

How Dusty a Future?

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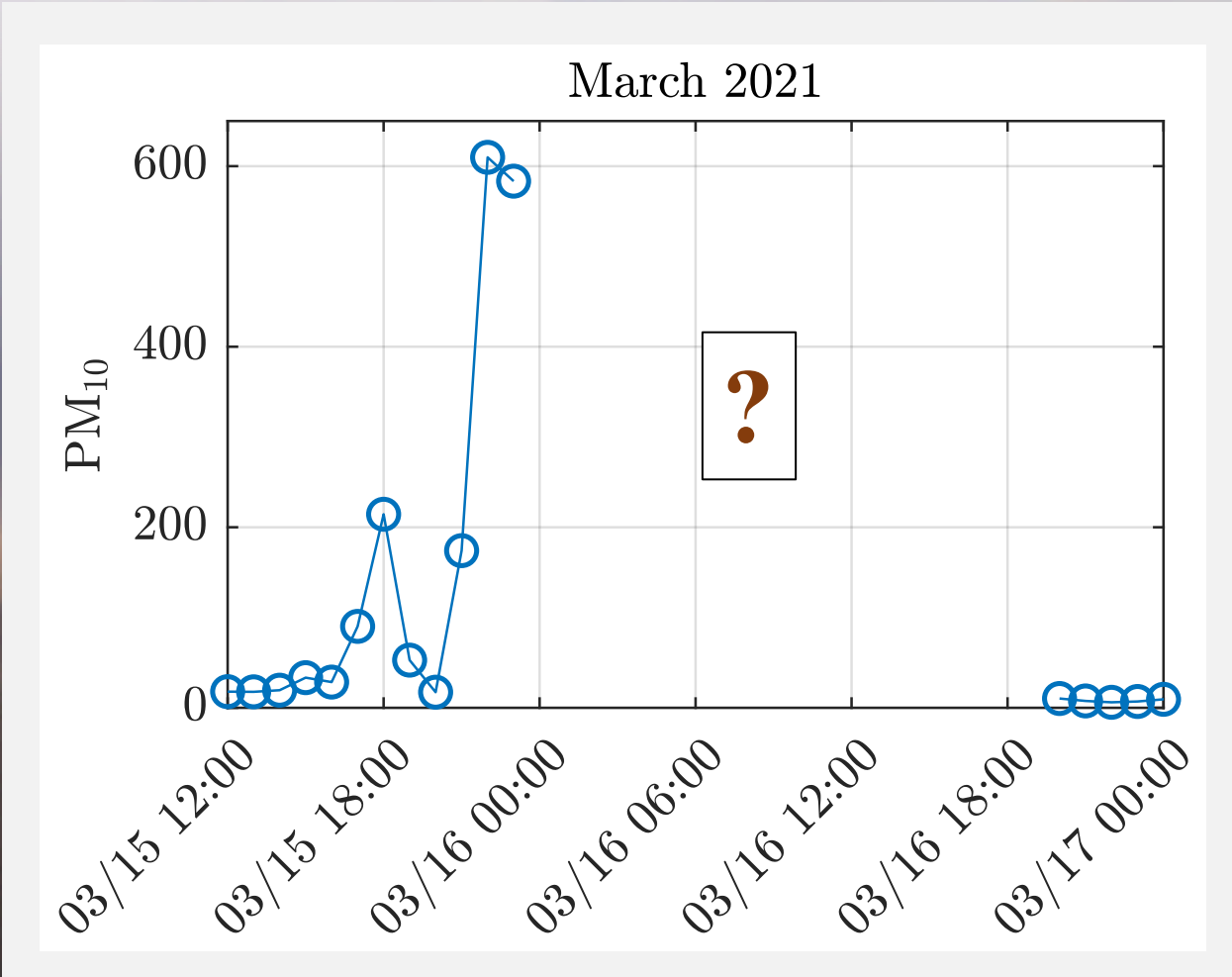
Past as Prologue
(Historical Observations)

Simulate and Forecast
(Computer Models)

Historical Observations – How Has PM_{10} Changed?



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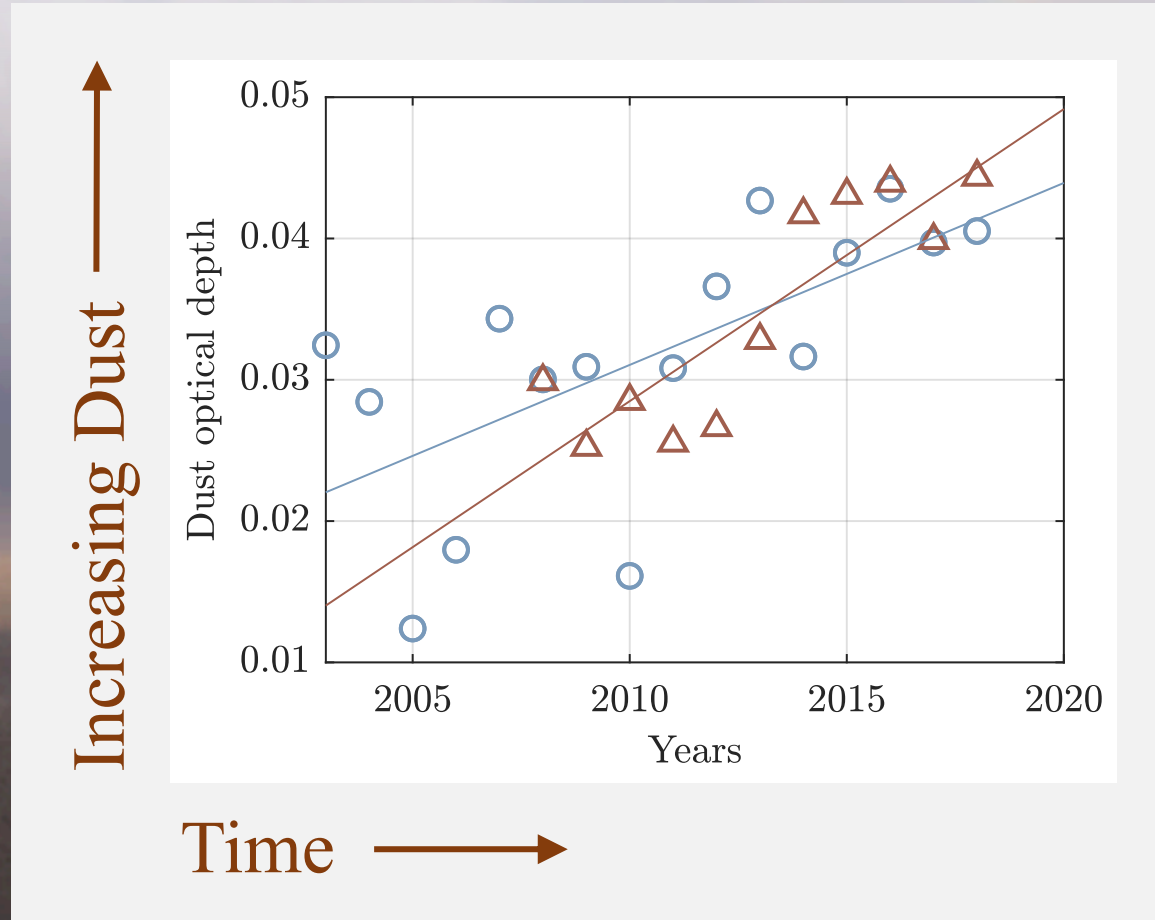


Historical Observations – Satellite Dust Estimates

March 15, 2021



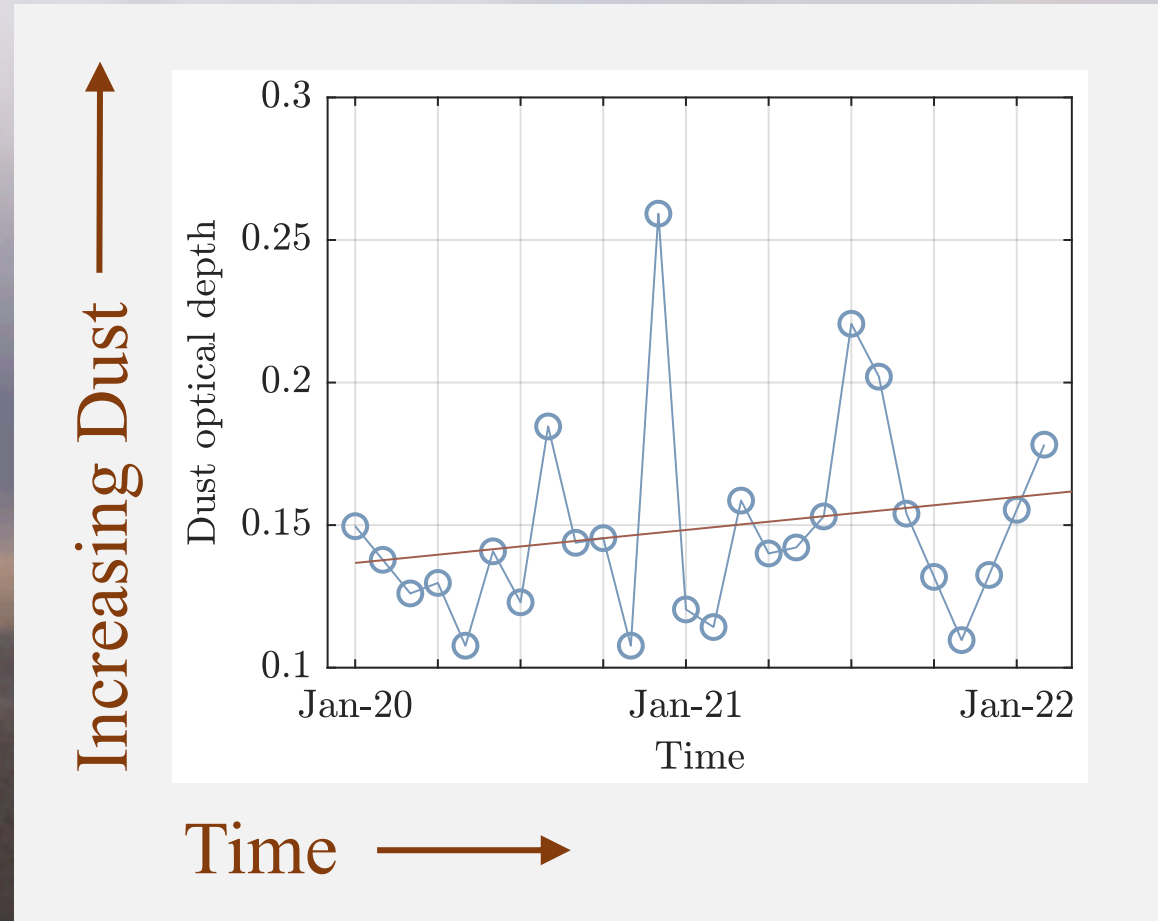
Historical Observations – Satellite Dust Estimates



Improving *Future* Historical Observations



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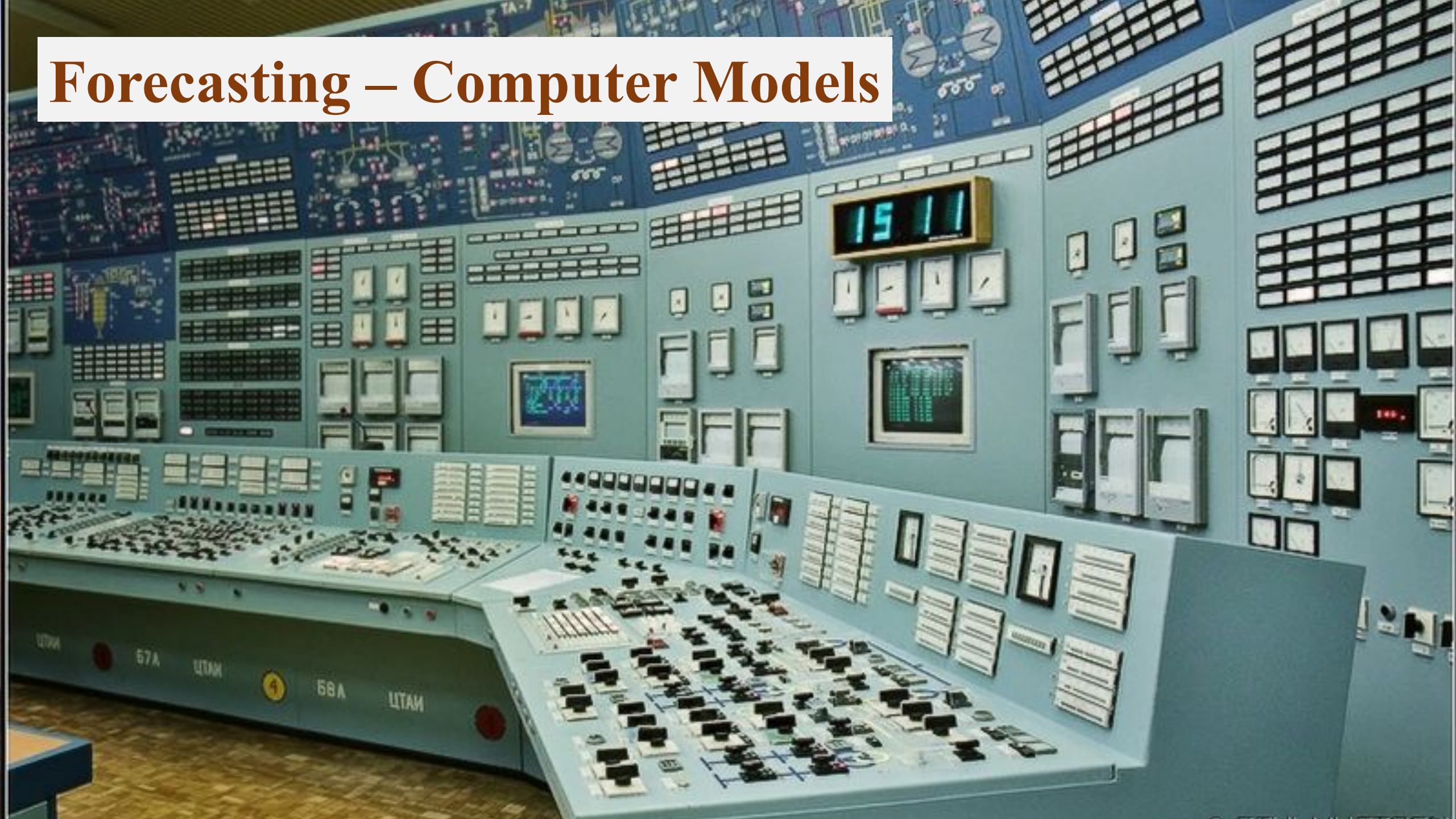


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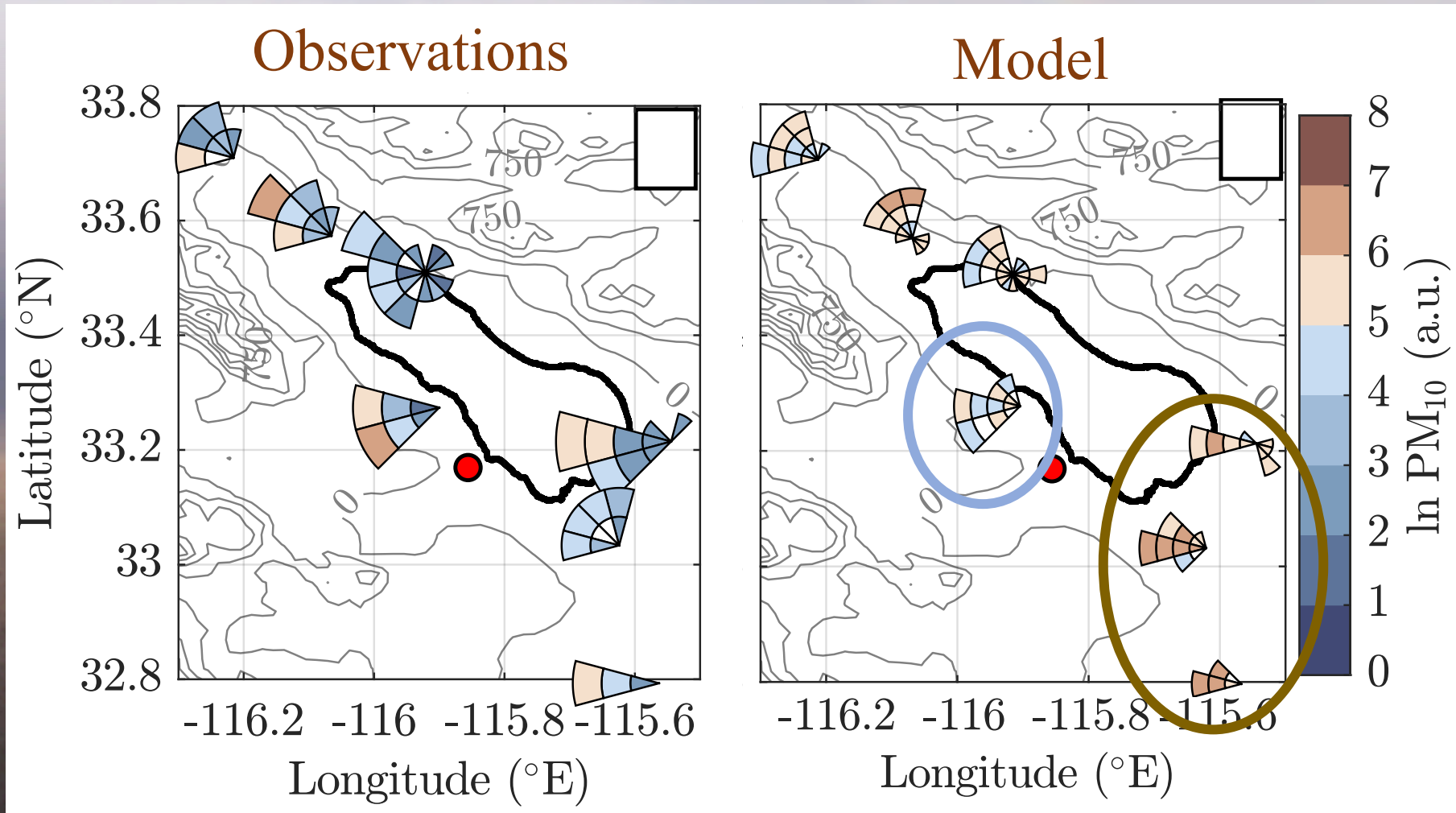
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Forecasting – Computer Models

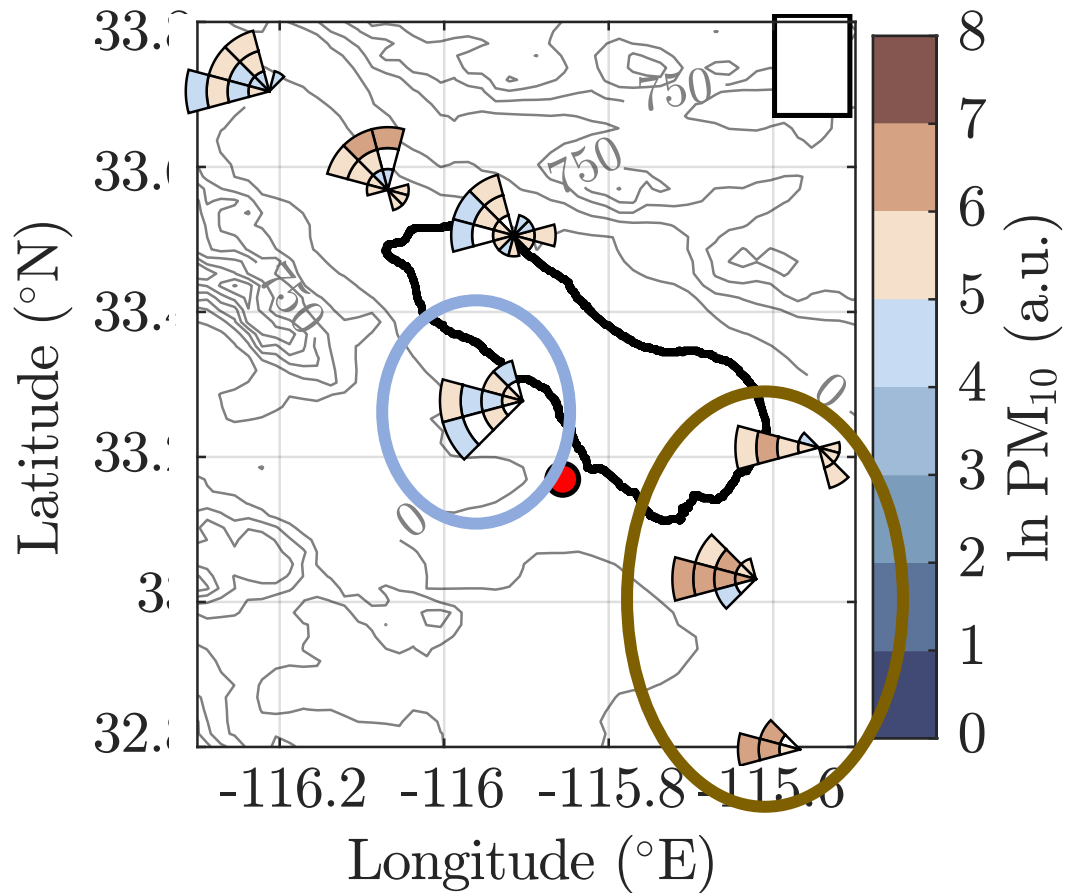


Forecasting – Computer Model

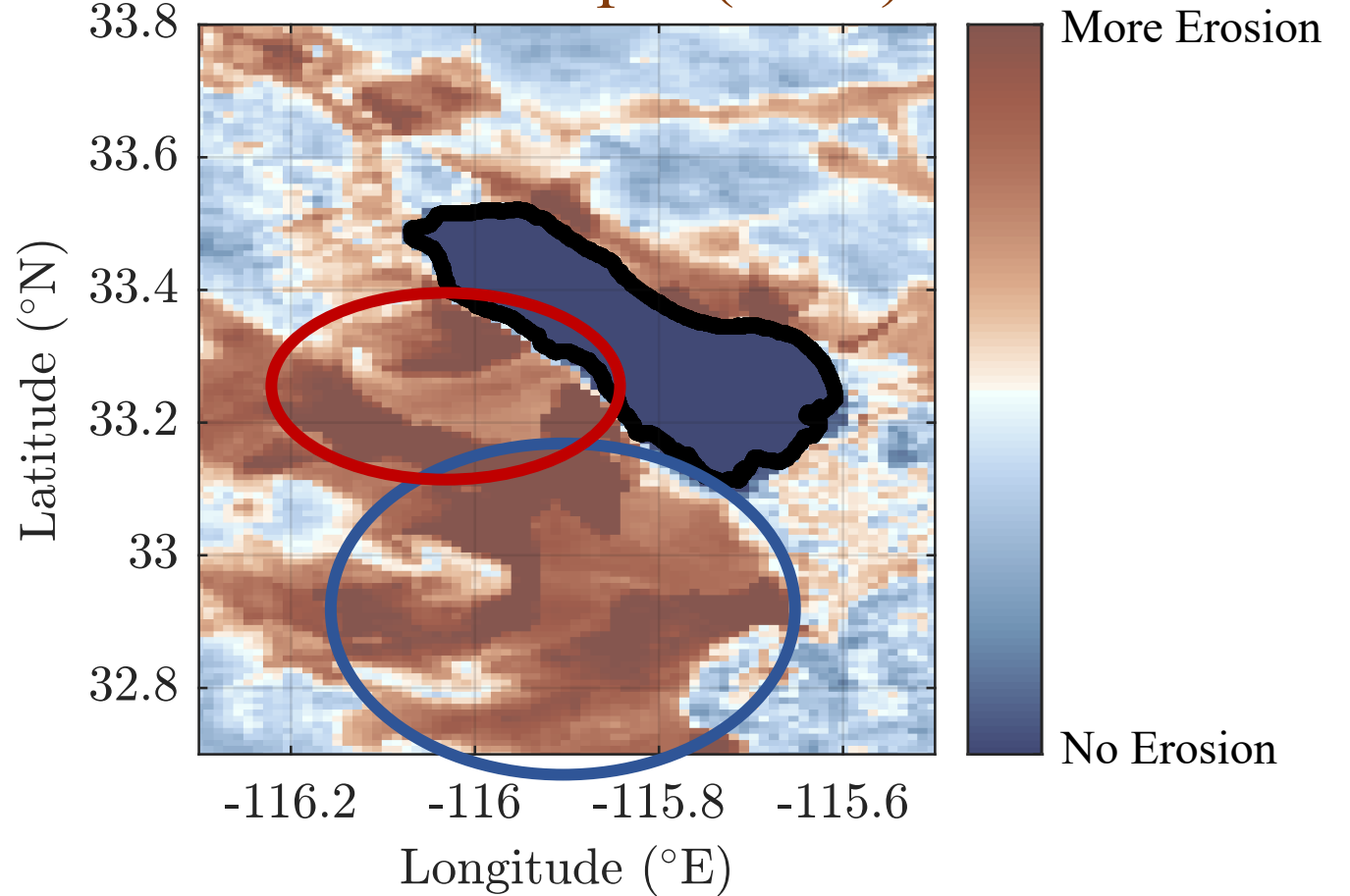


Forecasting – Computer Model

Model



Model Input (knob)



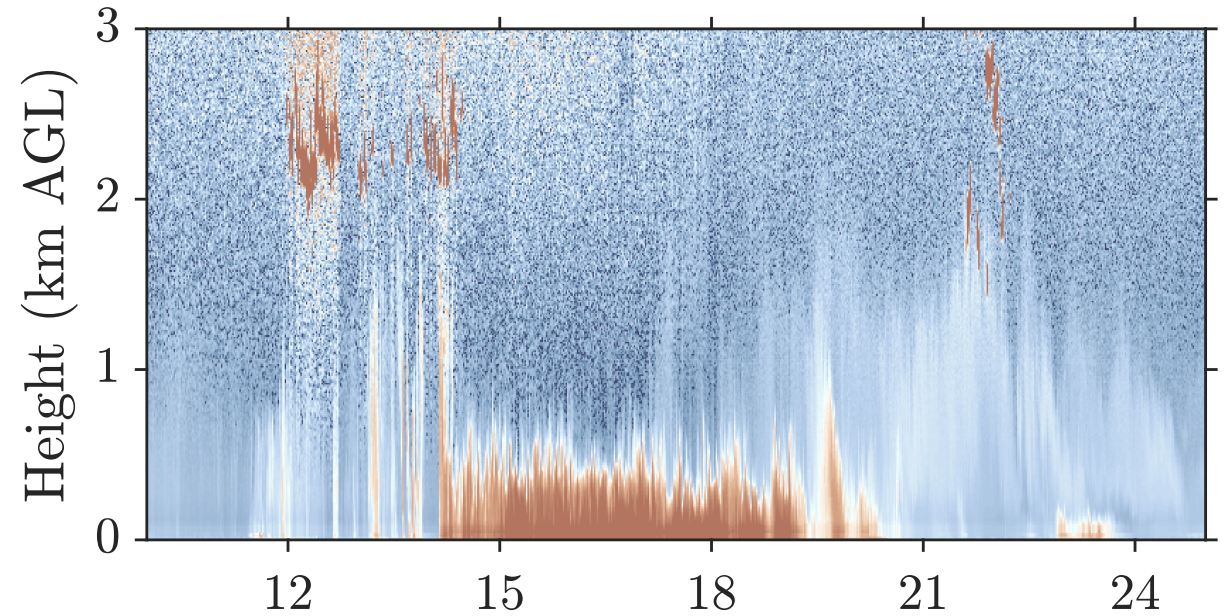
Forecasting Step 1: Physical Understanding



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Future Forecasting Work

Step 2: Testing, Testing, Testing...

Step 3: Run those future simulations



