

Katedra aplikované geoinformatiky a kartografie, Přírodovědecká fakulta, Karlova Univerzita
Vám představuje



Úvod do DPZ

Mgr. Josef Laštovička, Ph.D.

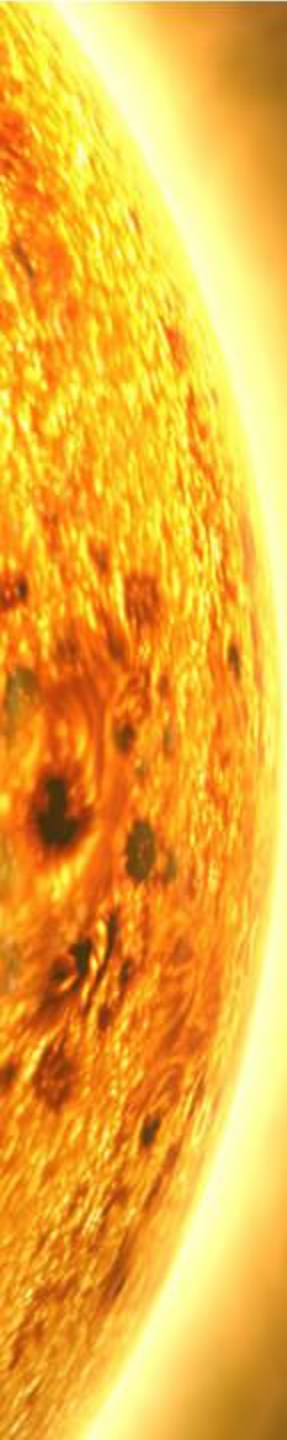
16.2.2021 13:40-14:25 ZŠ Štefcova, Hradec Králové



Gaspard-Félix Tournachon (Felix Nadar, 1820-1910)



Briefträger
mit Kamera



Mercury

Venus

Earth

Mars

Jupiter

Saturn

Uranus

Neptune

Ceres

Pluto

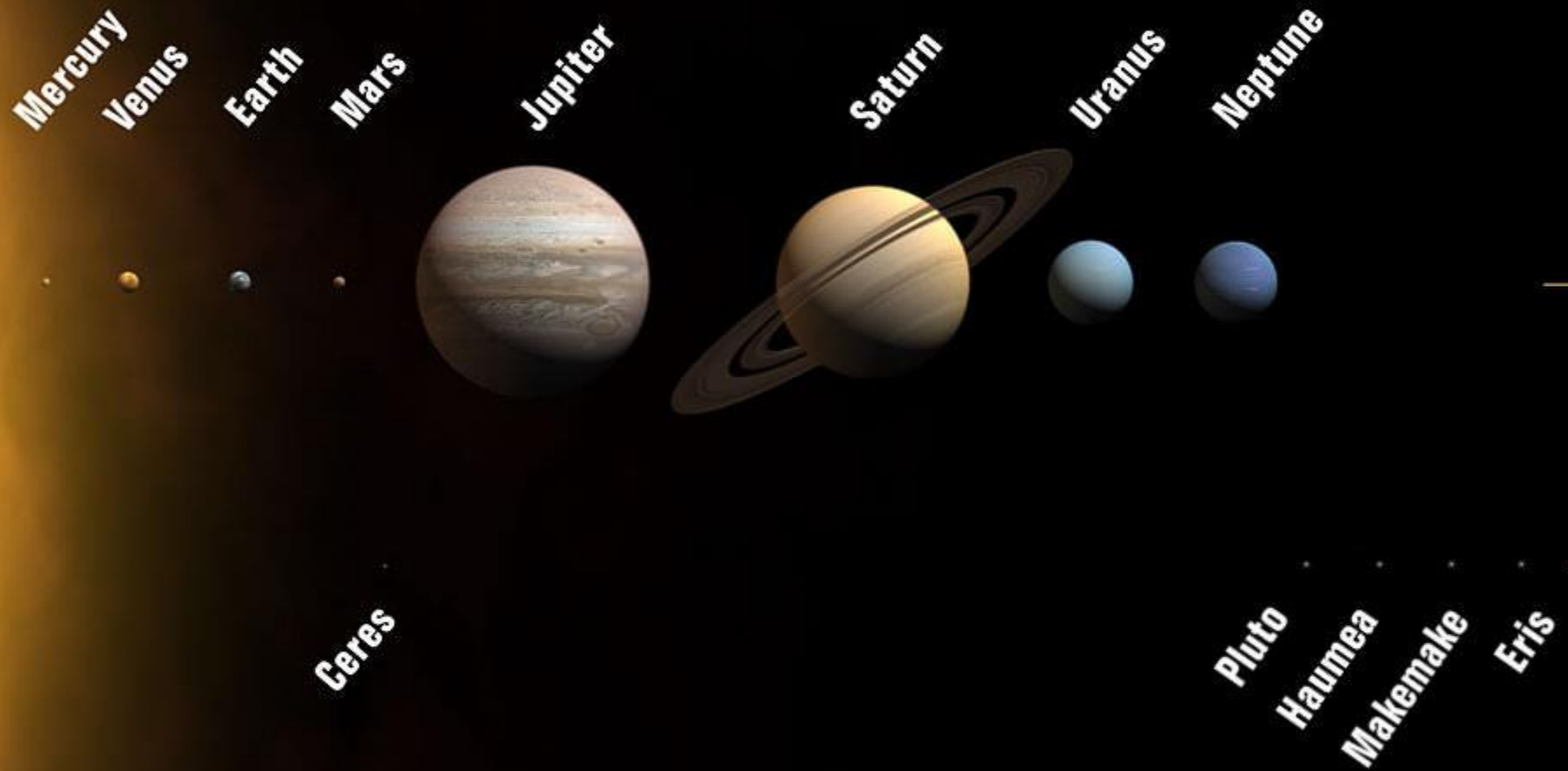
Haumea

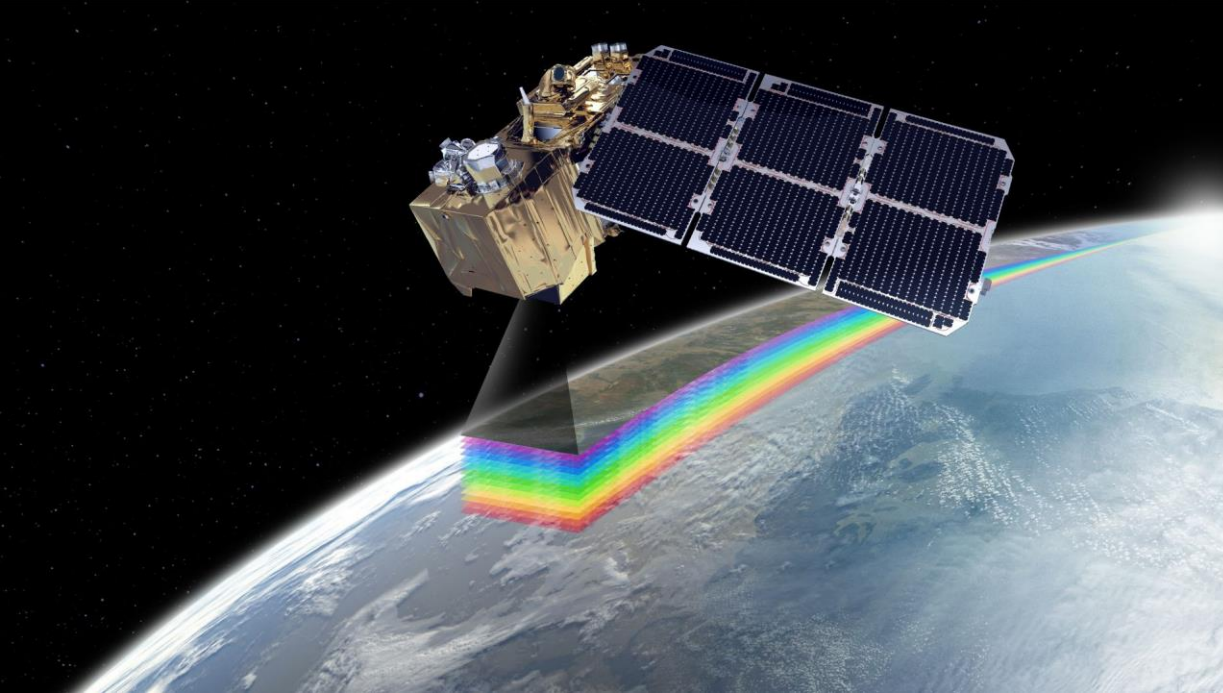
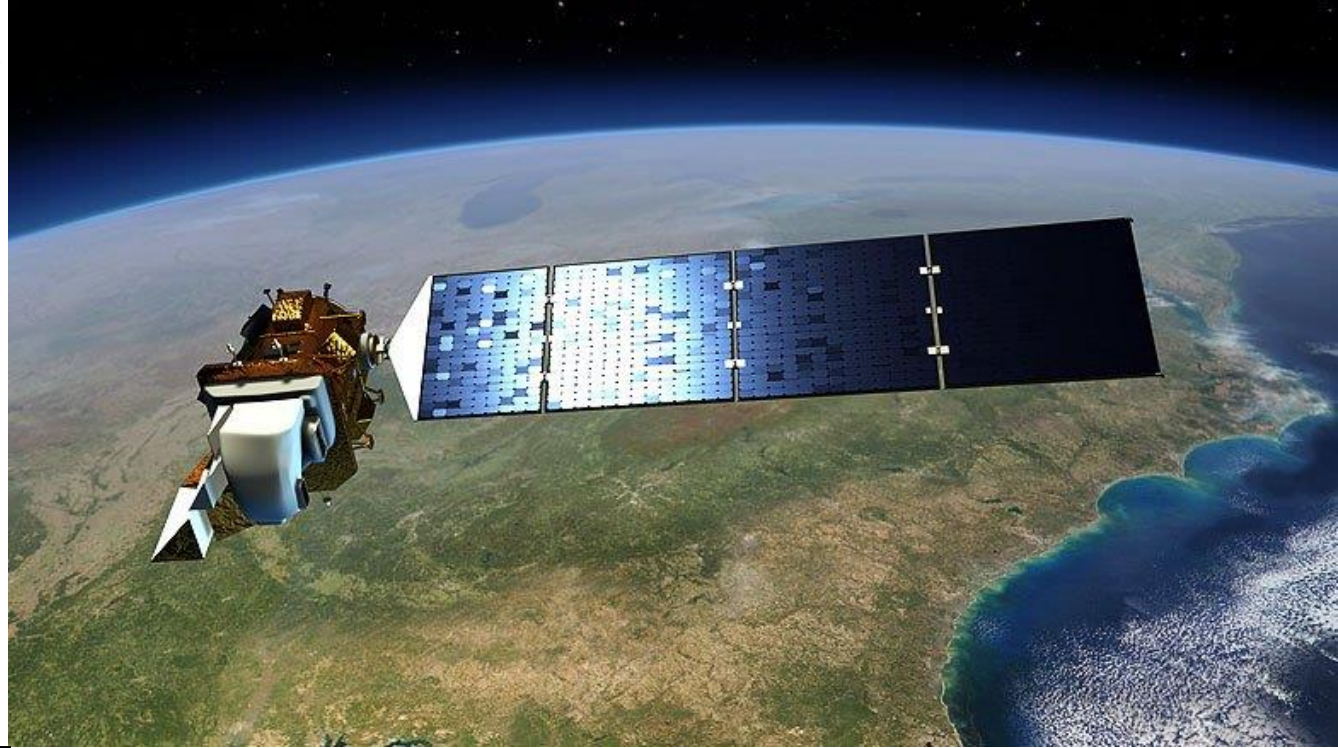
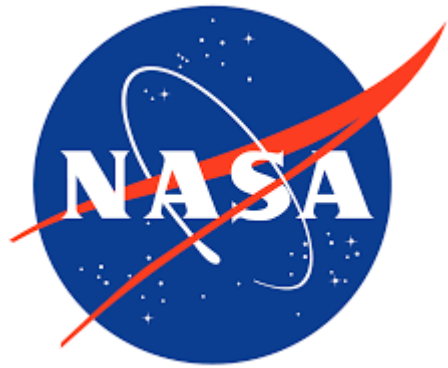
Makemake

Eris

— “Planets”

— “Dwarf Planets”





European Space Agency

Pléiades Neo

📷 30 cm

Revisit capacity
twice daily, anywhere

Daily acquisition capacity:
2,000,000 km²

Pléiades 1a/1b

📷 50 cm

Revisit capacity
daily, anywhere

Daily acquisition capacity:
700,000 km²

Vision-1

📷 90 cm

Daily to 8 days, anywhere,
depending on latitude and
partner satellites

Daily acquisition capacity:
20,000 km²

SPOT 6/7

📷 1.5 m

Revisit capacity
daily, anywhere

Daily acquisition capacity:
6,000,000 km²

RADAR Constellation

📷 From 25cm to 40 m

Revisit capacity
daily for most latitudes

Daily acquisition capacity:
5,400,000 km²

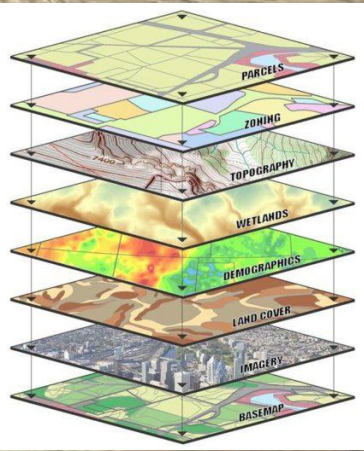
DMC Constellation

📷 From 12 to 24 m

Revisit 3-5 days anywhere

Daily acquisition capacity:
10,000,000 km²



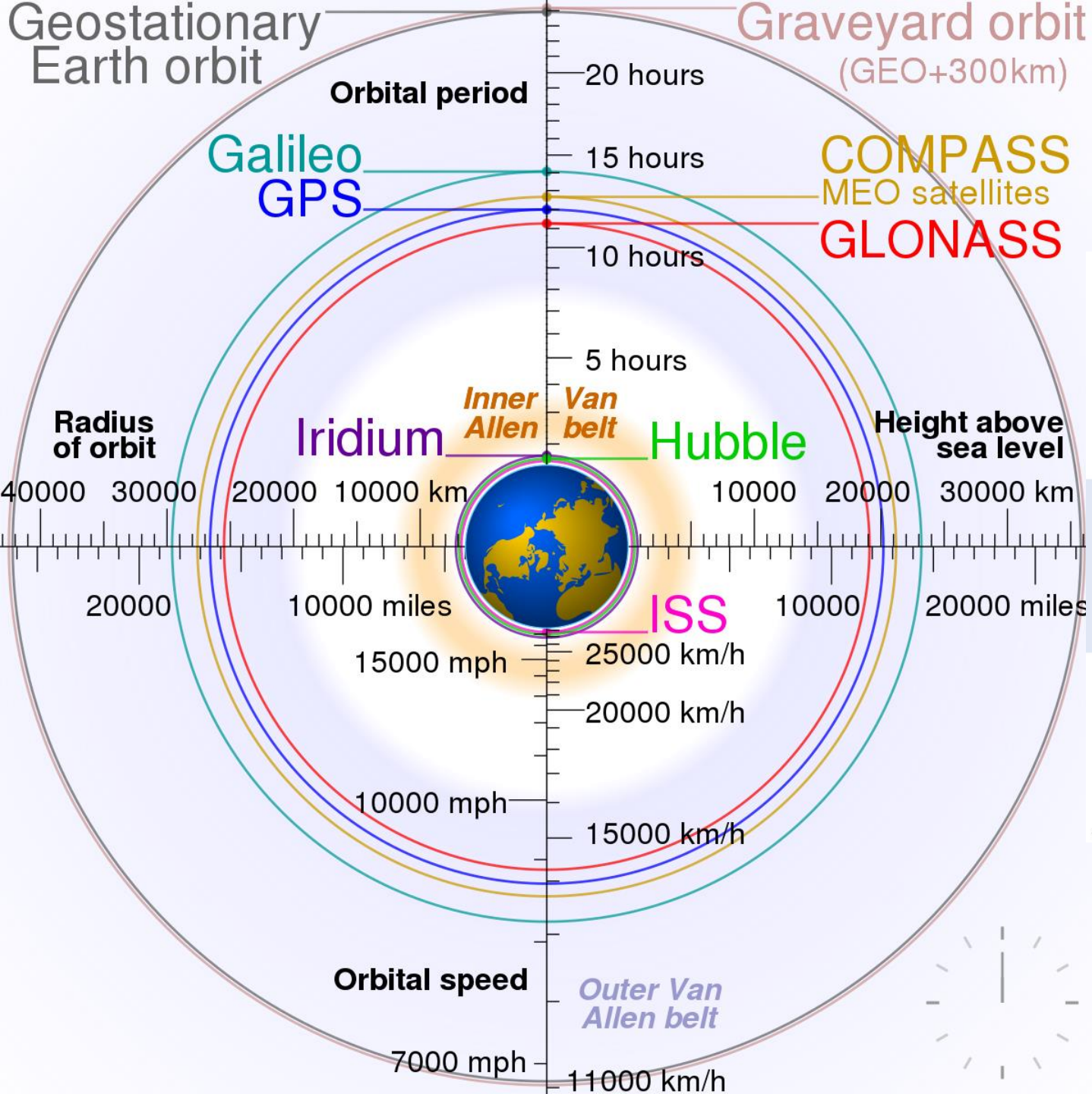


GEOLOGIC MAP OF THE PARIA NW QUADRANGLE,
KANE COUNTY, UTAH

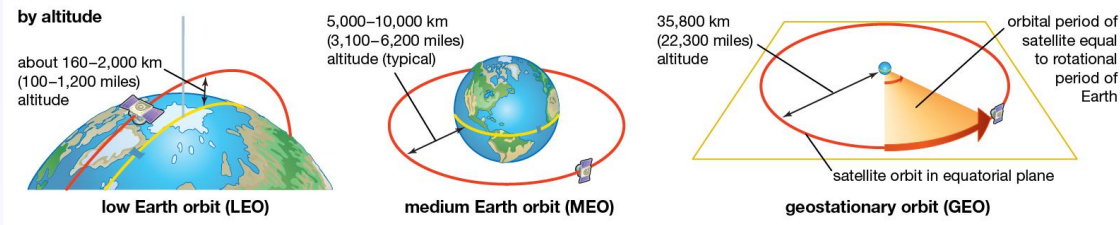
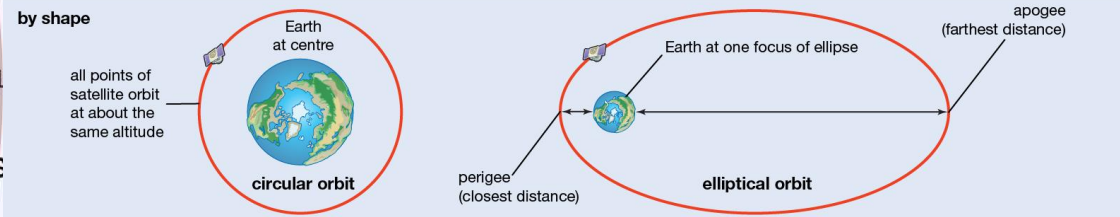
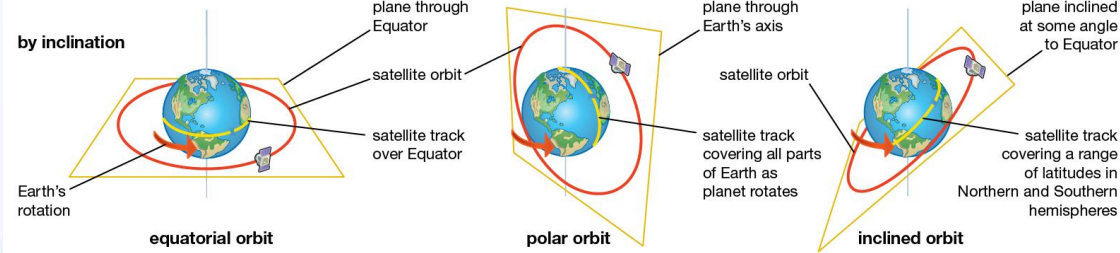


Base from USGS topographic map
Plate no. 254

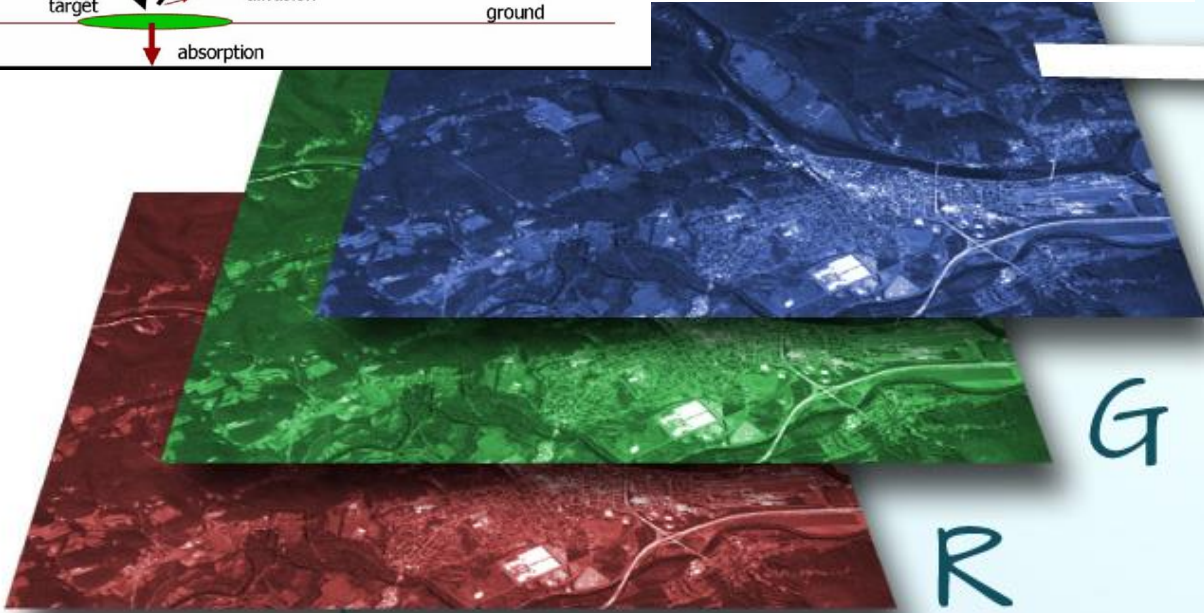
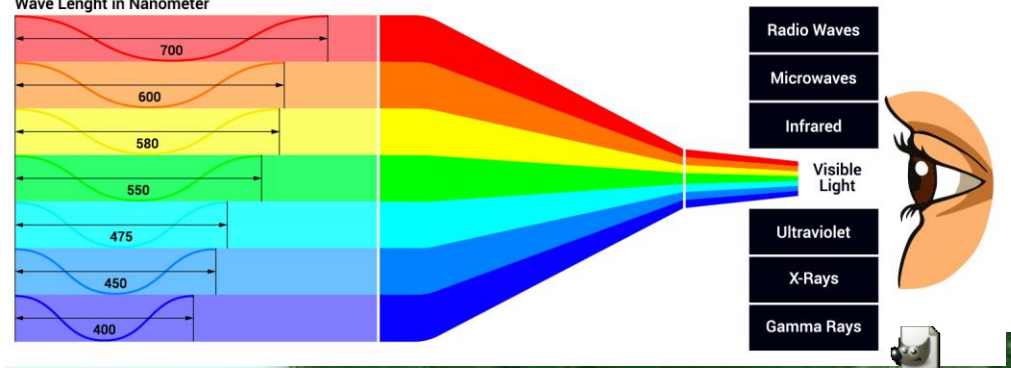
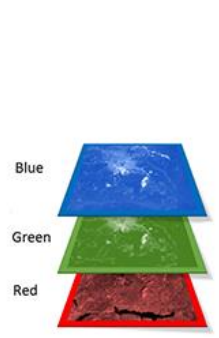
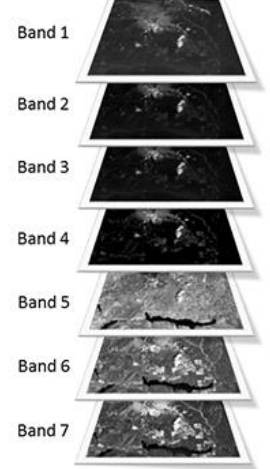
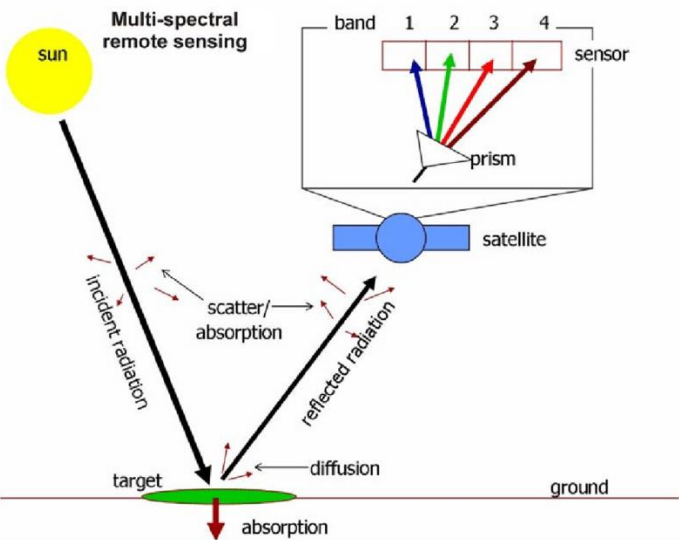


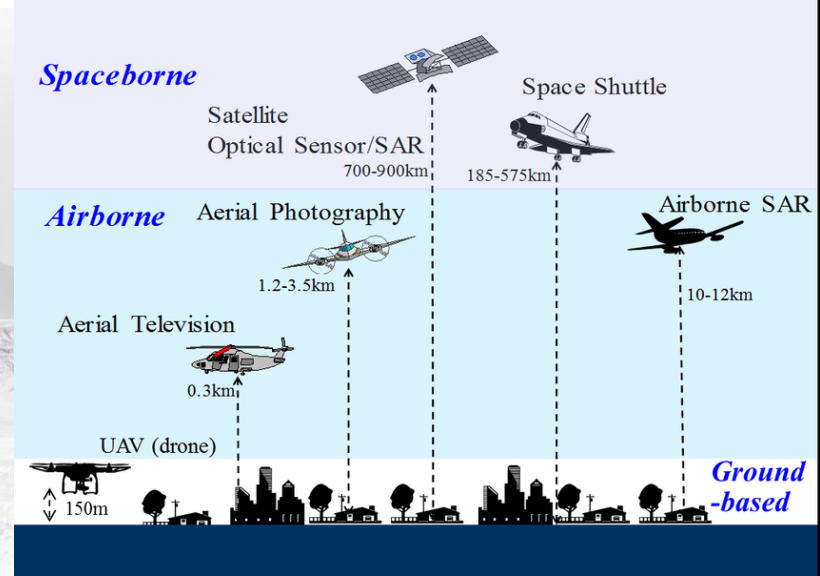
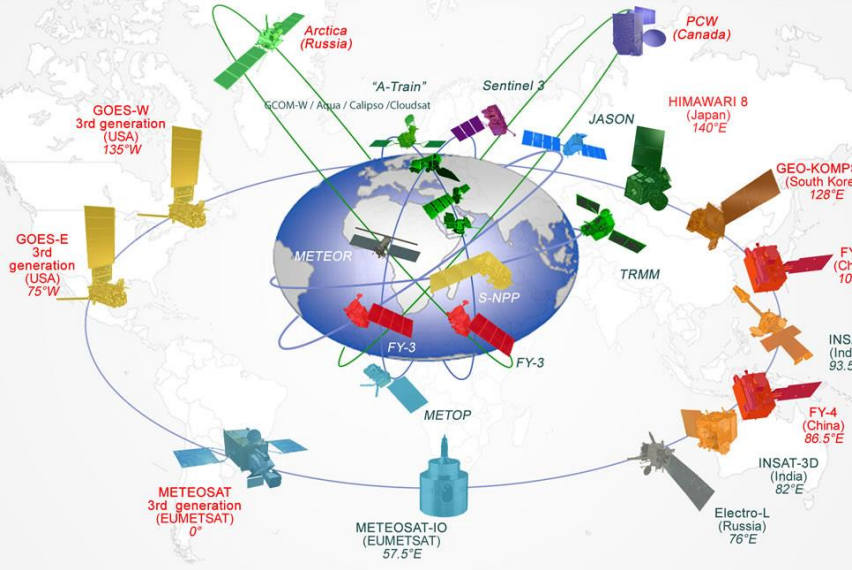


Types of Earth orbit



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Aerial photograph 0.2 m 21.07.2015

HyMap 3.6 m 20.08.2009

Sentinel-2 10 m 23.08.2015

Landsat 8 30 m 03.10.2015



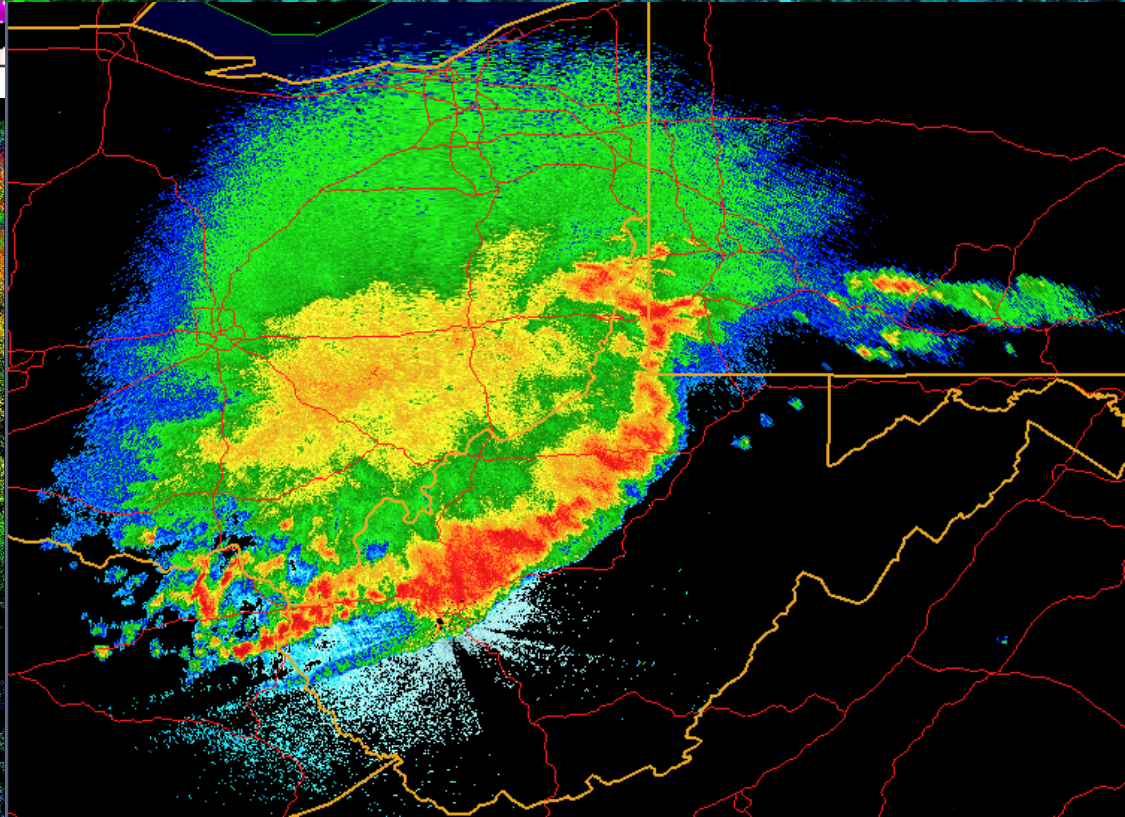
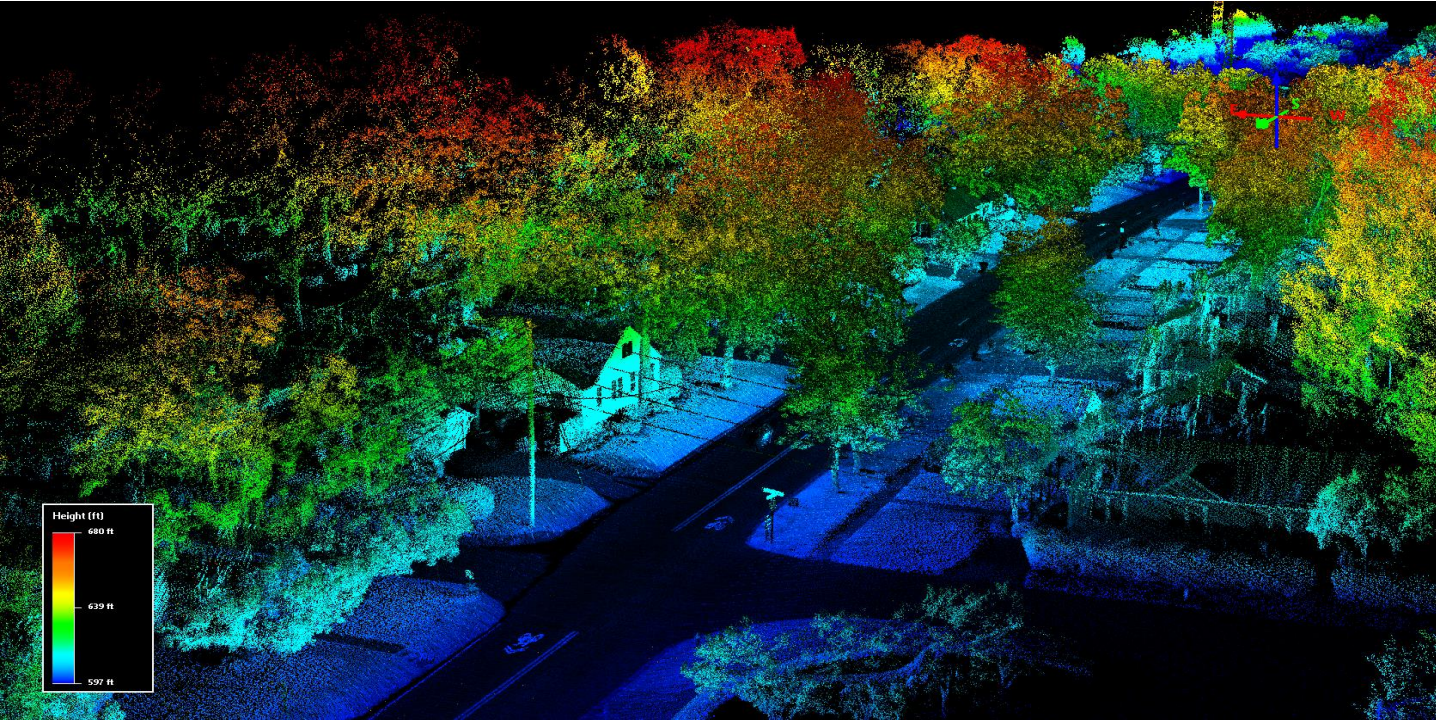
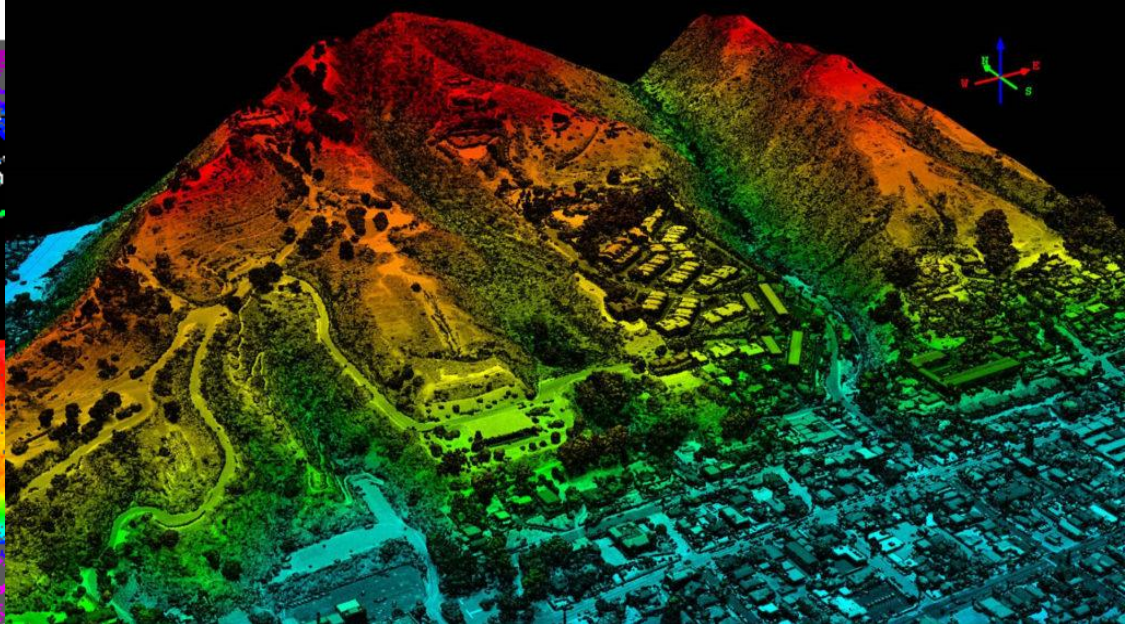
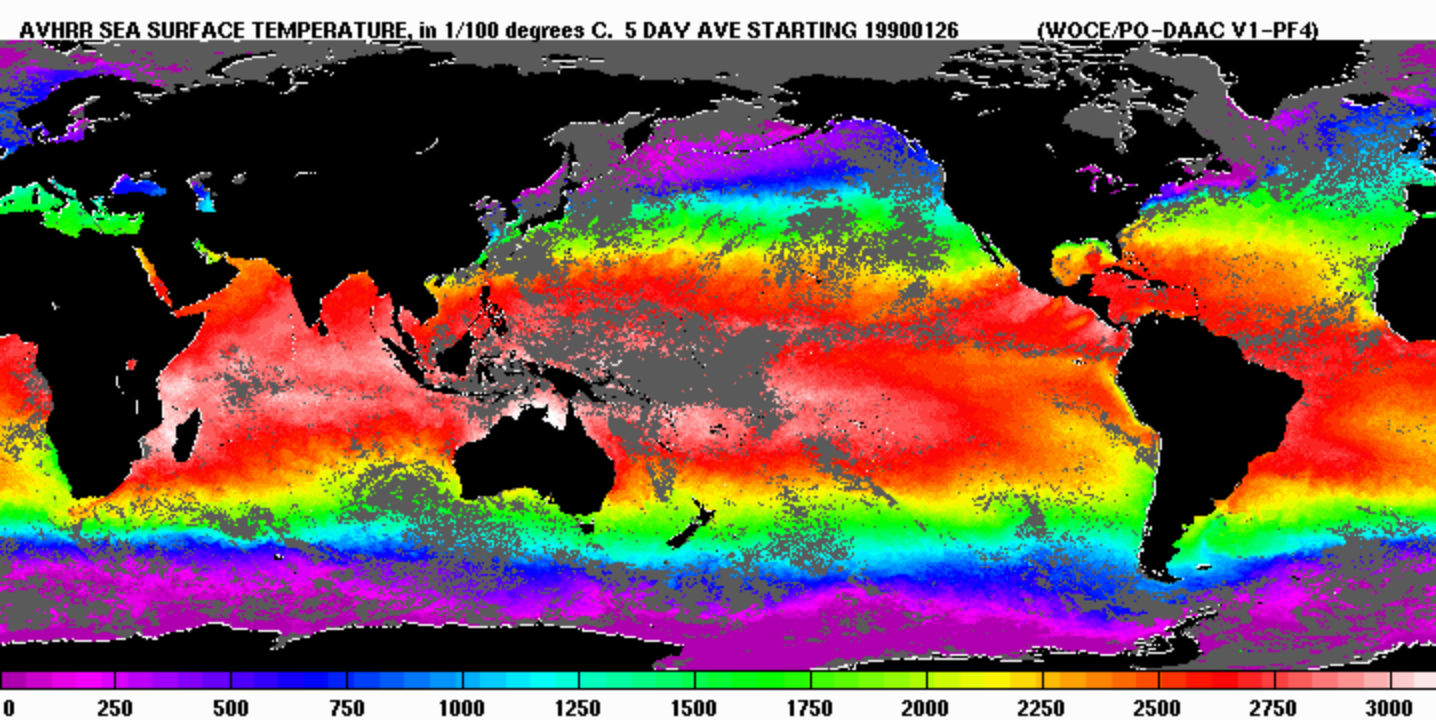


U.S. Department of the Interior
U.S. Geological Survey

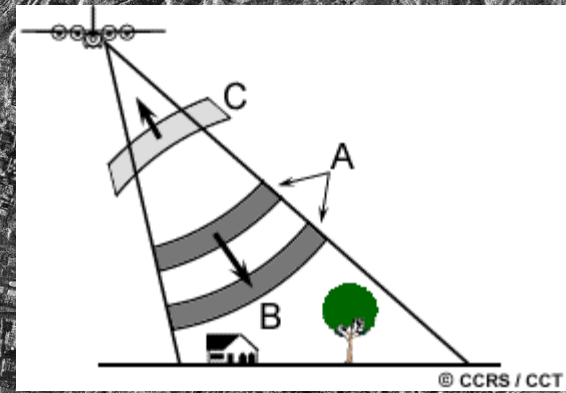
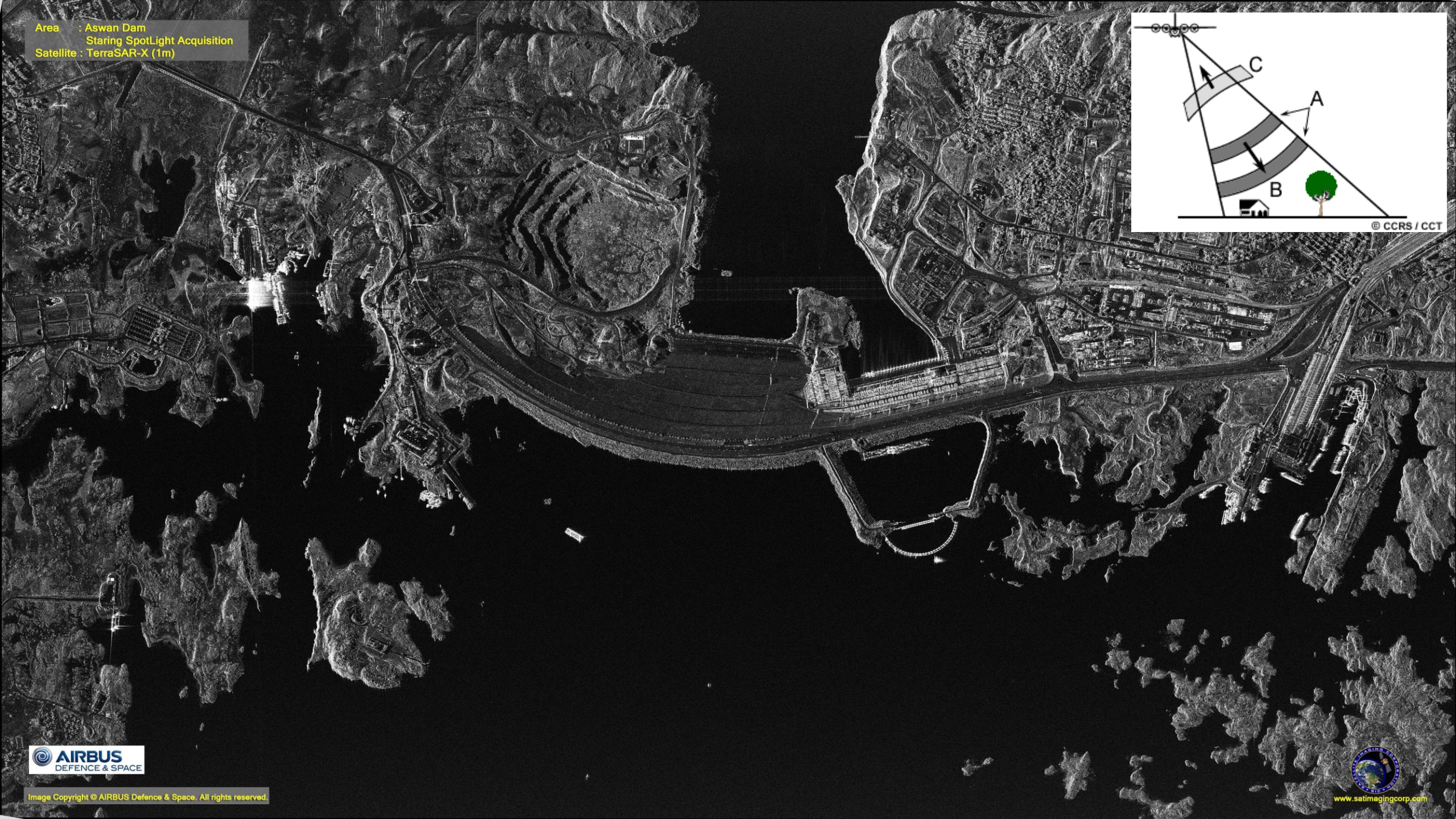
Nature's Patterns

The biologically complex conditions of mangroves are shown in dark green along the fingers of the Ord River in Australia. Yellow, orange, and blue represent the impressive flow patterns of sediment and nutrients in this tropical estuary. The bright spot at the lower left is an area of mudflats, which is home to saltwater crocodiles.

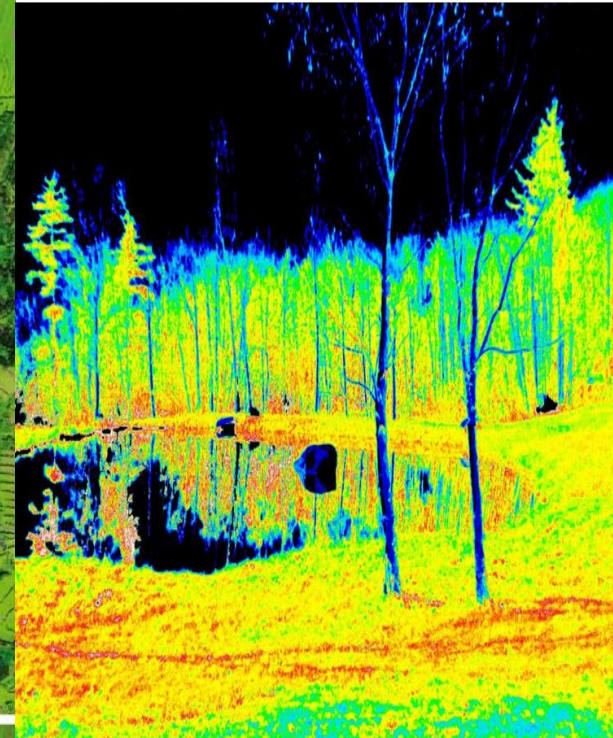
LandSat 8 data acquired on 05/12/2013



Area : Aswan Dam
Staring SpotLight Acquisition
Satellite : TerraSAR-X (1m)







HEALTHY
VEGETATION REFLECTANCE

50% NIR 8% RED



NDVI = 0.72

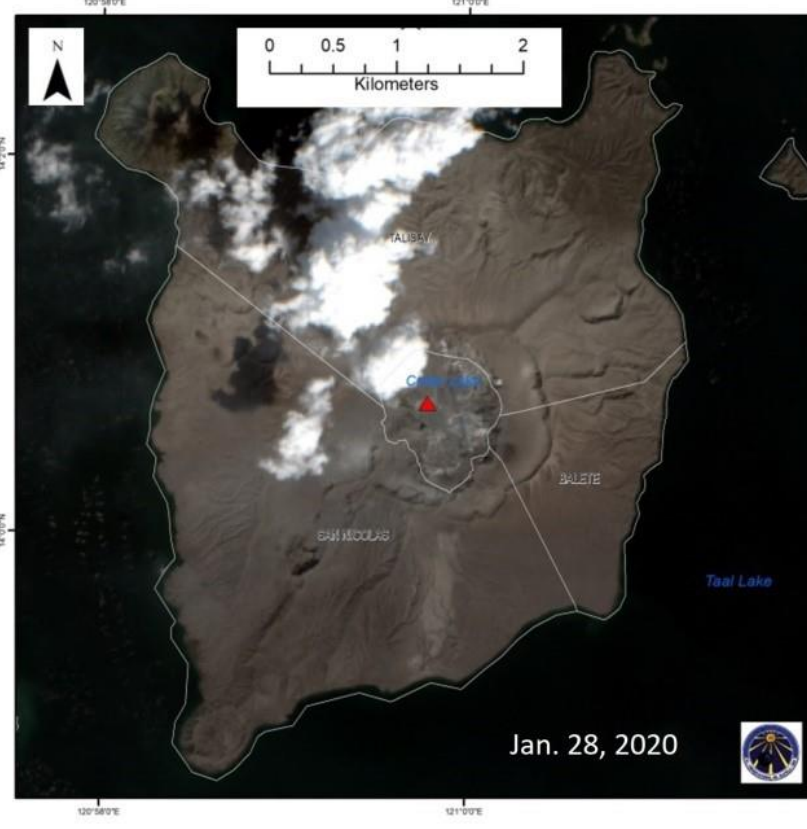
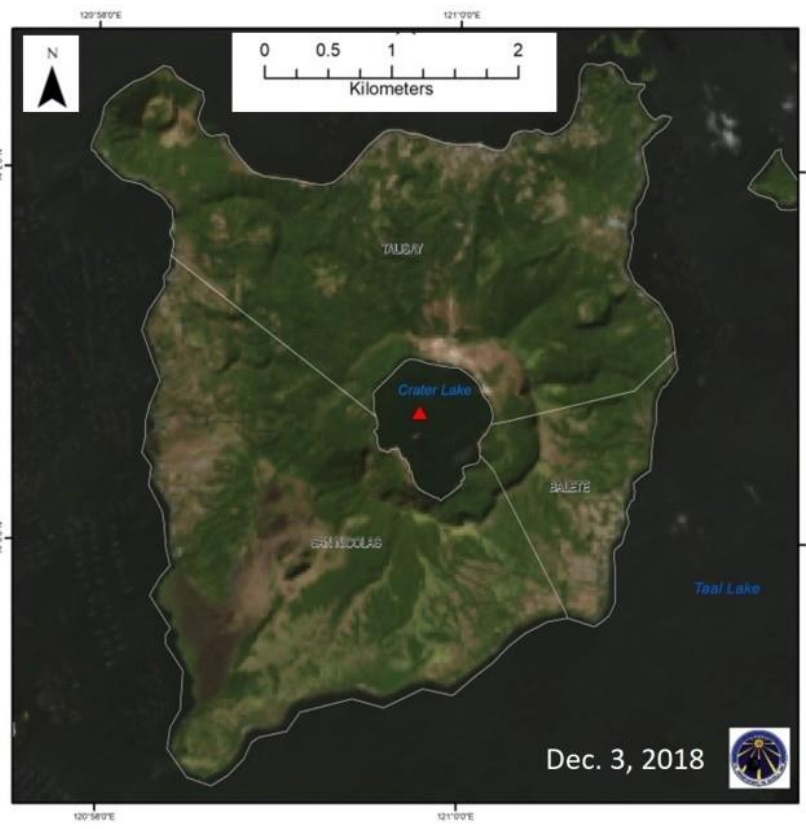
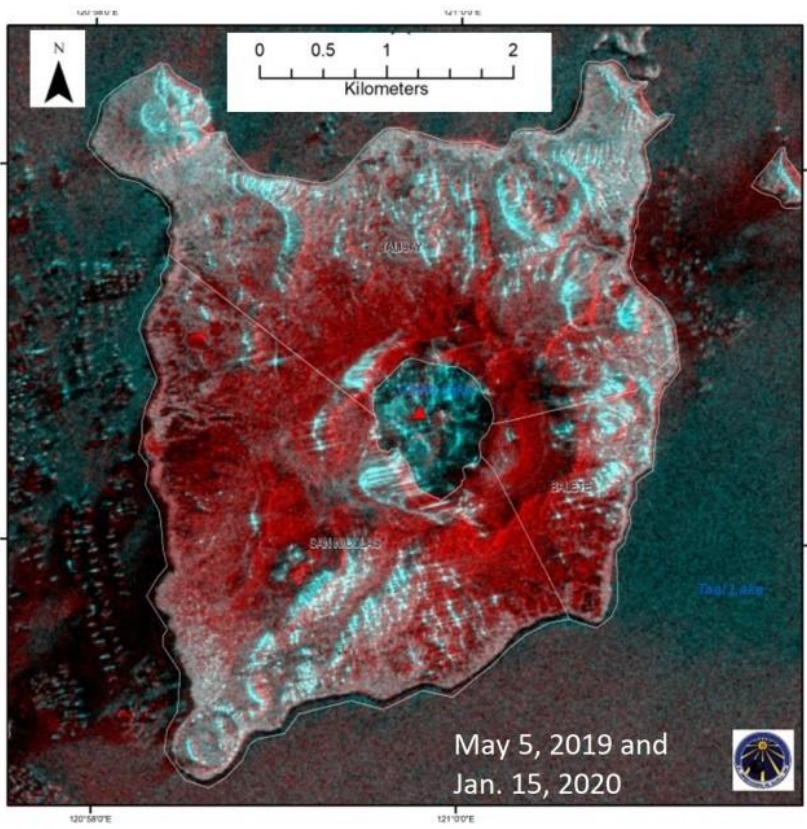
STRESSED
VEGETATION REFLECTANCE

40% NIR 30% RED



NDVI = 0.14

$$\text{NDVI} = \frac{\text{NIR} - \text{RED}}{\text{NIR} + \text{RED}}$$





Zajímavé ukázky:

<https://earthengine.google.com/timelapse#v=36.11007,-114.92783,9.541,latLng&t=3.4&ps=50&bt=19840101&et=20181231&startDwell=0&endDwell=0>

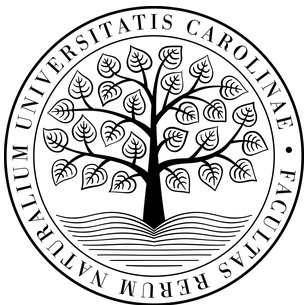
<https://earthengine.google.com/timelapse#v=50.54299,13.67982,10.348,latLng&t=3.4&ps=50&bt=19840101&et=20181231&startDwell=0&endDwell=0>

<https://earthengine.google.com/timelapse#v=-10.99191,-53.13184,4.194,latLng&t=0&ps=50&bt=19840101&et=20181231&startDwell=0&endDwell=0>

<https://earthengine.google.com/timelapse#v=60.74728,-141.80875,4.654,latLng&t=0&ps=50&bt=19840101&et=20181231&startDwell=0&endDwell=0>

<https://earthengine.google.com/timelapse#v=45.08126,59.7376,6.051,latLng&t=1.97&ps=50&bt=19840101&et=20181231&startDwell=0&endDwell=0>

DĚKUJI VÁM ZA POZORNOST.
PROSTOR PRO VAŠE DOTAZY 😊



Mgr. Josef Laštovička, Ph.D., 2021, Praha, kontakt: pepa.lastovicka@gmail.com

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Search

Planning

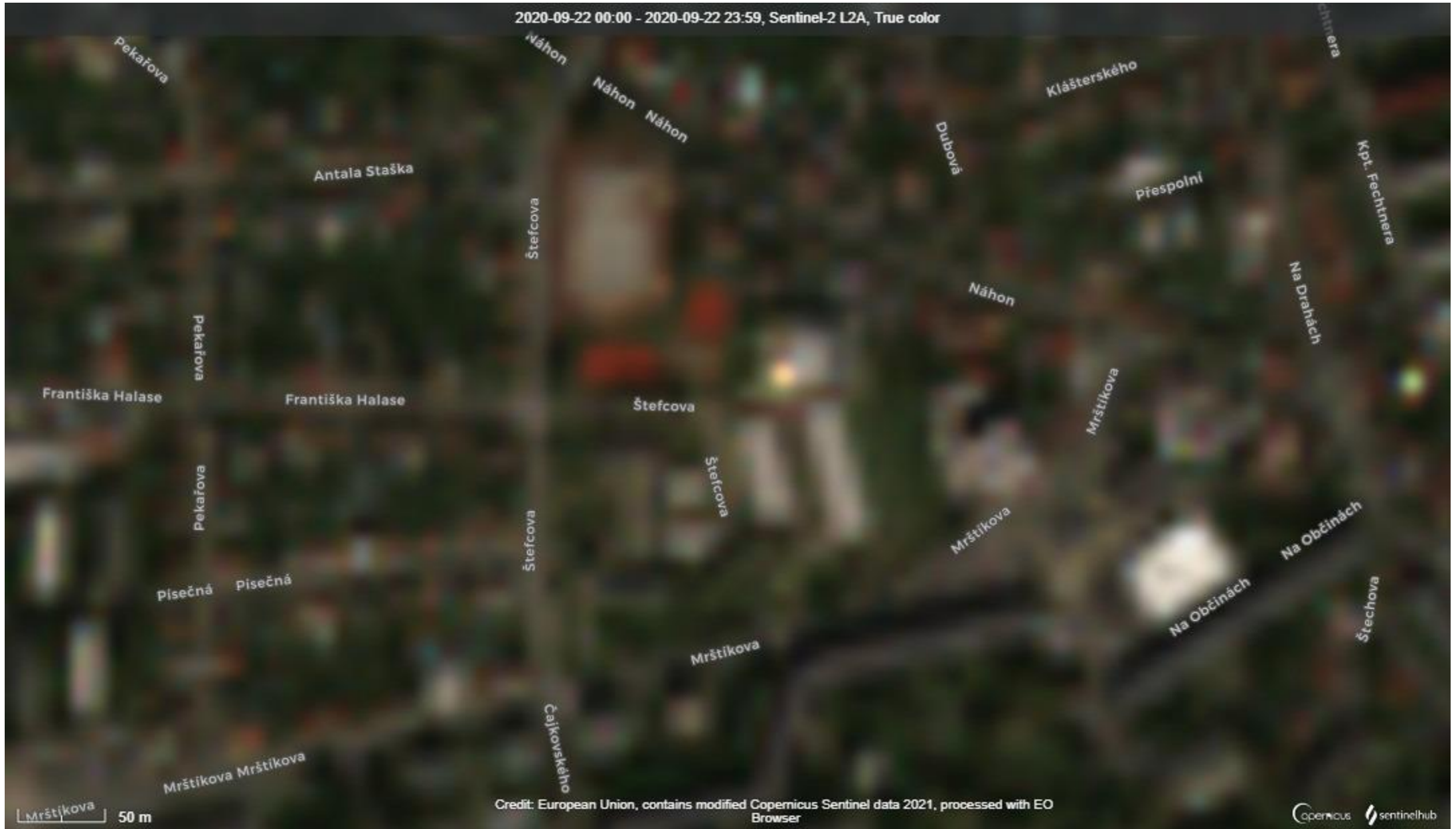
Log in to My maps



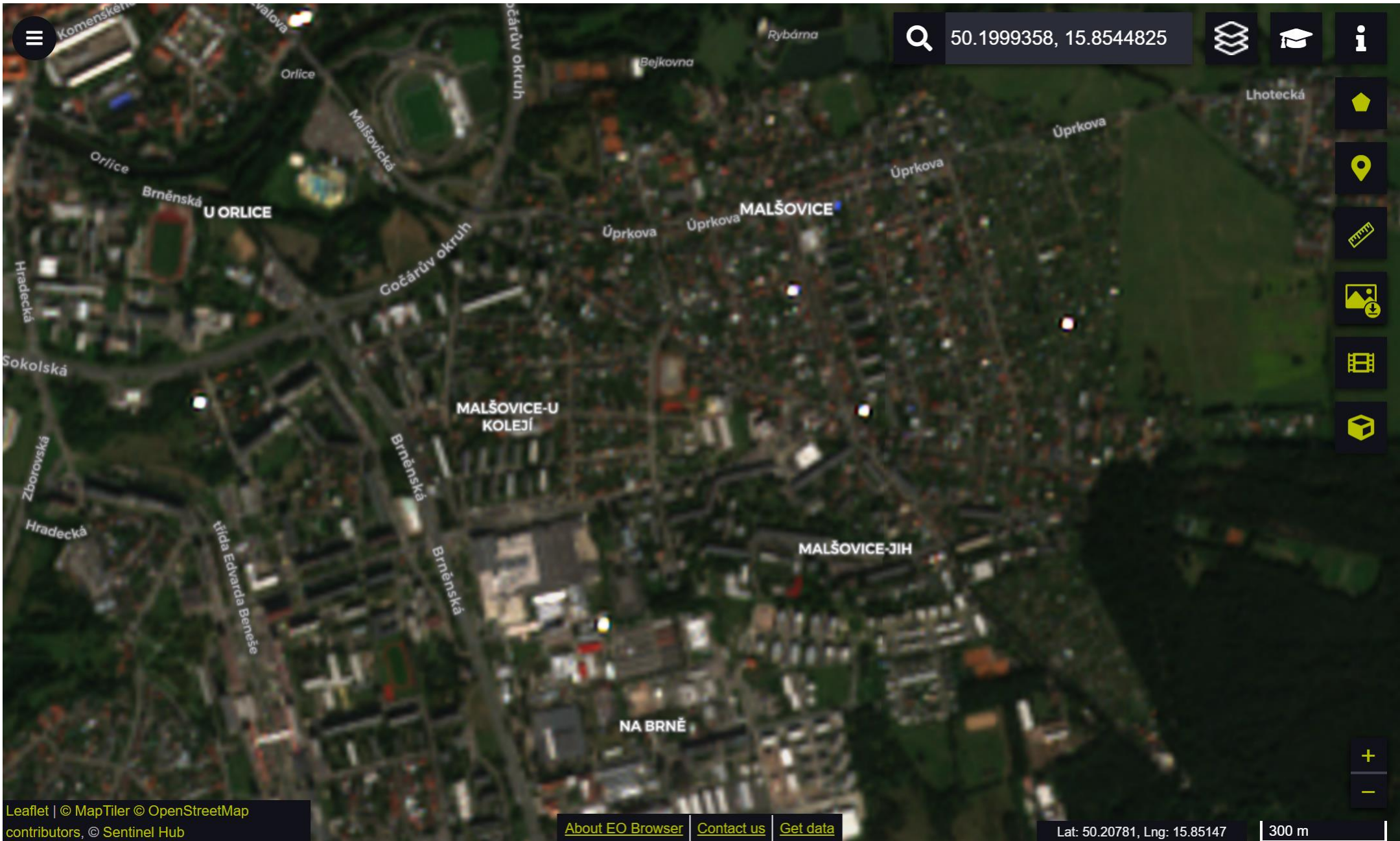
50°11'59.769"N 15°51'16.137"E

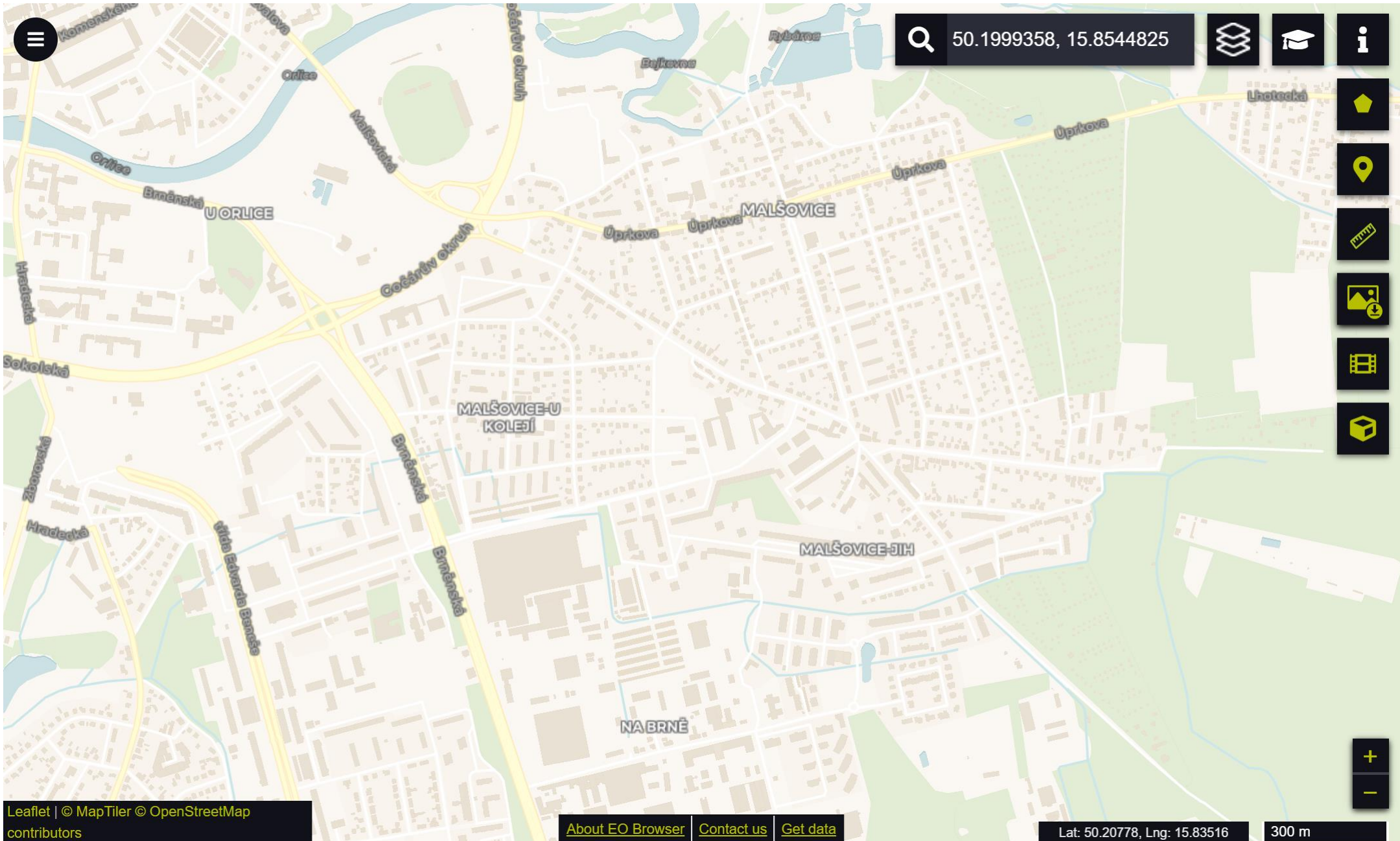
If there you see a place or location missing or exceeding, we would be glad if you [let us know](#).

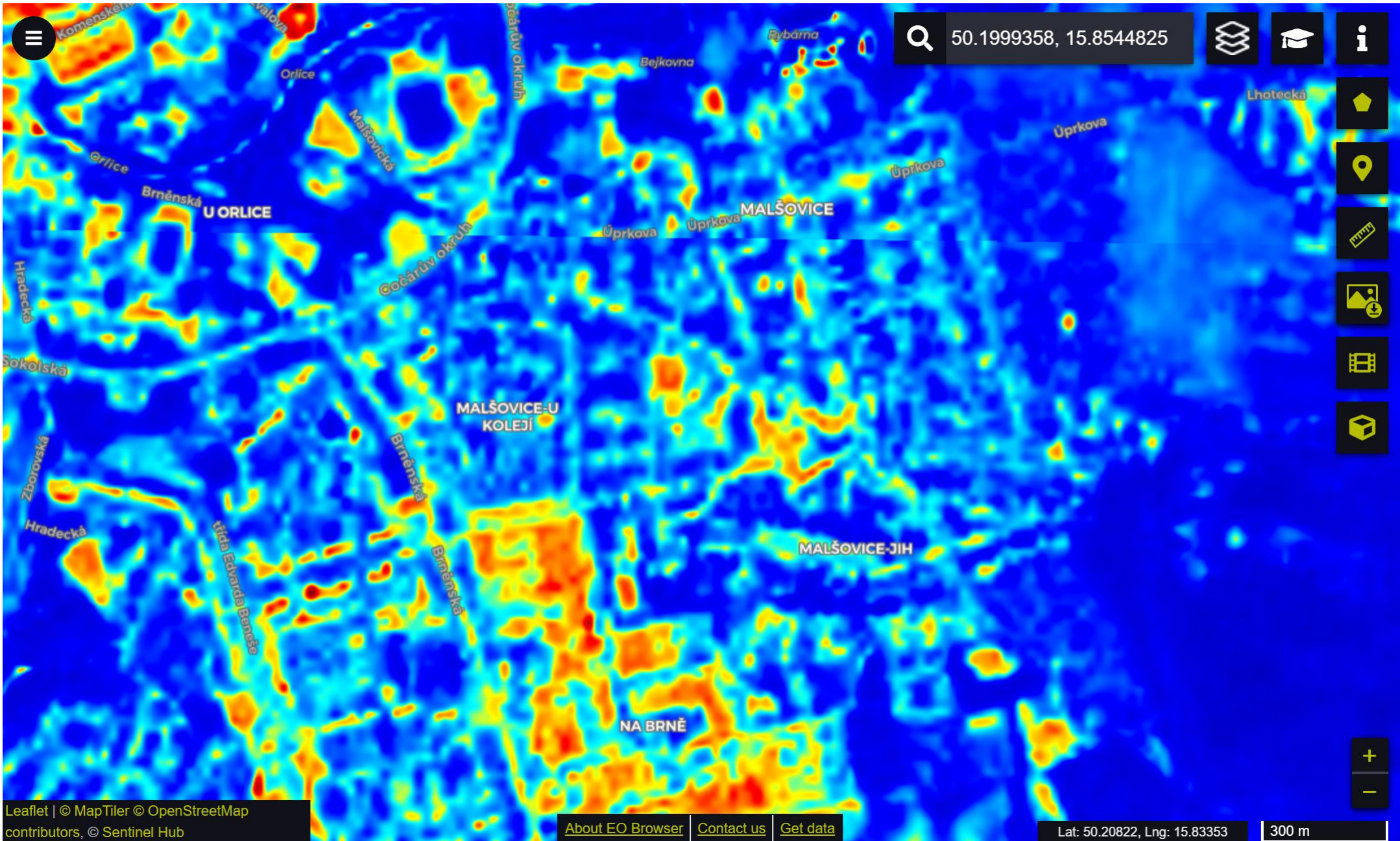
2020-09-22 00:00 - 2020-09-22 23:59, Sentinel-2 L2A, True color

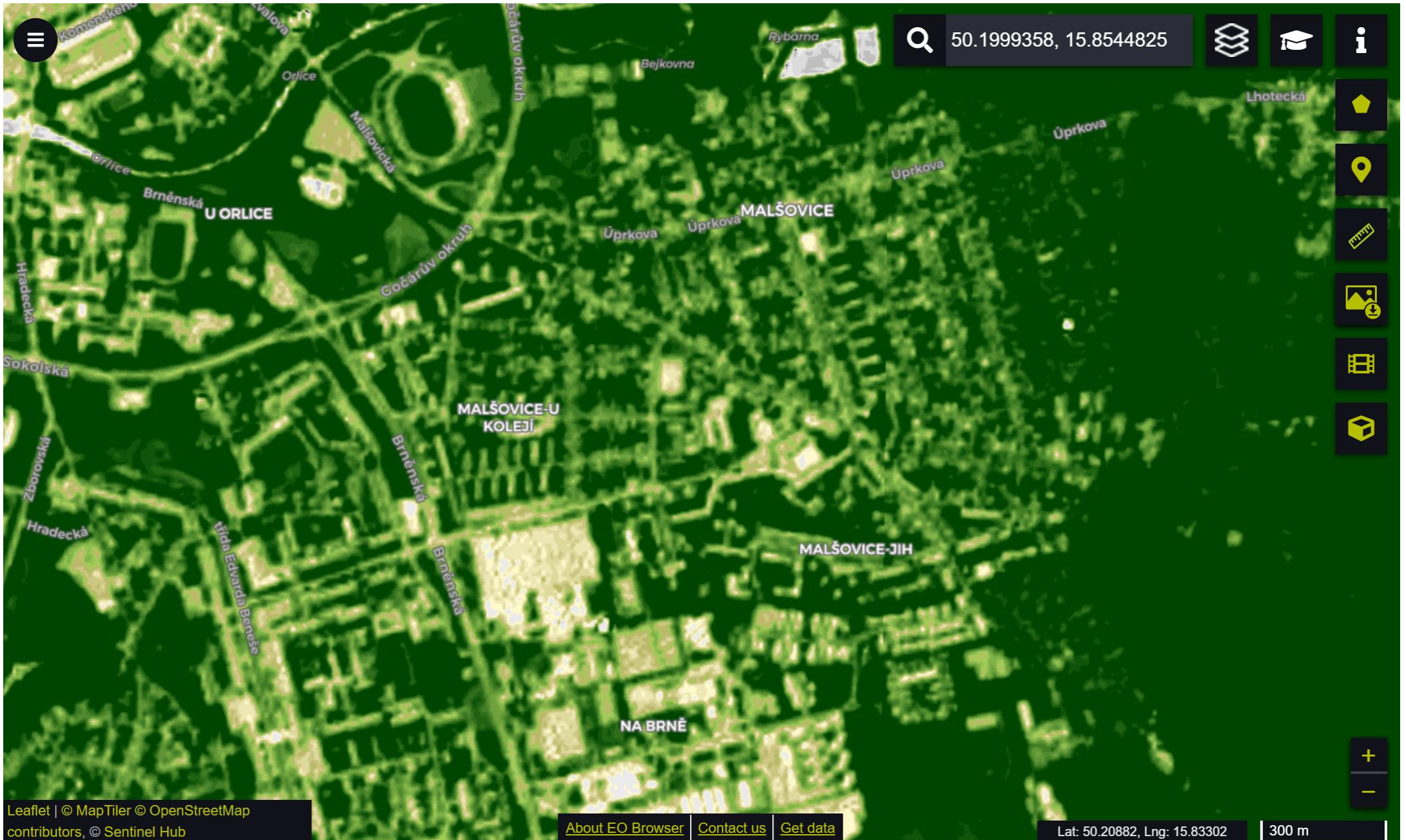


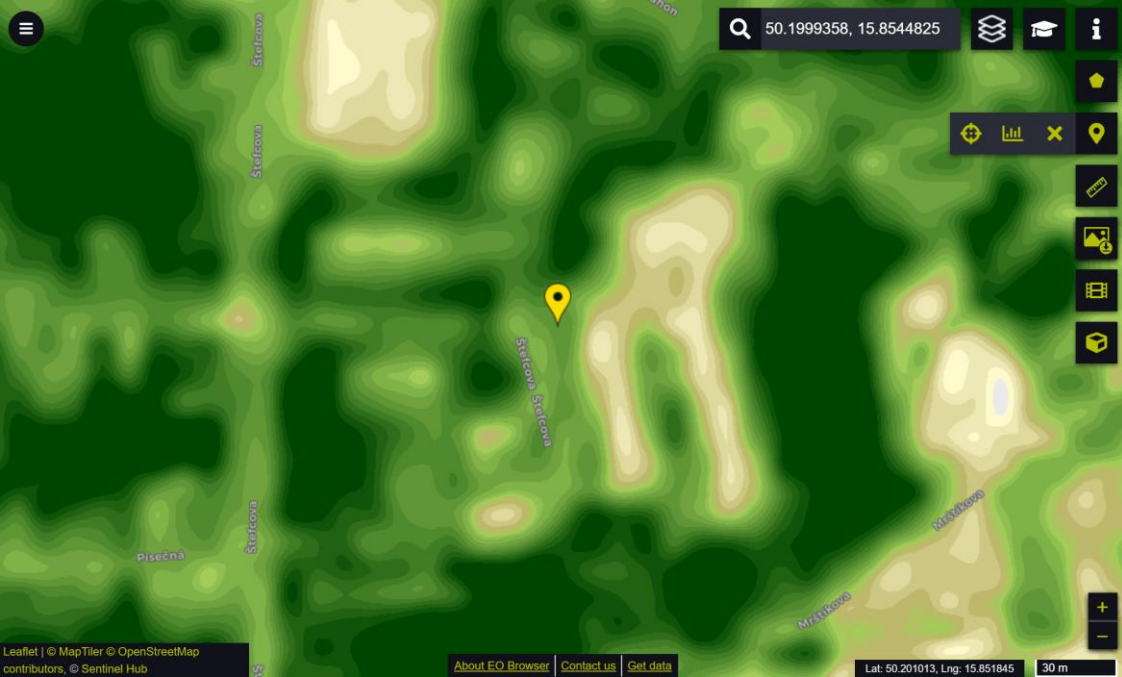
Credit: European Union, contains modified Copernicus Sentinel data 2021, processed with EO Browser







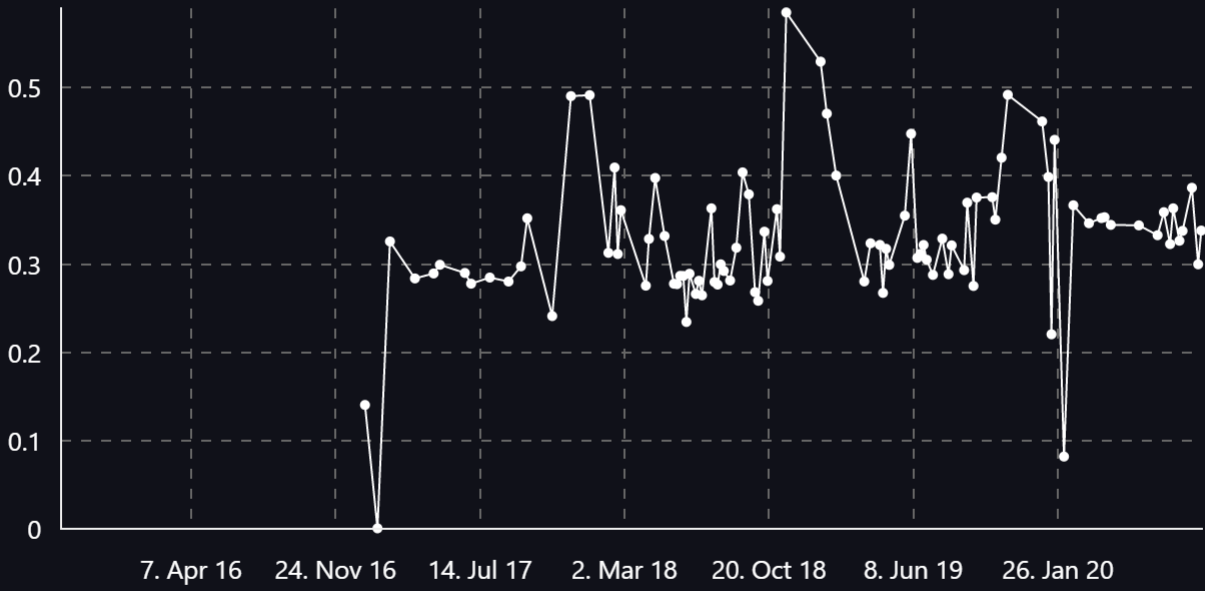




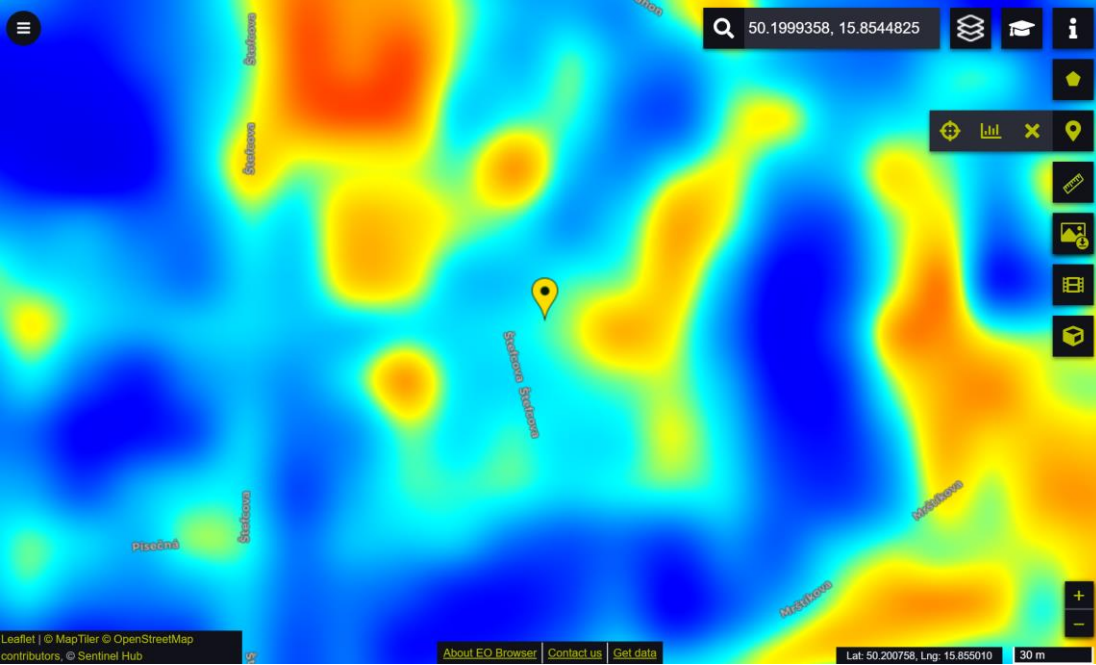
Sentinel-2 L2A - 3_NDVI



- 5 years
- 2 years
- 1 year
- 6 months
- 3 months
- 1 month



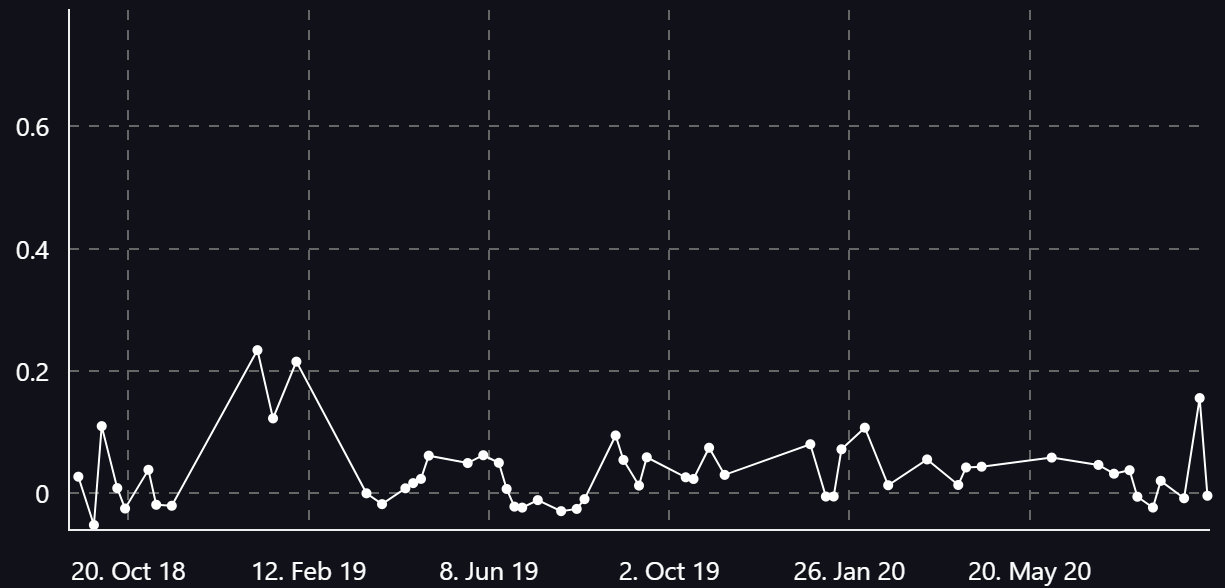
Export CSV



Sentinel-2 L2A - 5-MOISTURE-INDEX1

☰ 0 %

5 years 2 years 1 year 6 months 3 months 1 month



📄 Export CSV