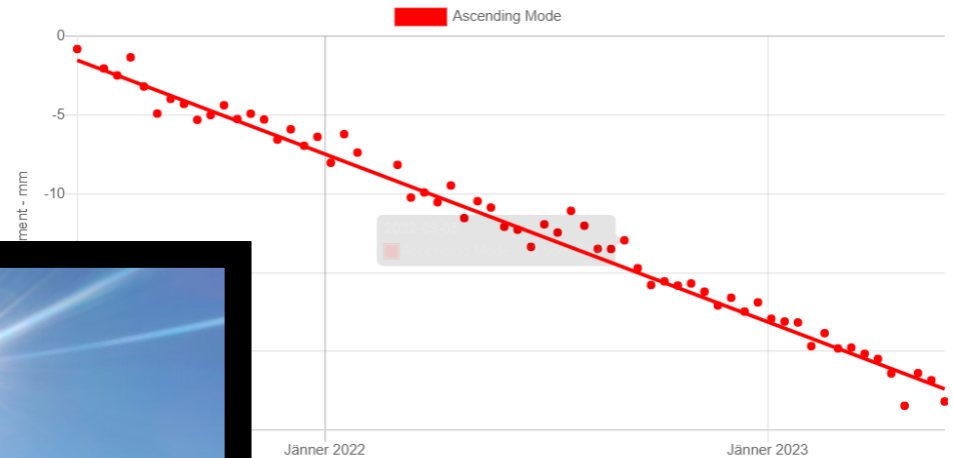


Stubnerkogel



InSAR - Ascending Mode TerraSAR-X 2021-2023

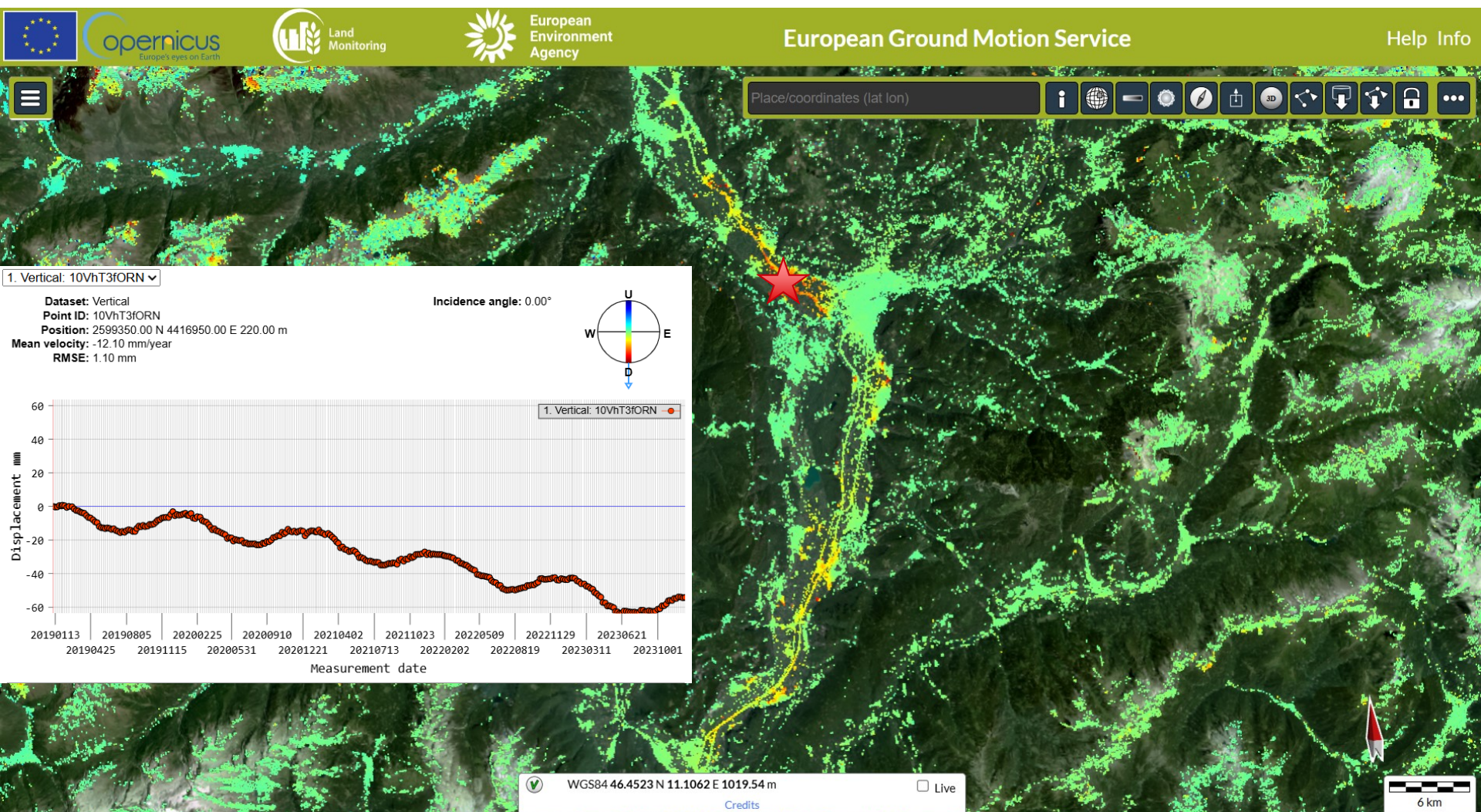
Anzahl der Punkte	Datum des Datenstandes	Mittlere Geschwindigkeit der Punkte	Mittlere Standardabweichung [VEL]	Mittlere Kohärenz
76	31/03/2023	-10,76 mm/Jahr	2,01 mm/Jahr	0,77





LAND SALZBURG

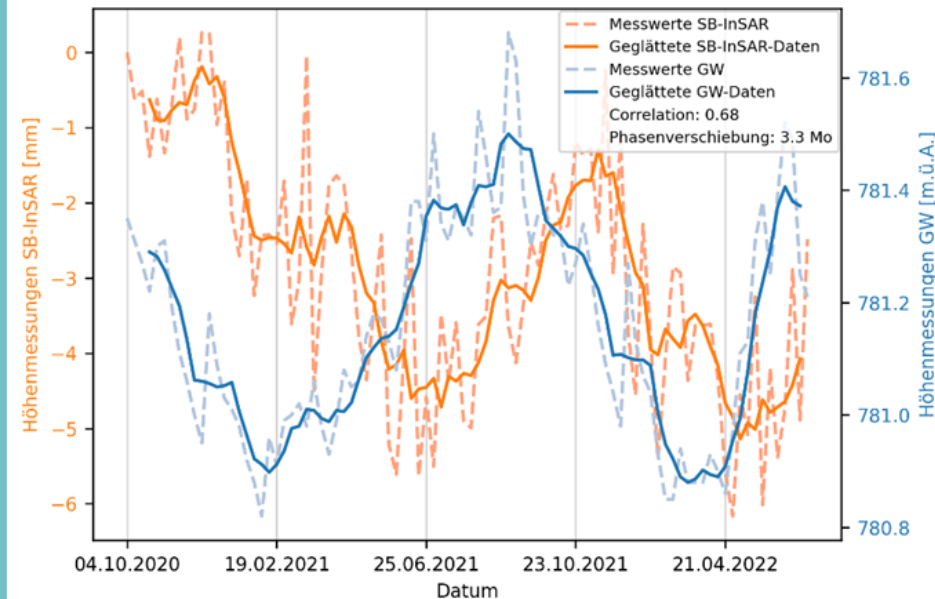
European Ground Motion Service



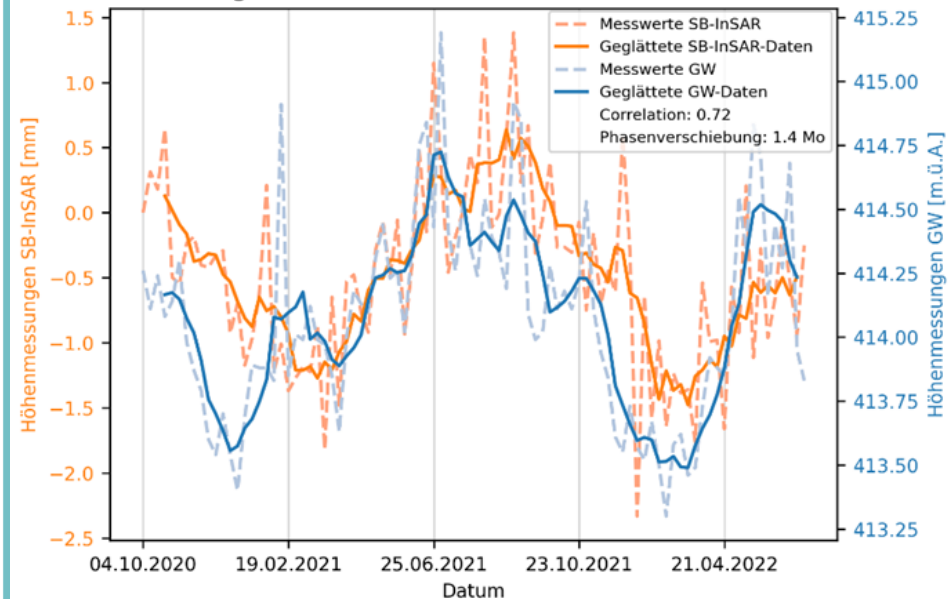


Grundwasser-Monitoring

Stuhlfelden, BI 13: Messwerte SB-InSAR und GW über Zeit

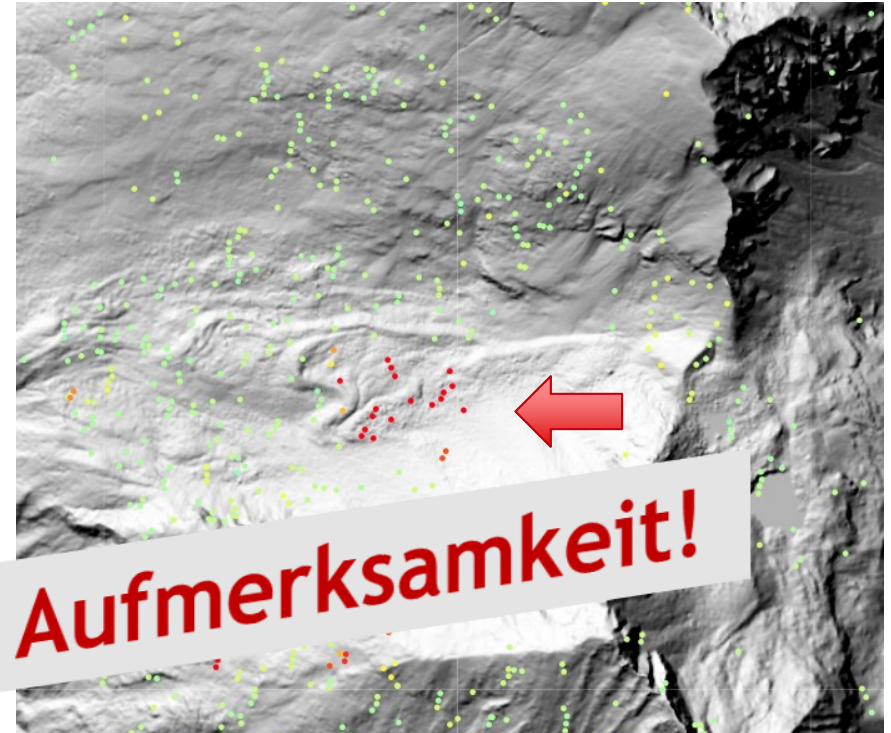


Stadt Salzburg, BI 409: Messwerte SB-InSAR und GW über Zeit





Glanzkopf



Vielen Dank für die Aufmerksamkeit!

