

Verif 1.0

A python package for forecast verification

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THE UNIVERSITY
OF BRITISH COLUMBIA

Improving products using verification



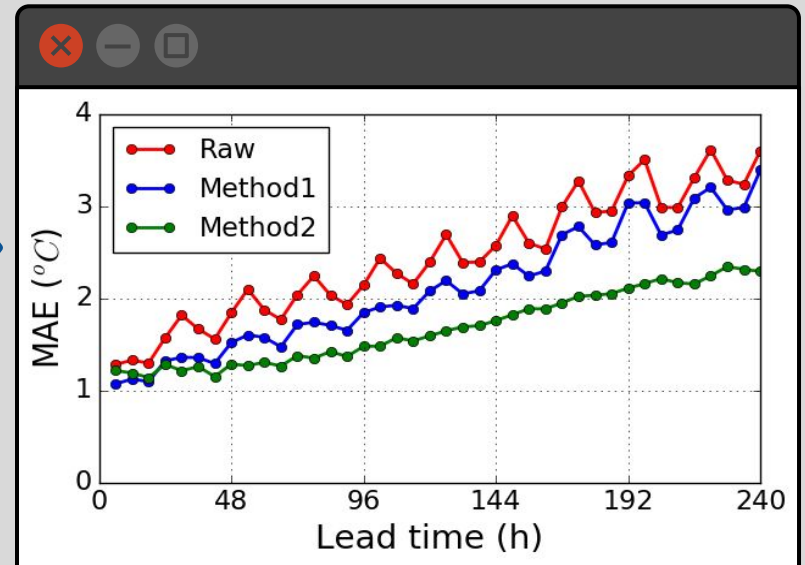
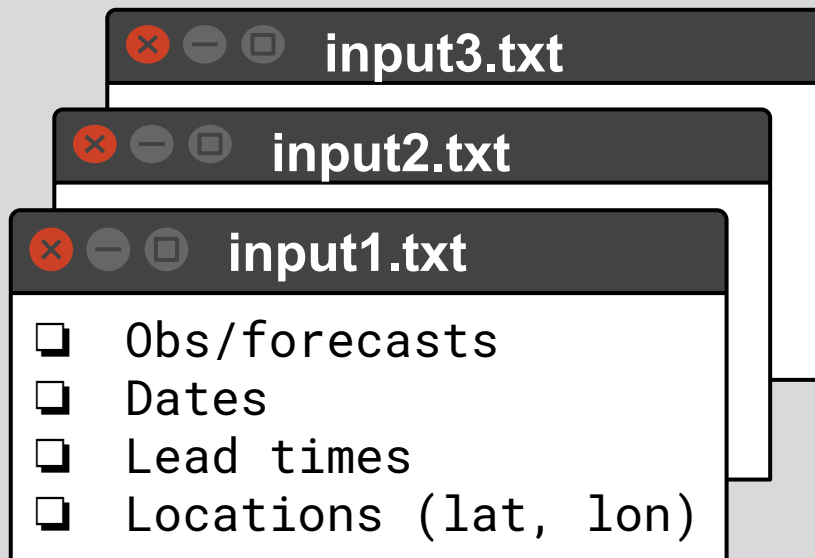
Verif: A forecast verification package

- ❏ Open-source command-line tool in python
- ❏ Forecast and observations for point locations
- ❏ 80 metrics/diagrams and 60 command-line flags

Verif: A forecast verification package

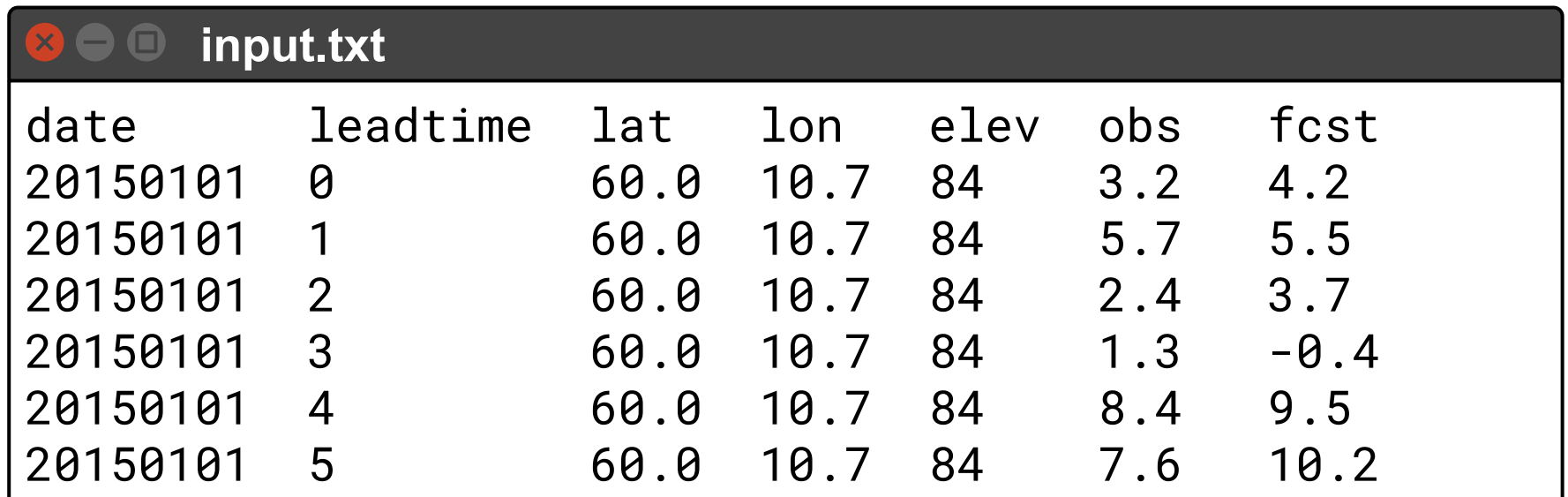
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[~]$ verif input*.txt -m mae [options]
```



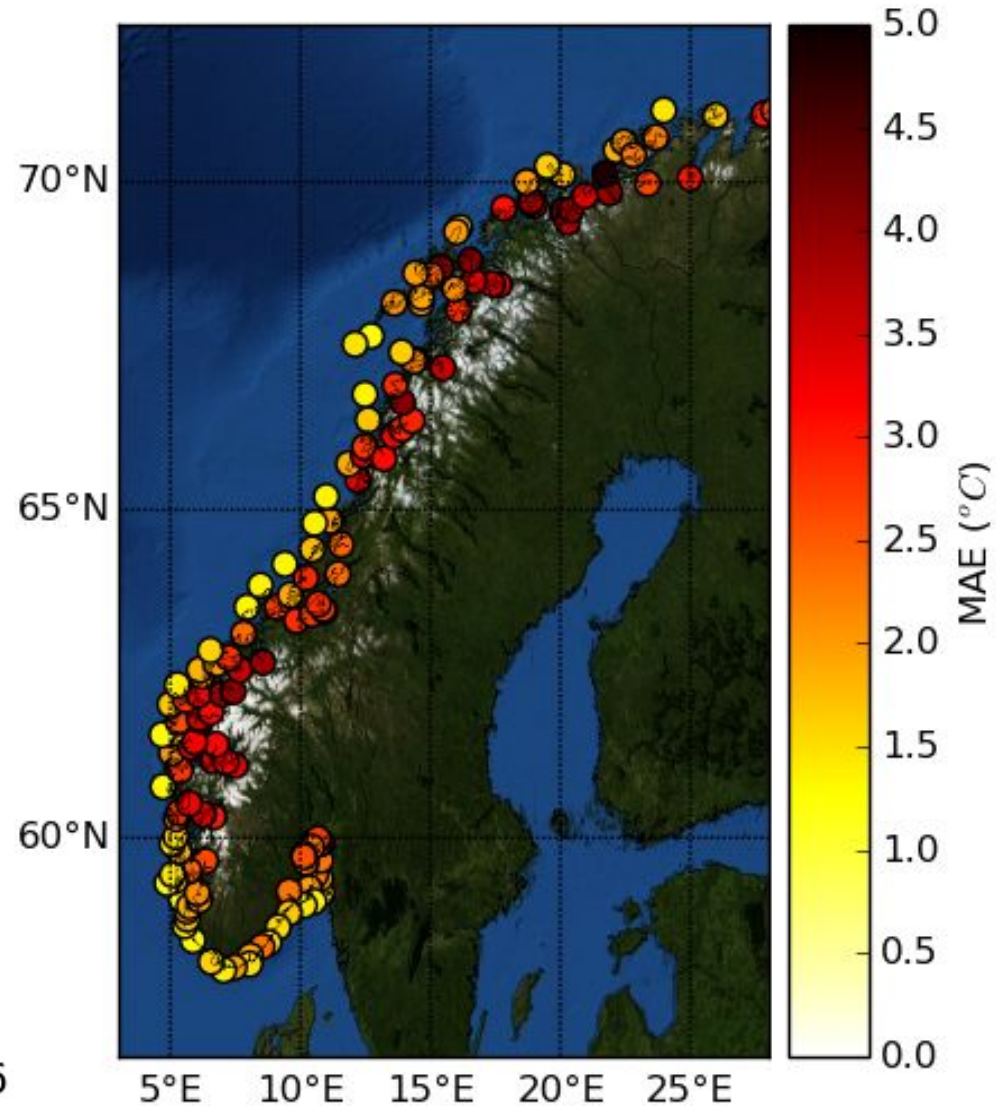
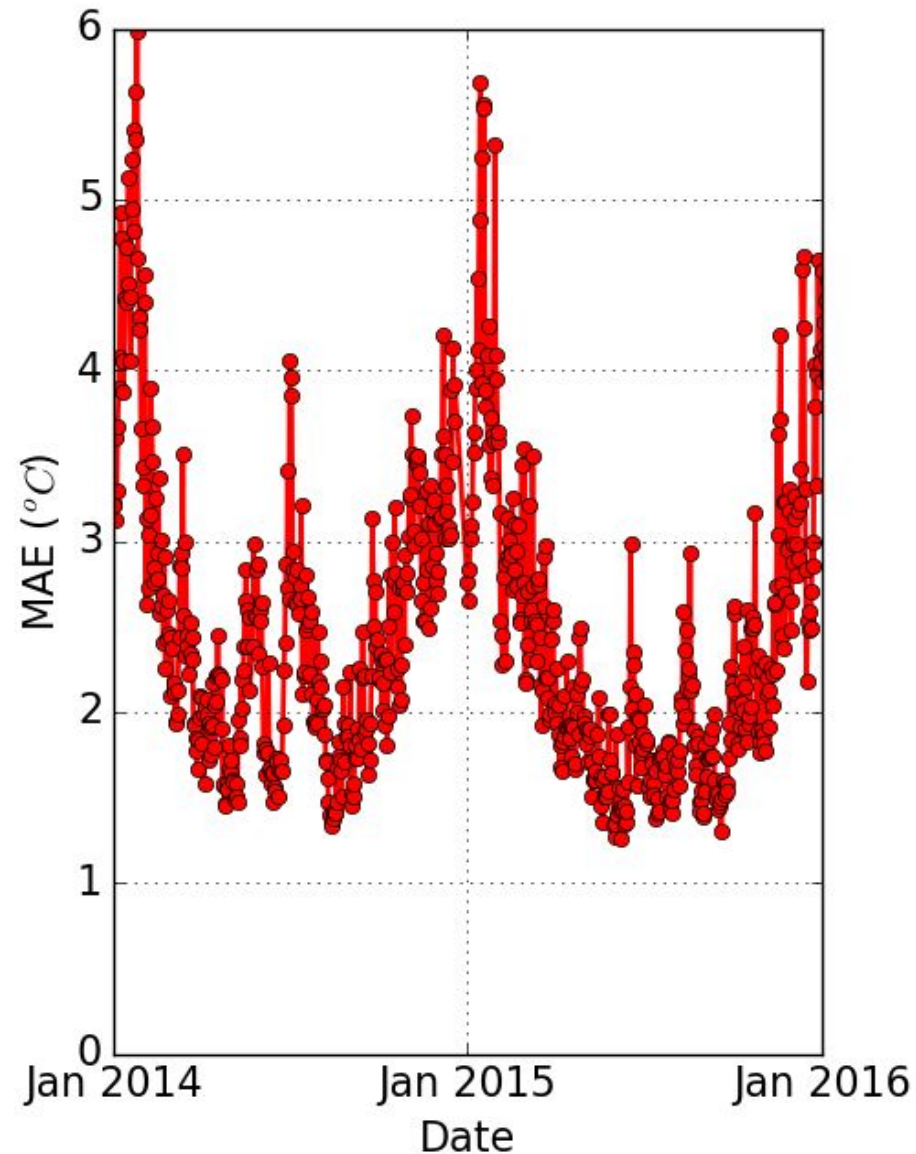
Verif: A forecast verification package

- ❏ Open-source command-line tool in python
- ❏ Forecast and observations for point locations
- ❏ 80 metrics/diagrams and 60 command-line flags
- ❏ Text or NetCDF format



date	leadtime	lat	lon	elev	obs	fcst
20150101	0	60.0	10.7	84	3.2	4.2
20150101	1	60.0	10.7	84	5.7	5.5
20150101	2	60.0	10.7	84	2.4	3.7
20150101	3	60.0	10.7	84	1.3	-0.4
20150101	4	60.0	10.7	84	8.4	9.5
20150101	5	60.0	10.7	84	7.6	10.2

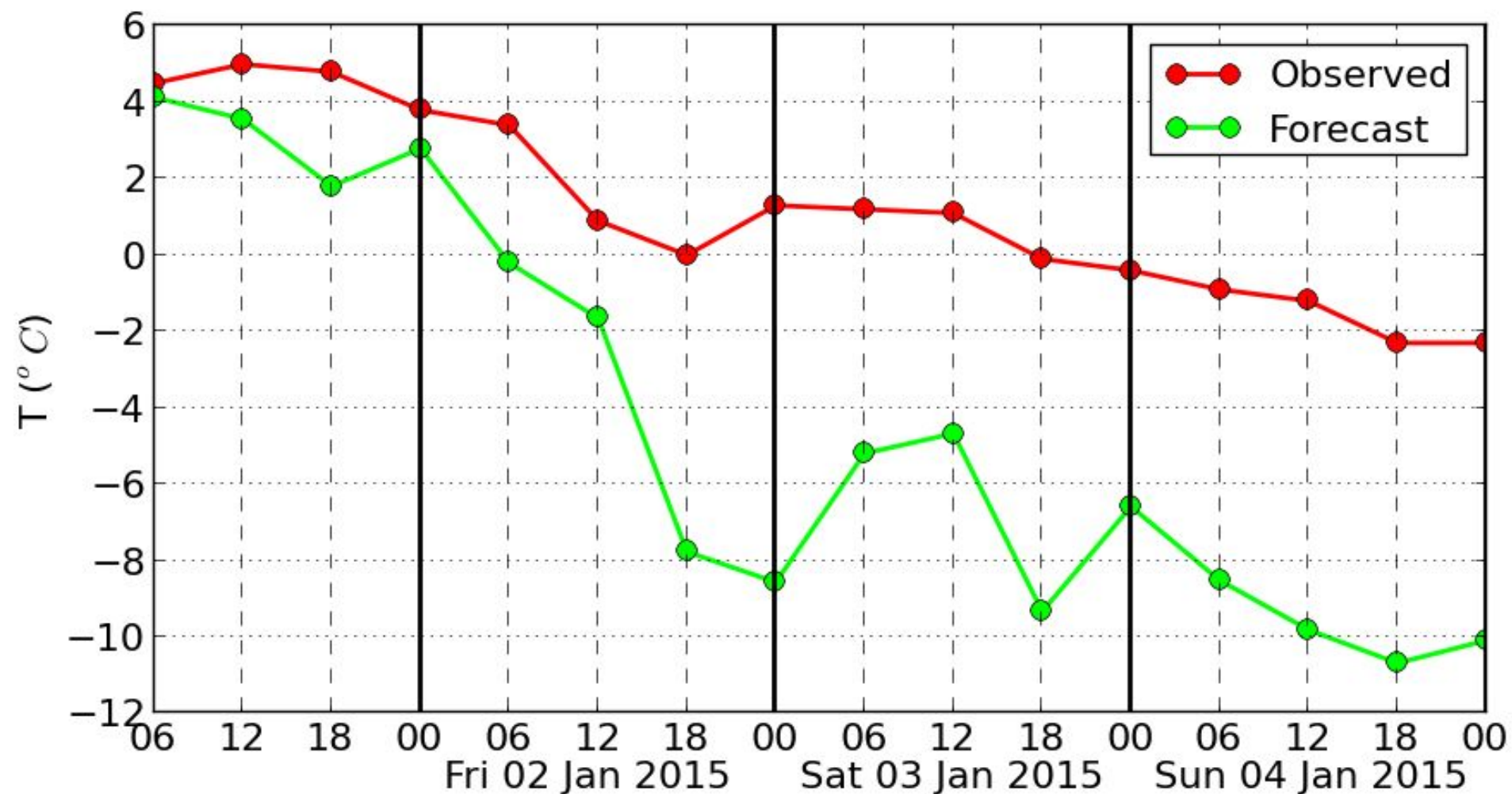
Scores across different dimension



See what users see

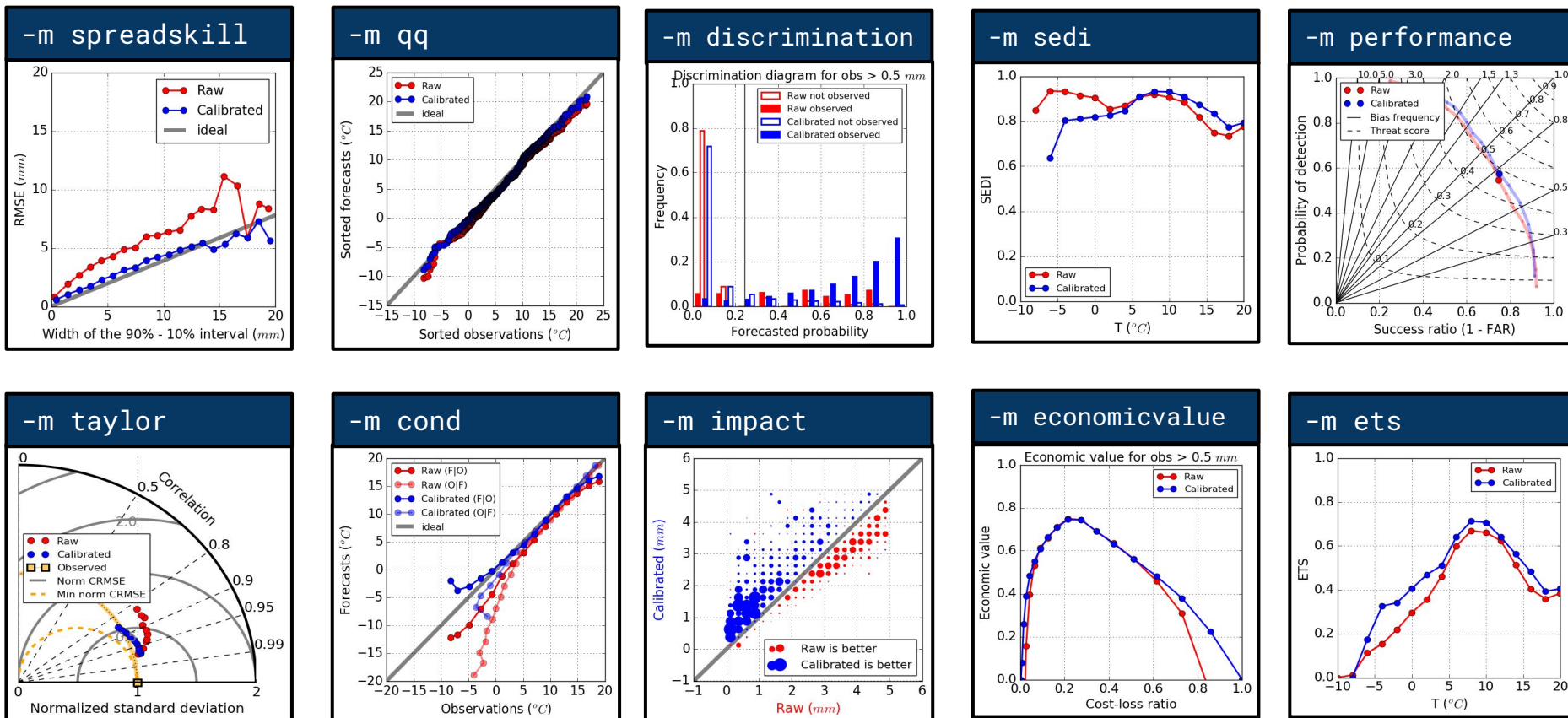
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- ☐ Meteograms for a specific date and location



Why so many metrics?

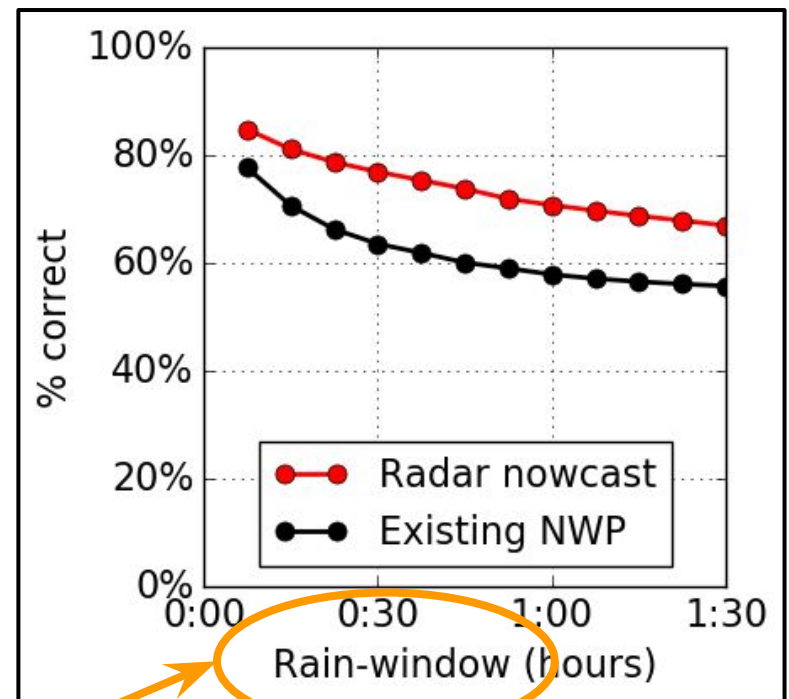
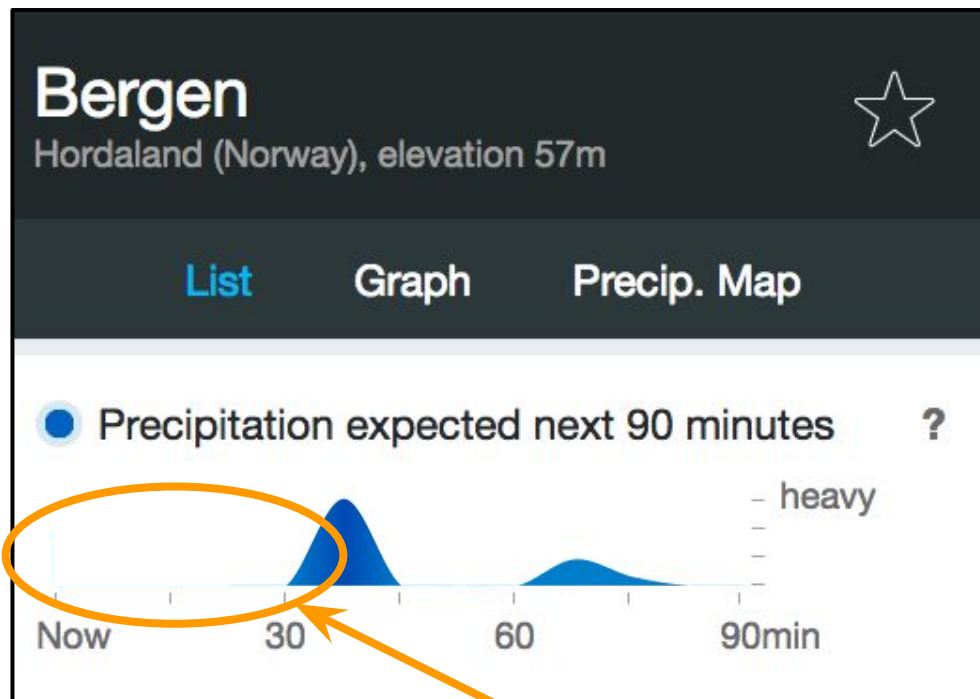
- ❑ A single metric does not give complete picture
- ❑ Diagnosing problems requires flexibility



Why so many metrics?

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- ❑ A single metric does not give complete picture
- ❑ Diagnosing problems requires flexibility
- ❑ End-users have different needs



Rain-window

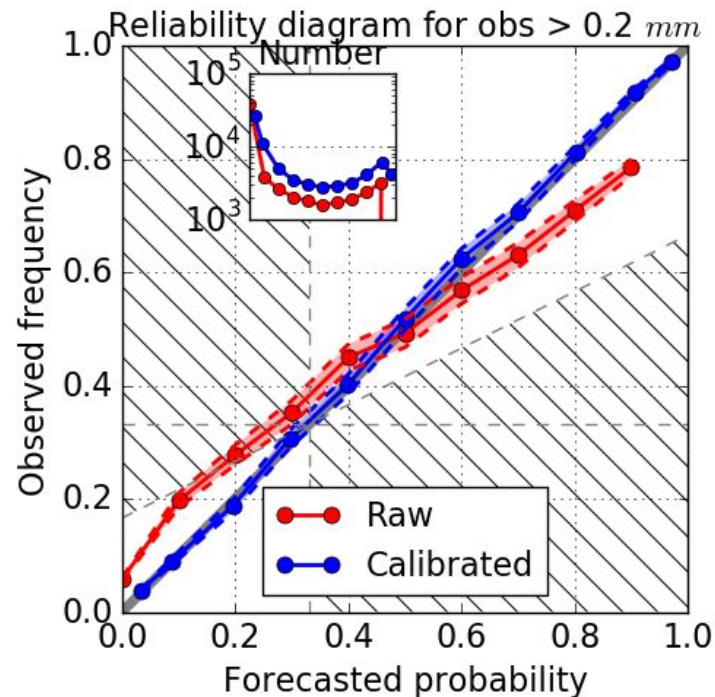
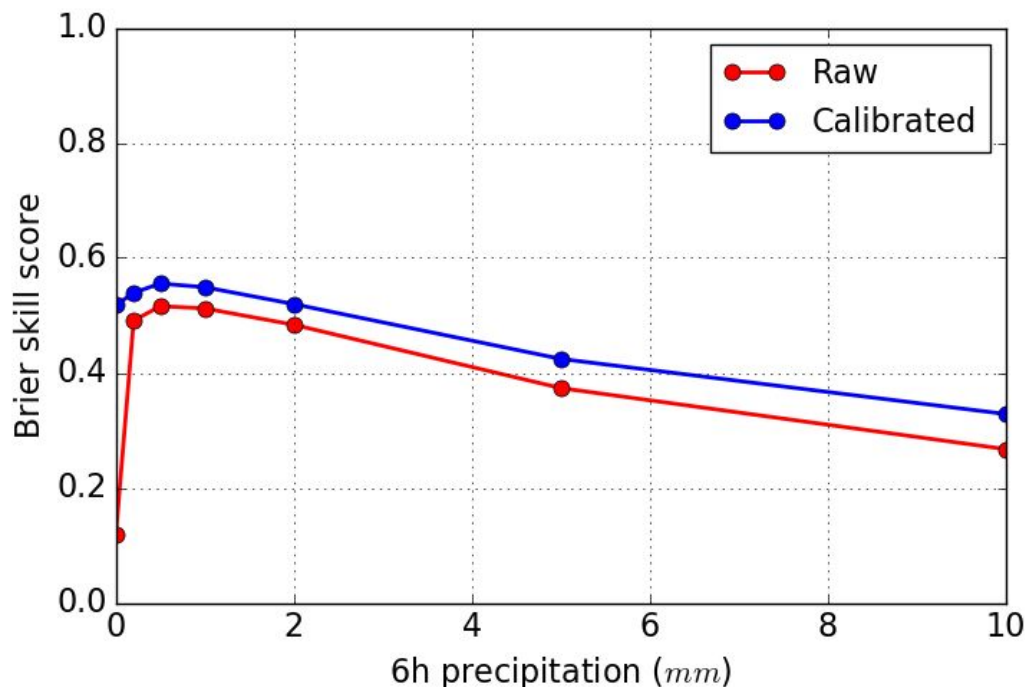
Probabilistic evaluation

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input.txt			
date	obs	p0.2	p0.5
20150101	2.1	0.31	0.61
20150102	0.0	0.84	0.92
20150103	0.0	0.74	0.89
20150104	3.7	0.15	0.27

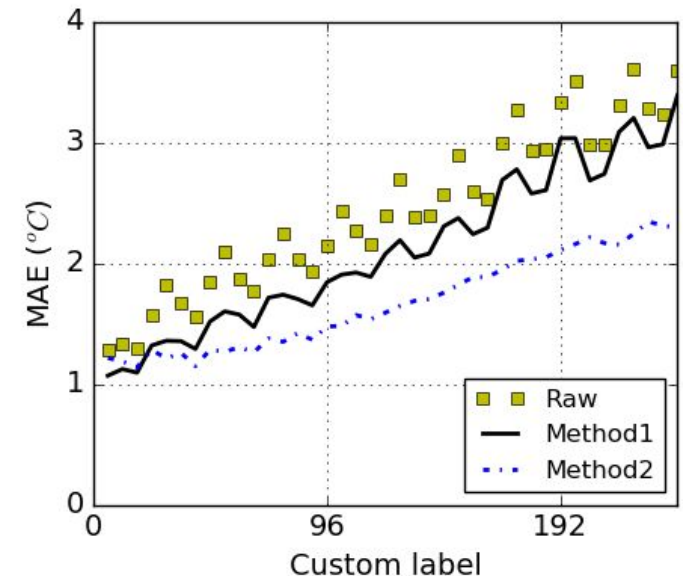
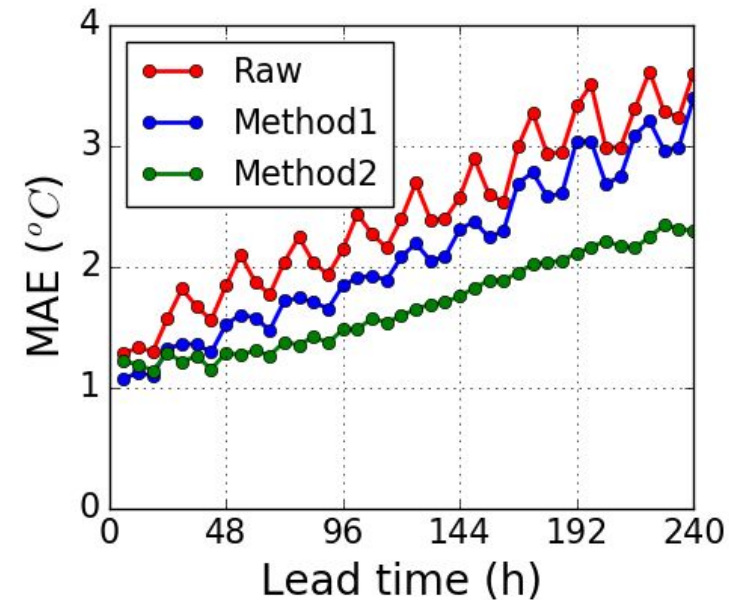
Probabilistic forecasts

E.g. CDF for 0.2 and 0.5 mm



Other features

- Customizing plots
 - Colors
 - Font sizes
 - axis labels
- Exporting to file
 - Image files
 - Text files
- Adding new metrics/diagrams



Summary

Check out:
github.com/WFRT/verif

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