



Integrating methane satellite observations at different scales

J.D. Maasackers (Thanks to many others)

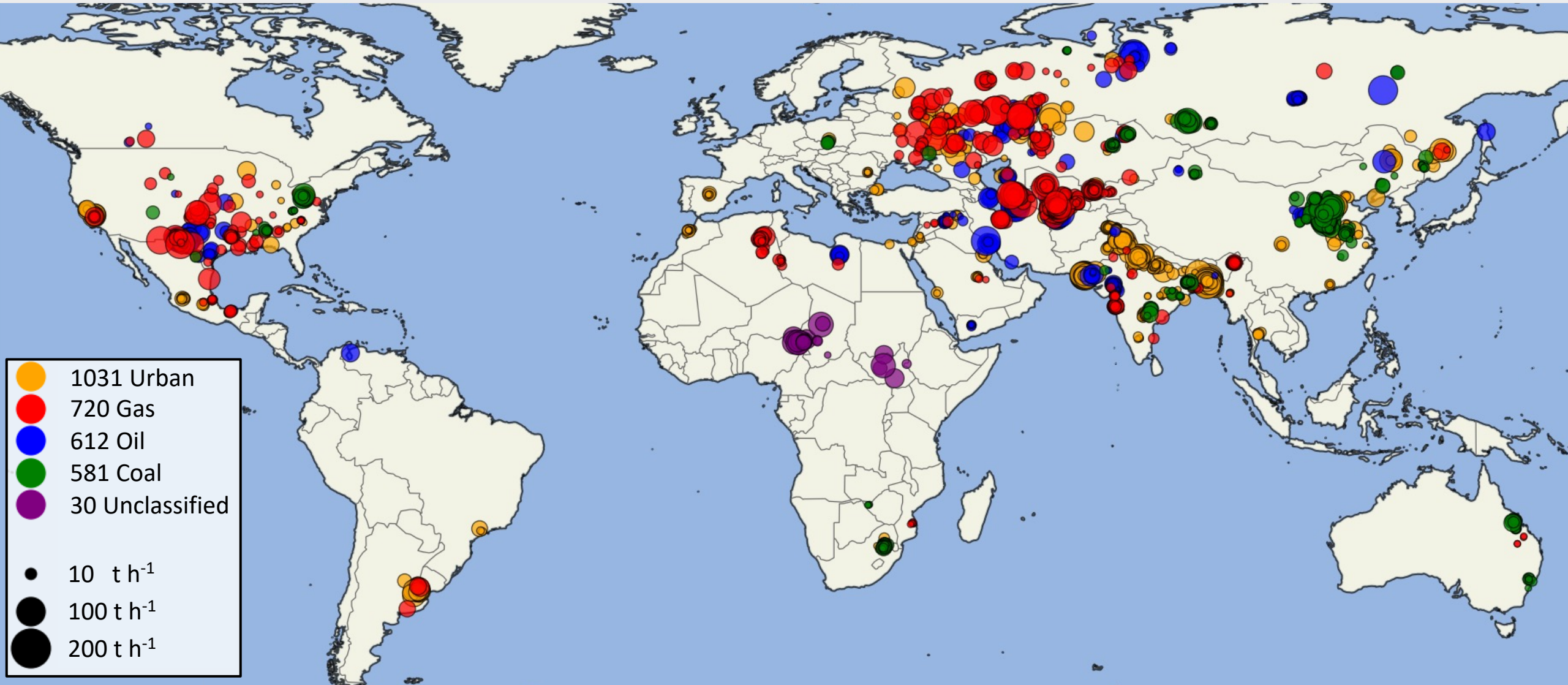


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Photo credit: A. Verschoor

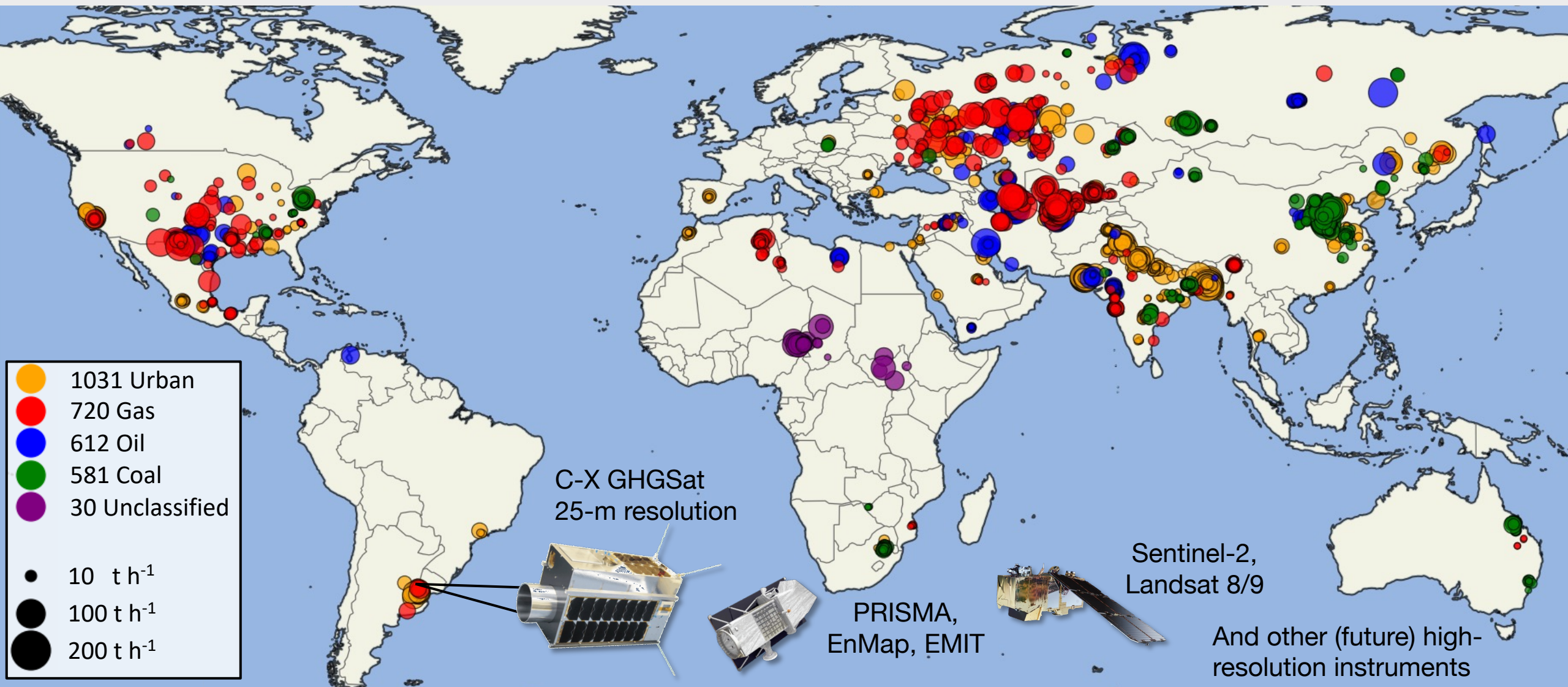
We automatically detect large plumes in the TROPOMI data

We find ~3000 plumes in 2021, related to various source sectors.



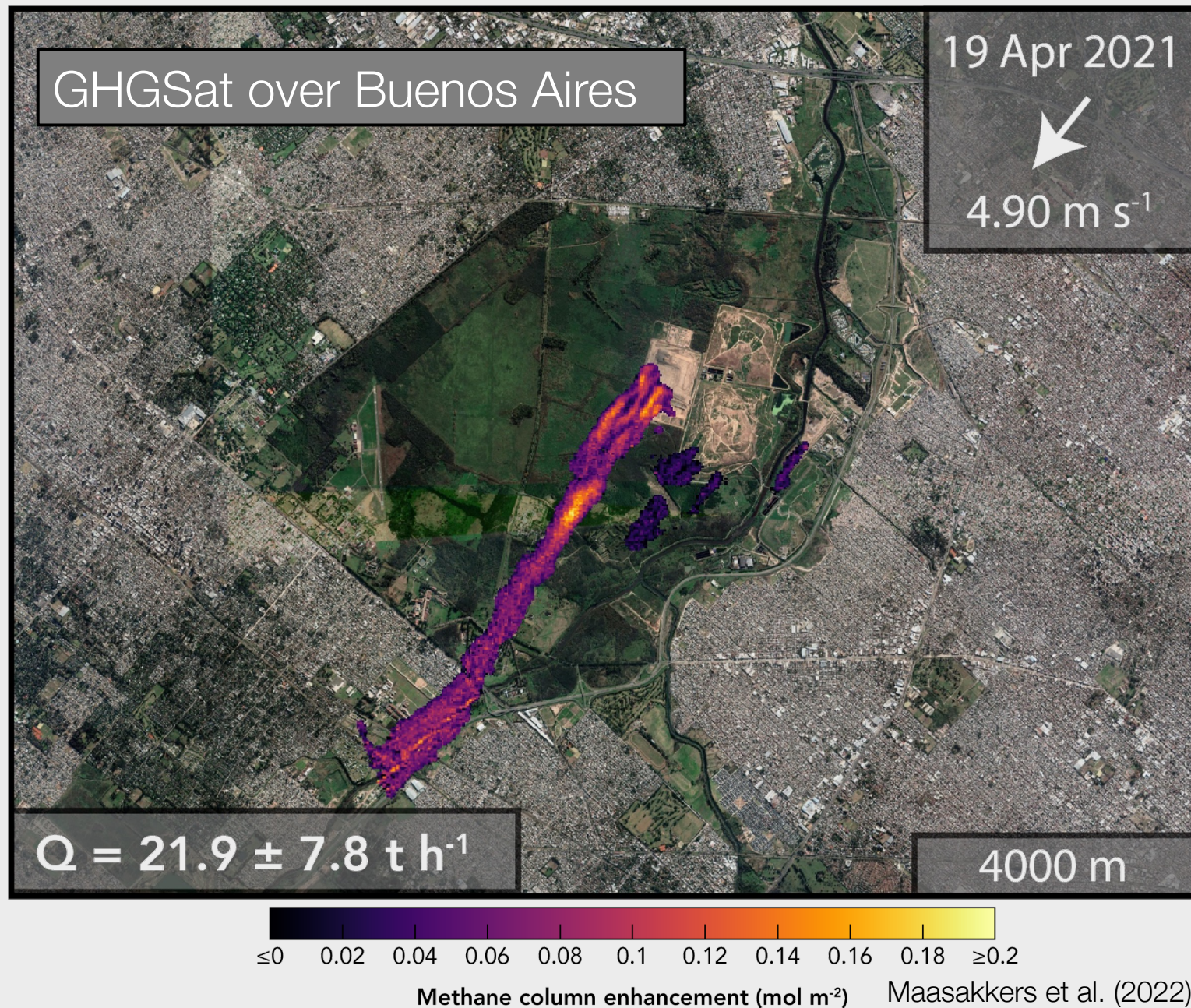
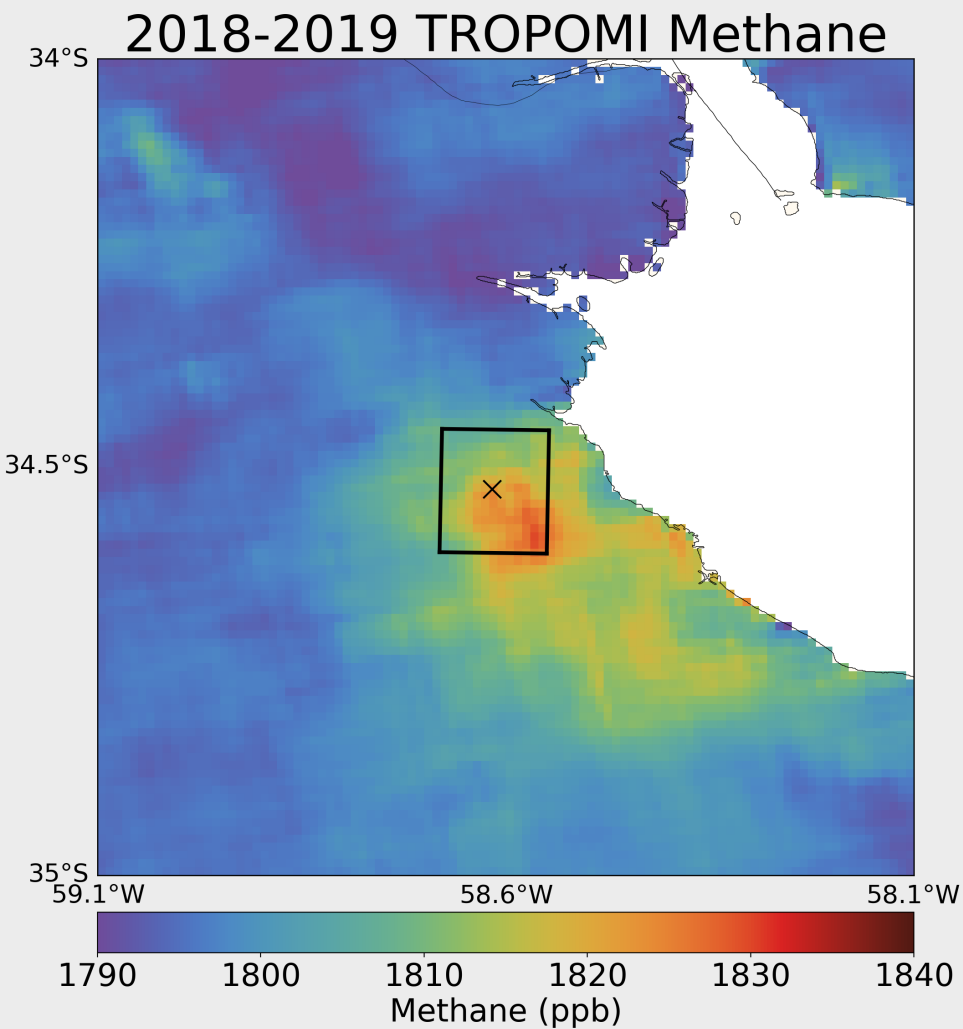
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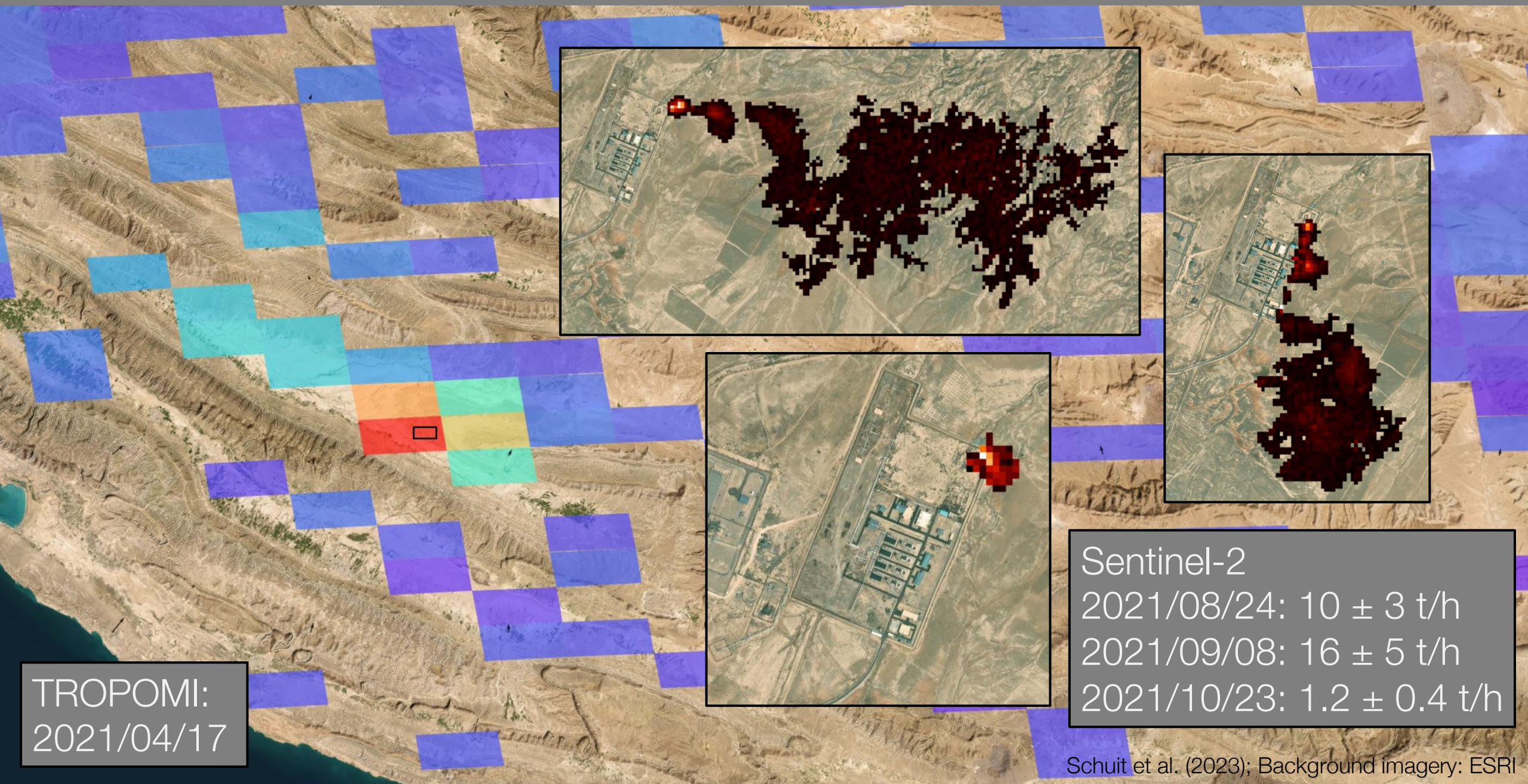


Zooming in on hot spots with high-resolution observations

Guided by TROPOMI data, GHGSat reveals large emissions from a landfill in Buenos Aires.



Part of our MARS contribution, we have compiled a list of ~190 hot spots

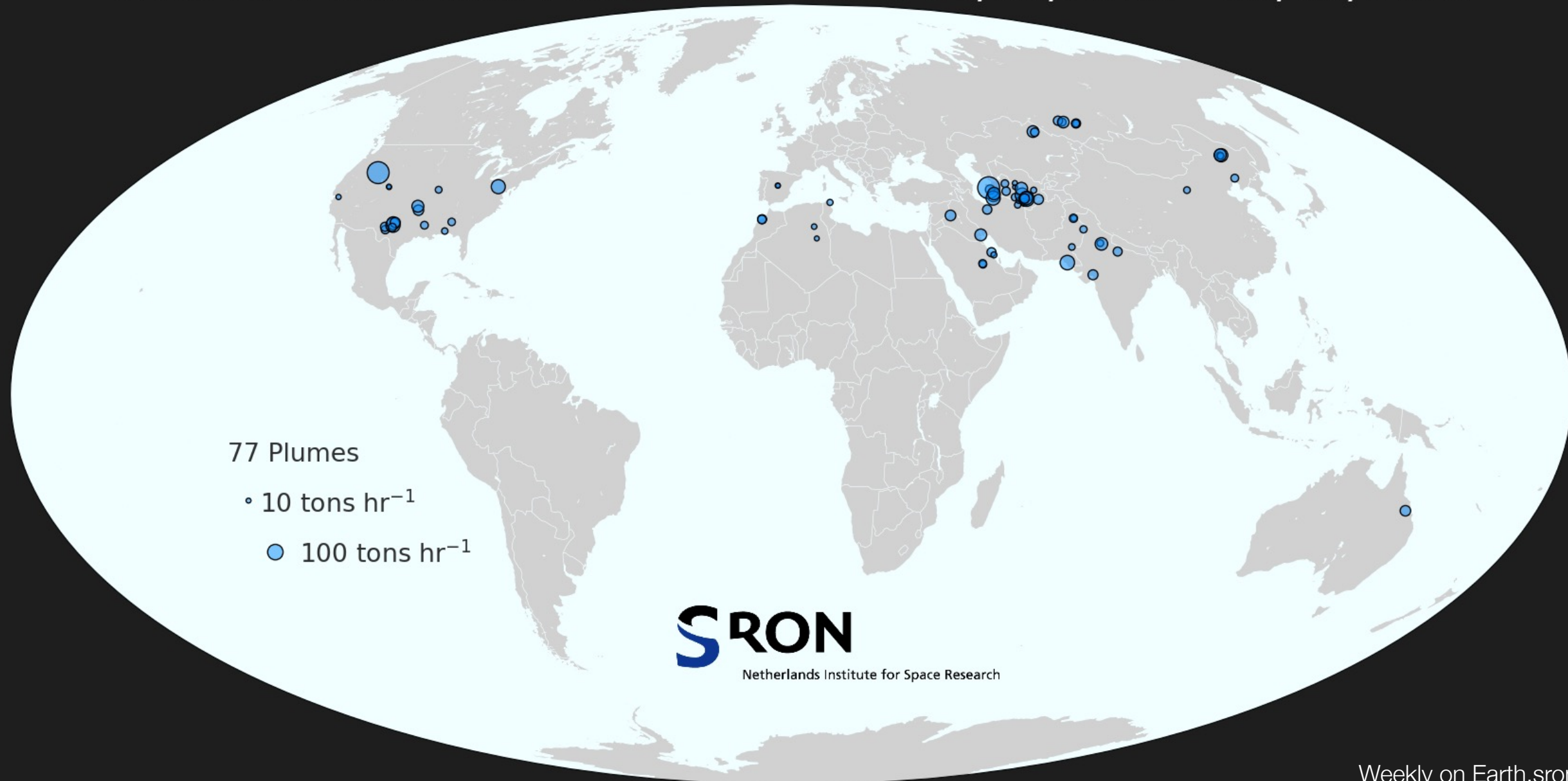


TROPOMI:
2021/04/17

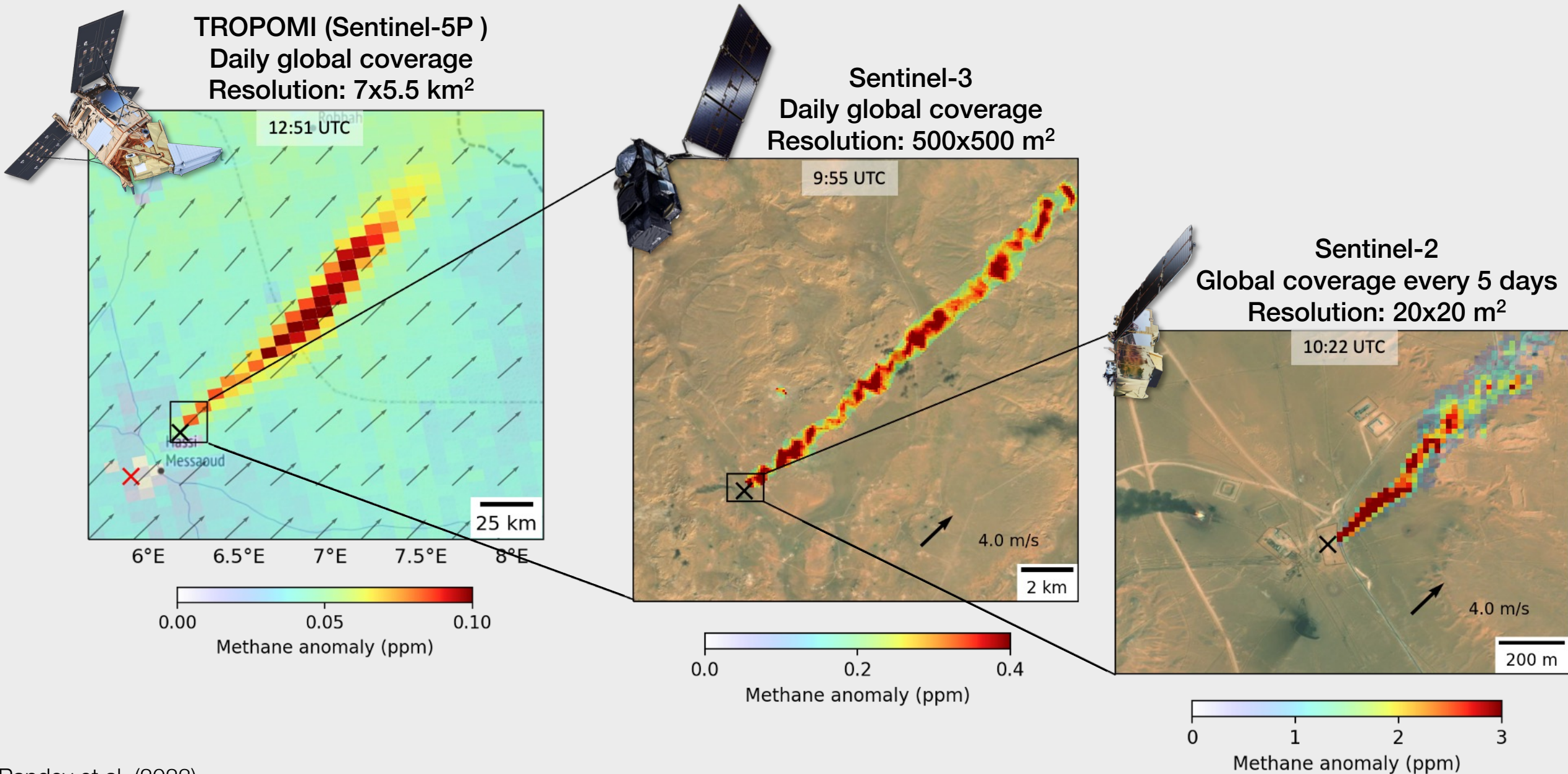
Sentinel-2
2021/08/24: 10 ± 3 t/h
2021/09/08: 16 ± 5 t/h
2021/10/23: 1.2 ± 0.4 t/h

We can also explore transient emissions using (mainly) land imagers

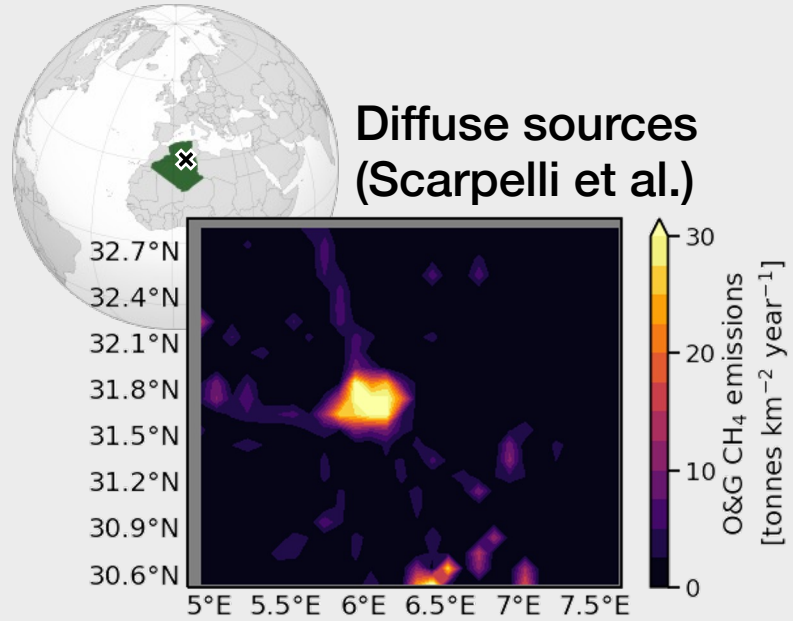
TROPOMI-detected Methane Plumes 07/10/2023 - 13/10/2023



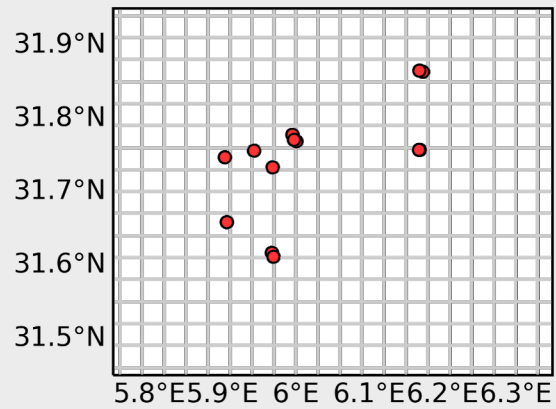
Using Sentinel-3 together with Sentinel-5p and Sentinel-2



Integration of information on different scales in inverse analyses

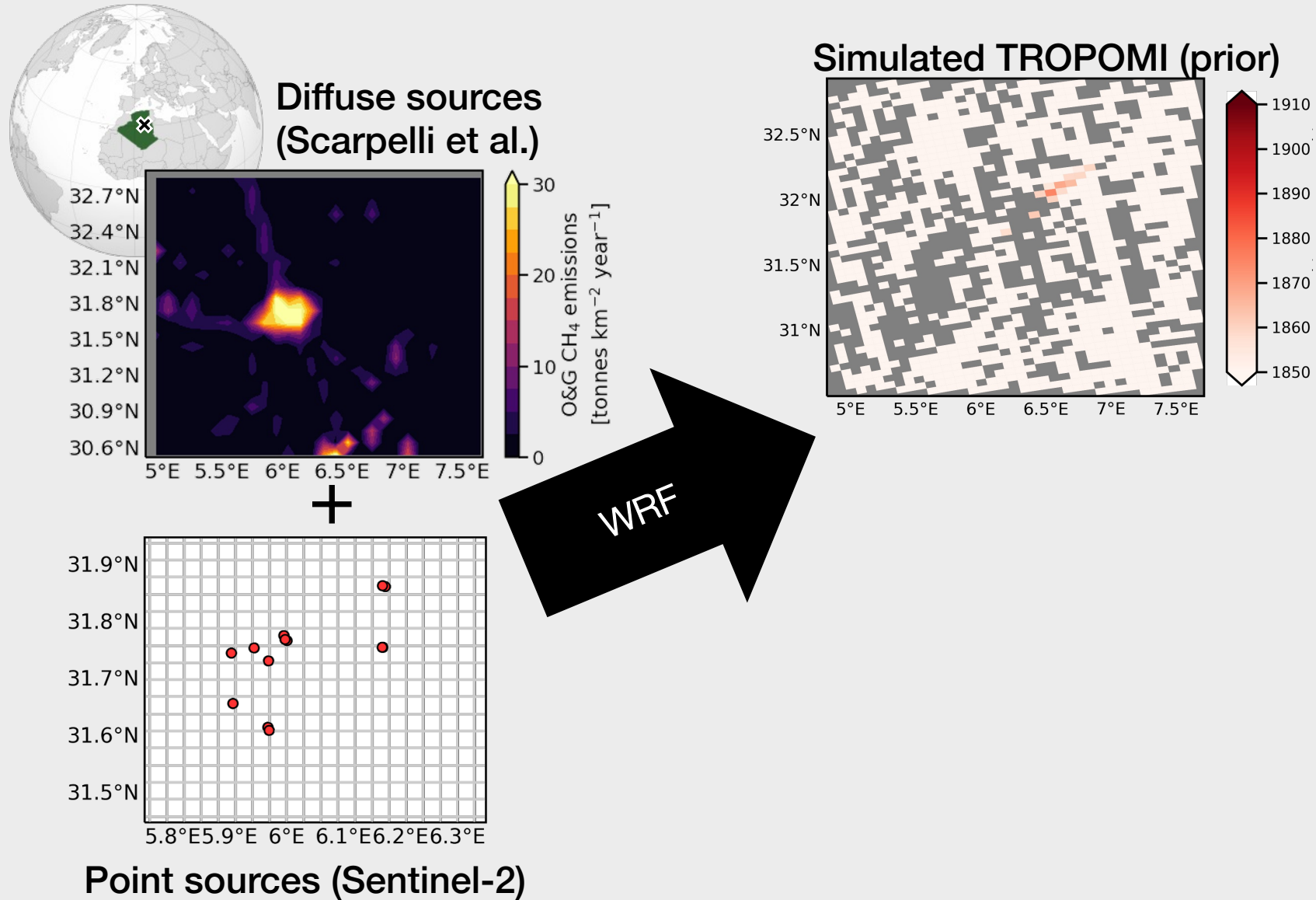


+

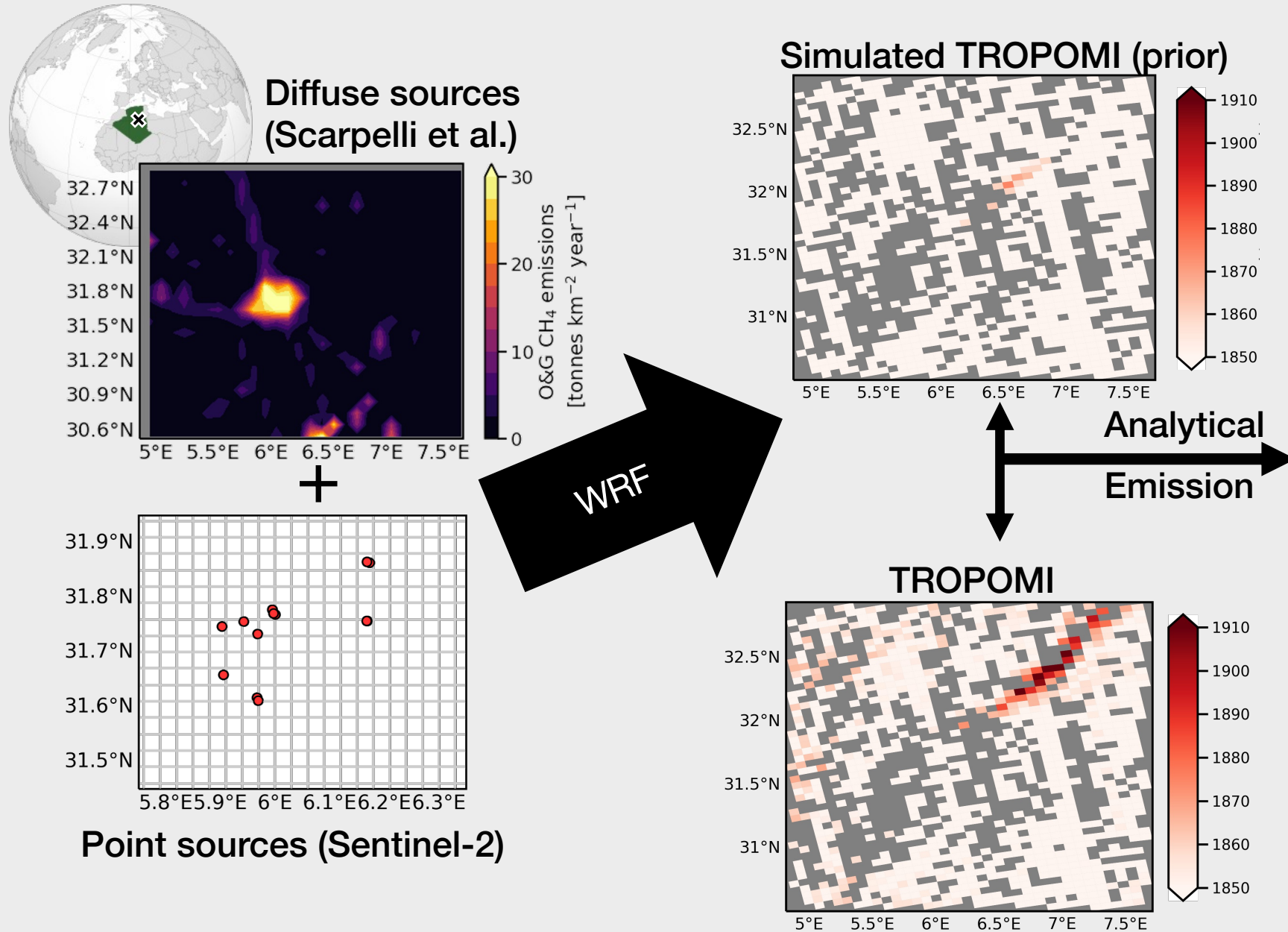


Point sources (Sentinel-2)

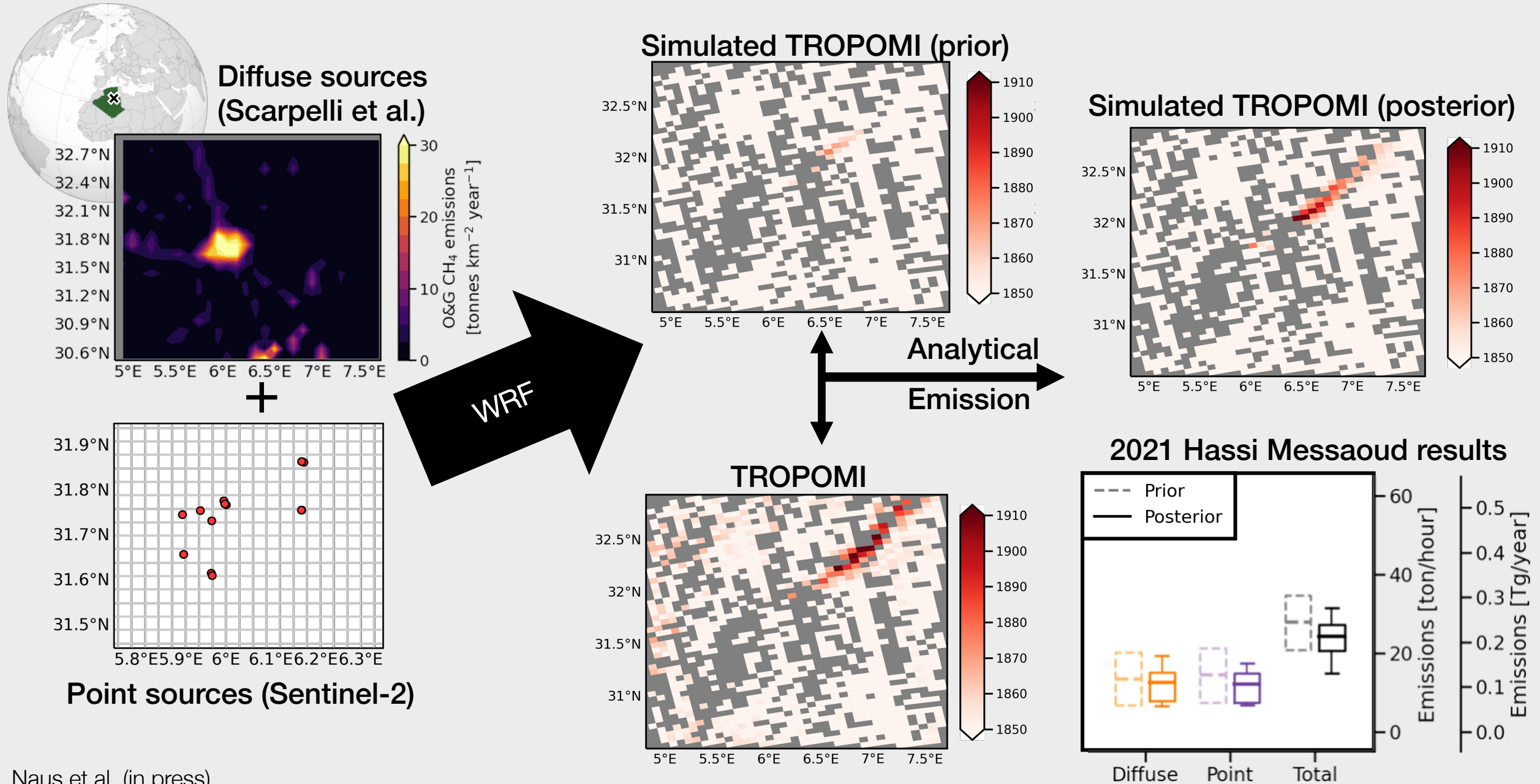
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