Performance of NWP models in complex terrain

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Question: Do NWP models perform better or worse in mountainous terrain ?

Only very few papers are dealing with model performance in complex terrain specifically.

Hypothesis: E.g., Luv of mountain ranges helps to “fix” precipitation areas “in place” and NWP models perform better.

Verify NWP-model at station locations in and around Alpine Region

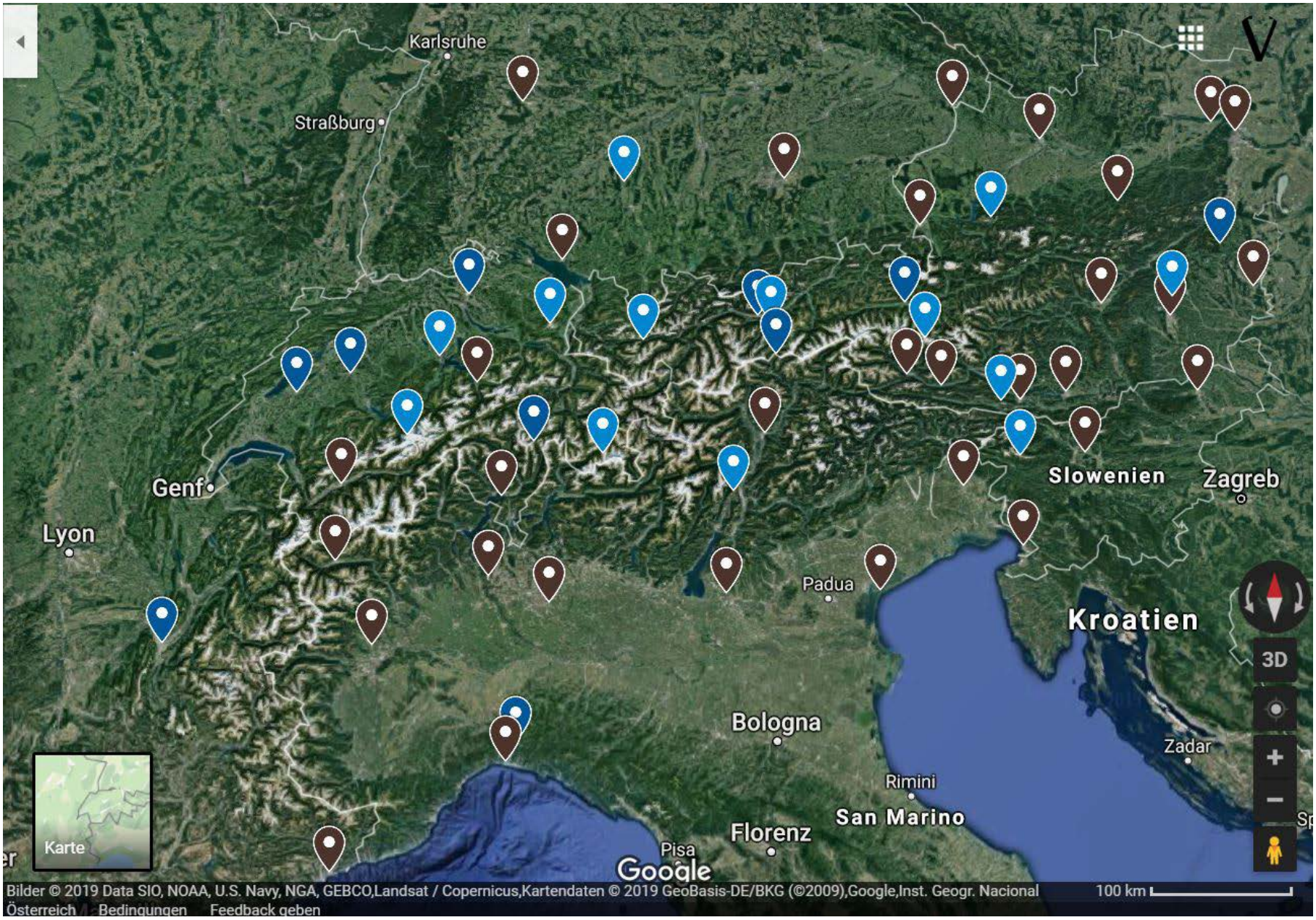
Start with 55 SYNOP stations:

- 13 Mountain stations
- 10 Foreland stations
- 32 Valley stations

Including inner-alpine dry valley stations
Including close-by mountain and valley stations

NWP-Model:
ECMWF in the current version

Data period:
8 March 2016 – 28 February 2019


Karlsruhe
Straßburg
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Slowenien
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Österreich
Bedingungen
Feedback geben
100 km

- Extension of time period possible
- **Inclusion of additional NWP-model results possible**
- Rather simple verification scores
- Stratify verification according to
  - Foreland vs. Mountain stations
  - Inneralpine dry valley stations
  - Close-by mountains and valley stations
  - Weather situation

Overcome two problems of MesoVICT

- Course resolution of VERA
- Old cases