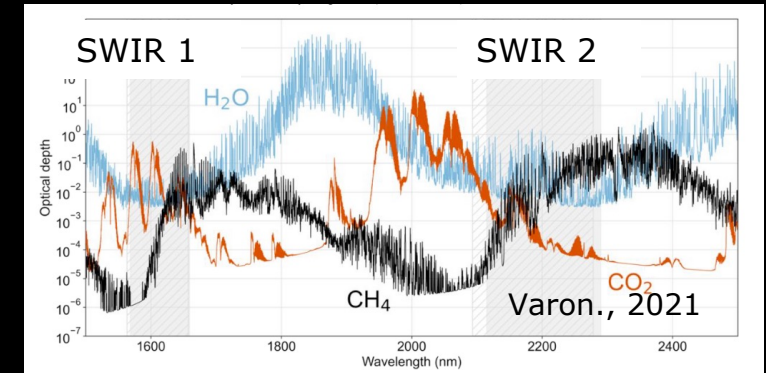


Methane emissions estimation using multiple satellites: Using multispectral instruments to fill in the remaining gaps

Satellites	Coverage	Emission detection limit	Spatial resolution
TROPOMI	Global	5 t/hr	7 x 5.5 km ²
Hyperspectral/ GHGsats	30 x 30 Km	0.2 t/hr	30 m
Multispectral	Global	2 t/hr	20 - 30 m

Useful methane retrievals possible in the using SWIR channels of Multispectral instruments



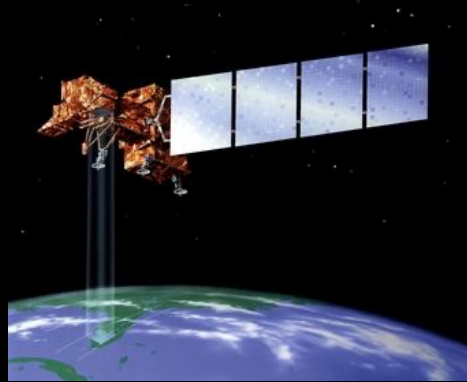
Sentinel-2

- Revisit < 5 days
- S-2A 2015 - present
- S-2B 2017 - present



Landsat 7

- Revisit < 16 days
- 1999 - present



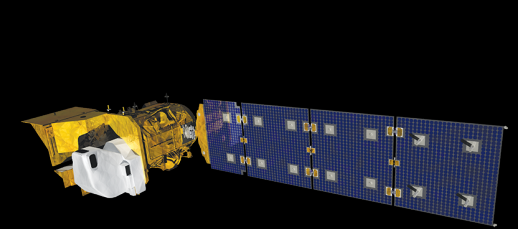
Landsat 8

- Revisit < 16 days
- 2013 - present



Landsat 9

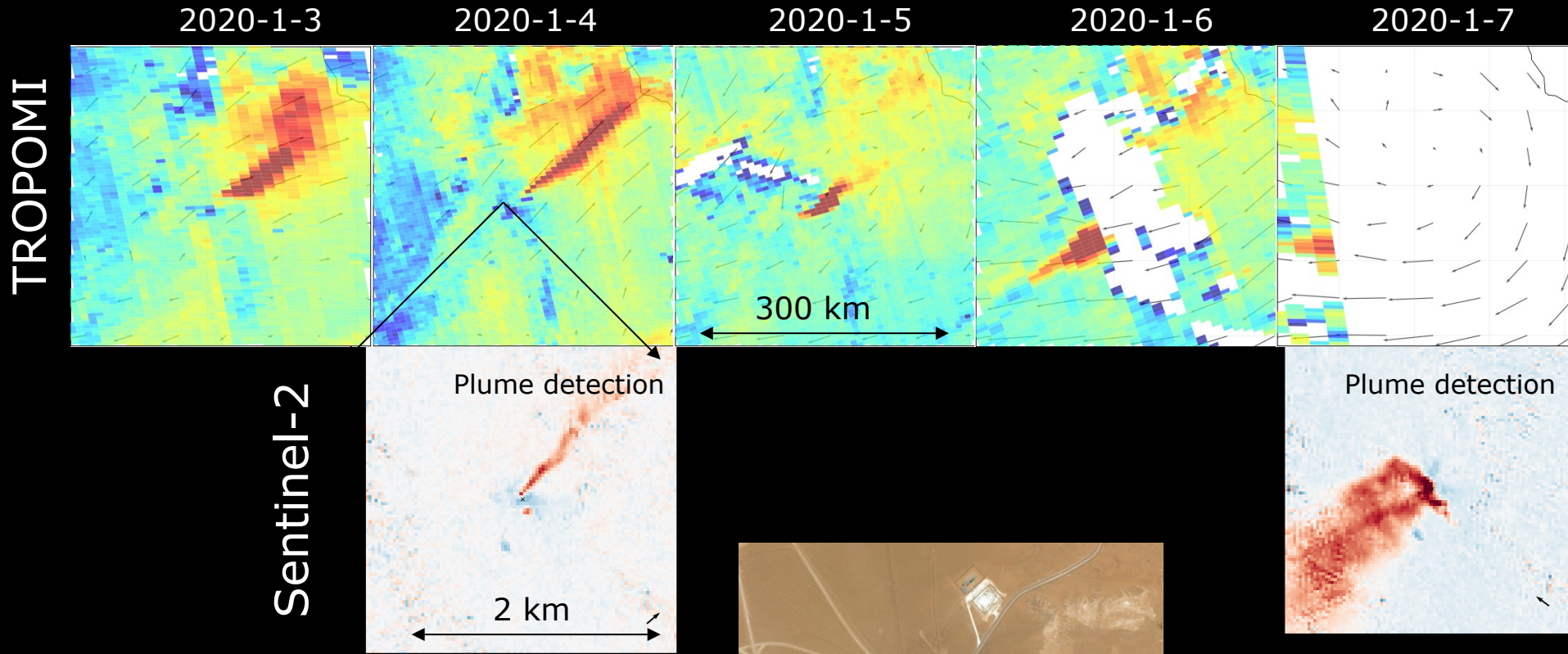
- Revisit < 16 days
- Launch 2021



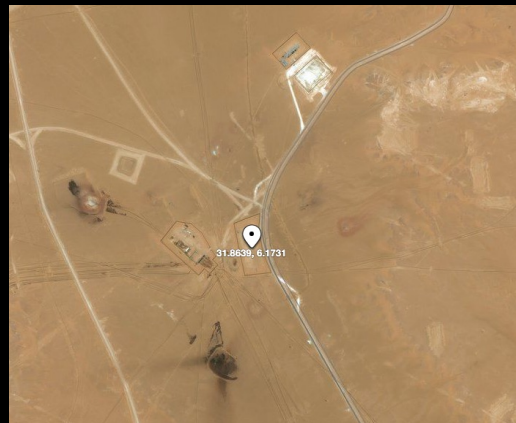
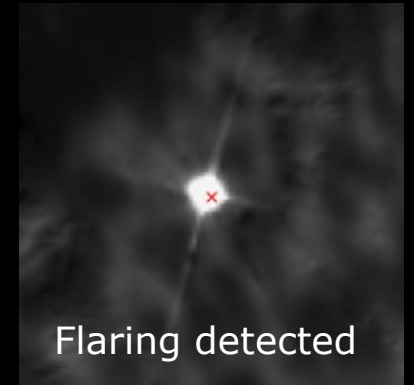
Combined revisit time of multispectral instruments < 2 days

Demonstration: source location identification of a large emission event in Algeria using Sentinel-2

Methane retrievals



2020-1-9



Precise location of the emitting facility

More at IWGGMS, June 16

