Storm
Demo

Guerova
et al.

GNSS RO

SW BG
July 2014
May 2019

Conclusions

# Combined space- and ground-based GNSS monitoring of two severe hailstorm cases in Bulgaria

Elbieta Lasota [1], Martin Slavchev [2], Guergana Guerova [2], Witold Rohm [1], Jan Kapon [1]

[1] Wrocaw University of Environmental and Life Sciences, Poland
[2] Department of Meteorology and Geophysics, Sofia University, Bulgaria

4 Seminar "Physics and chemistry of the Earth, atmosphere and ocean"
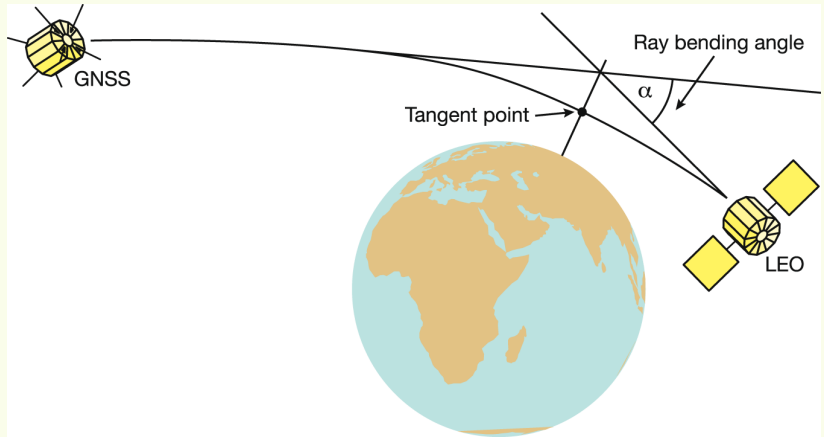9-11 October 2022, Bania, Bulgaria

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# GNSS radio occultation



Figure from: Gleisner et al. Monitoring global climate change using GNSS radio occultation. npj Clim Atmos Sci 5, 6 (2022).

# Severe weather in Bulgaria: Hail Storm 8 July 2014
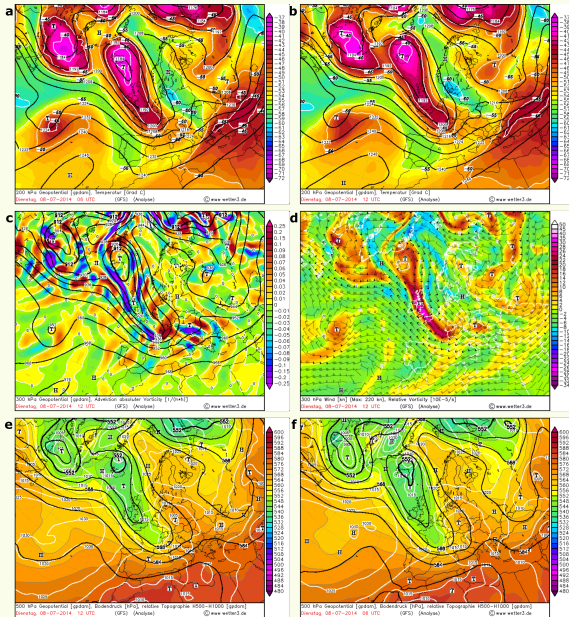
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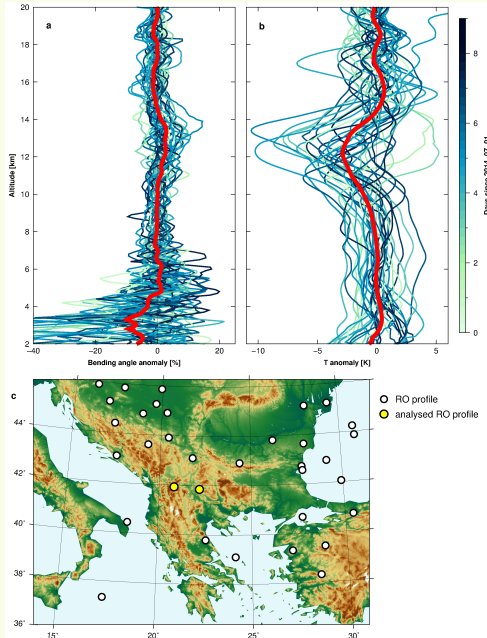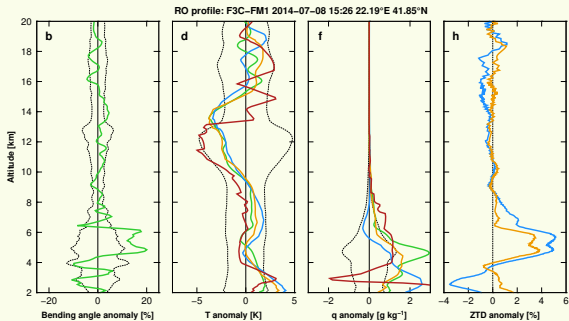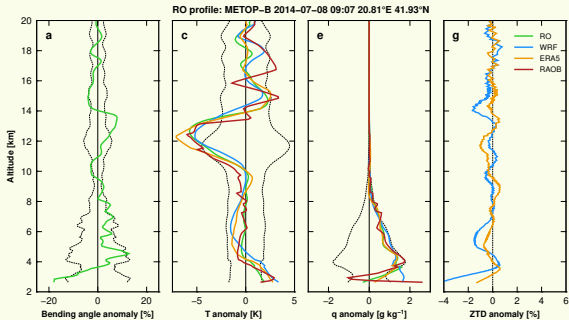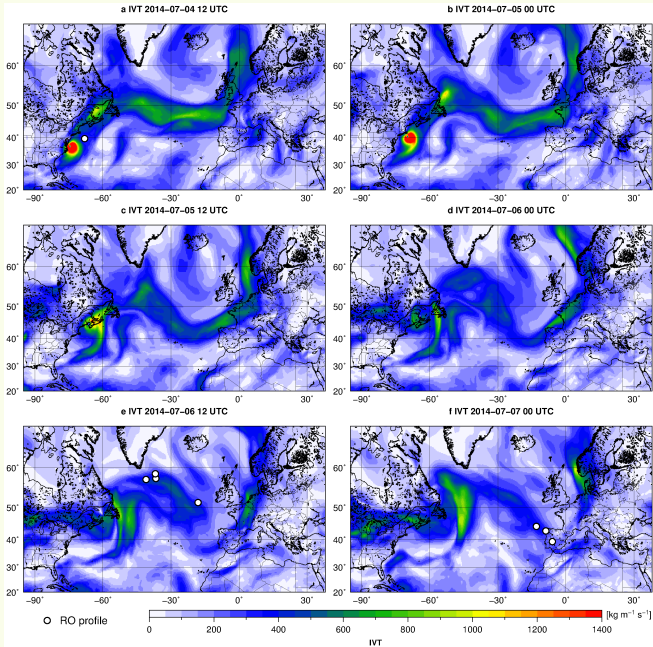
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# Severe weather in Bulgaria: Hail Storm 8 July 2014



RO profile: METOP-B 2014-07-08 09:07 20.81°E 41.93°N

RO profile: F3C-FM1 2014-07-08 15:26 22.19°E 41.85°N

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# Severe weather in Bulgaria: Hail Storm 16 May 2019
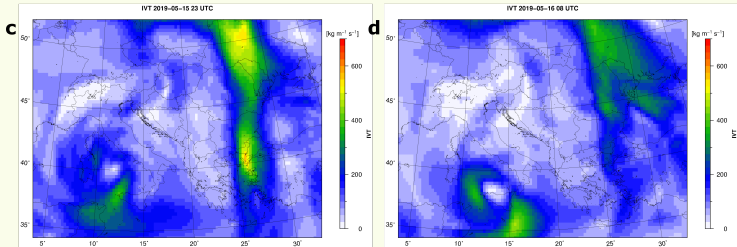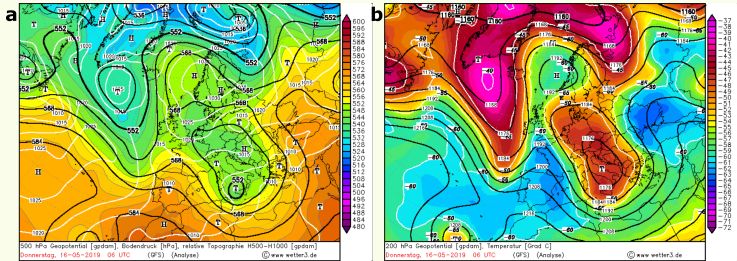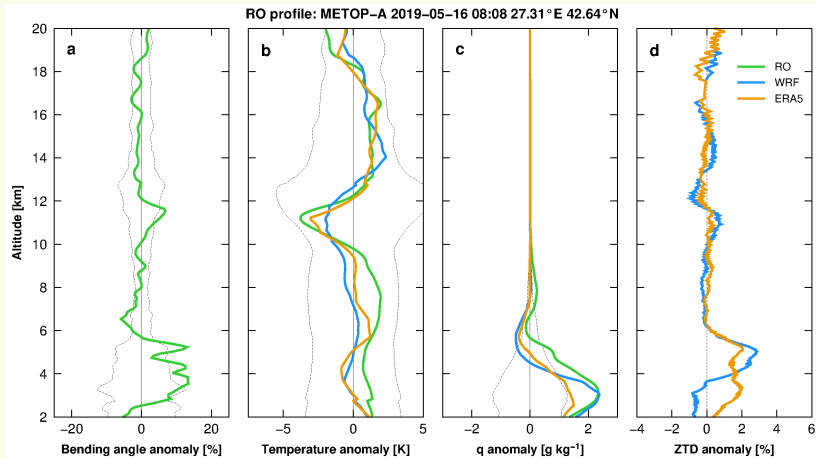
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# Severe weather in Bulgaria: Hail Storm 16 May 2019



RO profile: METOP–A 2019-05-16 08:08 27.31°E 42.64°N

- Further details in: Lasota, E., M. Slavchev, G. Guerova, W. Rohm, and J. Kaplon, Combined space- and ground-based GNSS monitoring of two severe hailstorm cases in Bulgaria. Journal of Atmospheric and Oceanic Technology, doi:10.1175/JTECH-D-21-0100.1, 39, 5, 649665, 2022.

**THANK YOU!**