

AMS Washington Forum 2018

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Beyond the 5 Day Forecast | Observations

Exploiting observational data

Data is:

- exploding in quantity
- improving in quality
- increasingly distributed
- increasingly diverse



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Exploiting observational data

Growth in Data is:

- HUGE opportunity
- HUGE challenge

So you think you're
parse-worthy?



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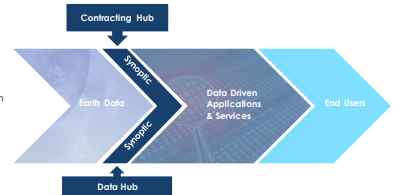
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Exploiting observational data

Growth in Data is:

- HUGE opportunity
- HUGE challenge

→ The value of data aggregation



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The true value of modern forecasts

Focus on the **weather** processes

→ Focus on the **customer** processes



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The true value of modern forecasts

Focus on the **weather** processes

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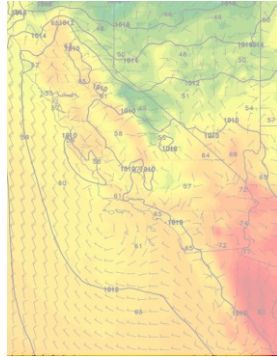


Improving modeling

- Increased computing power
 - higher resolutions
 - + more ensemble members
 - + better data assimilation
 - + more sophisticated physics
- Limiting factor: understanding what is actually happening at smaller and smaller scales
- Data is out there (and growing every day)

Need to:

- characterize new data as best as possible (metadata)
- improve data assimilation to exploit disparate (messy) data



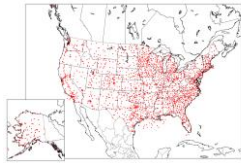
Leveraging Data Science To Create a Better Forecast

- Harness Observational Data:
- Identify relationships and improve physical understanding
 - Develop advanced error correction algorithms

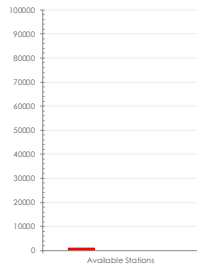
Data science enables us to have a subject matter expert everywhere



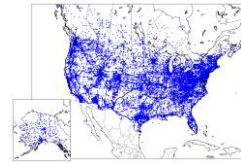
Observations



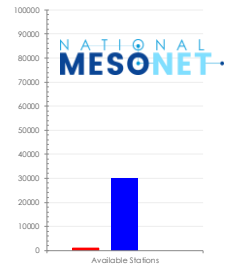
Federal observing network



Observations Observations



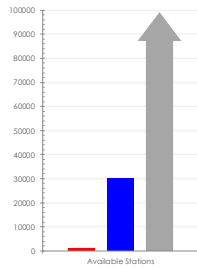
National Mesonet Program

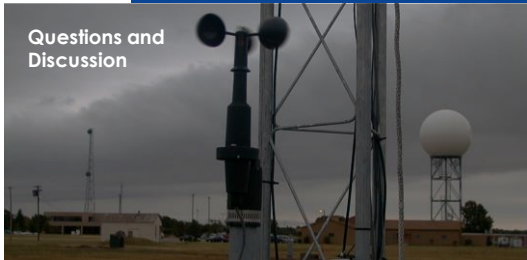


Observations Observations Observations



Home-Business Sensors





Questions and Discussion

Synoptic
SHARING EARTH'S DATA

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