Using PDFs to Assist in Validation

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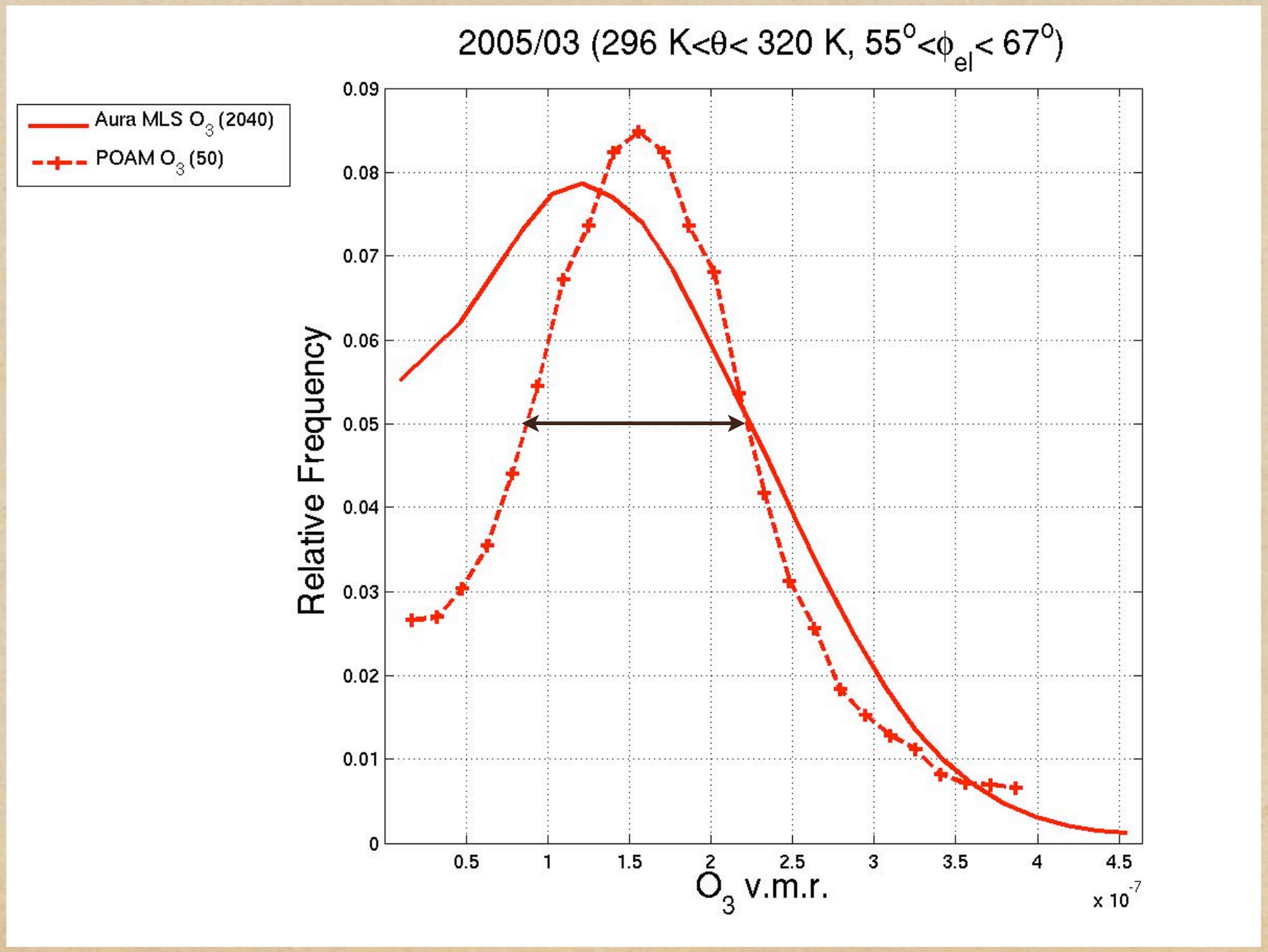
How close is close?

- A useful question to ask before we start comparing datasets is:
  - What is the spatial variability we expect, and so how good is the agreement should we expect between different sensors?

ALL plots come from gest.umbc.edu/PDFCentral

Ozone

Quantifying the variability



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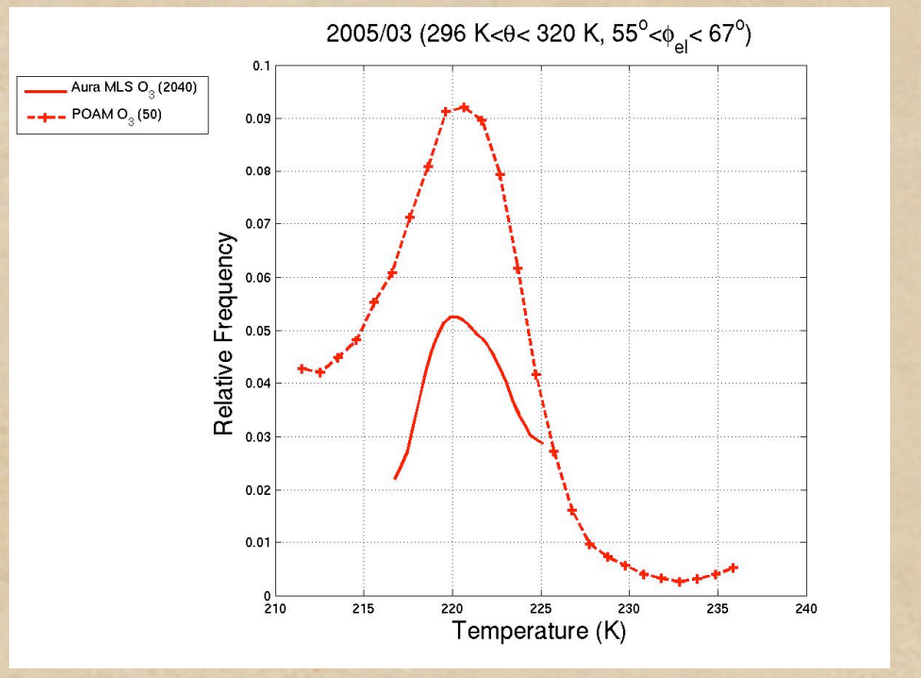
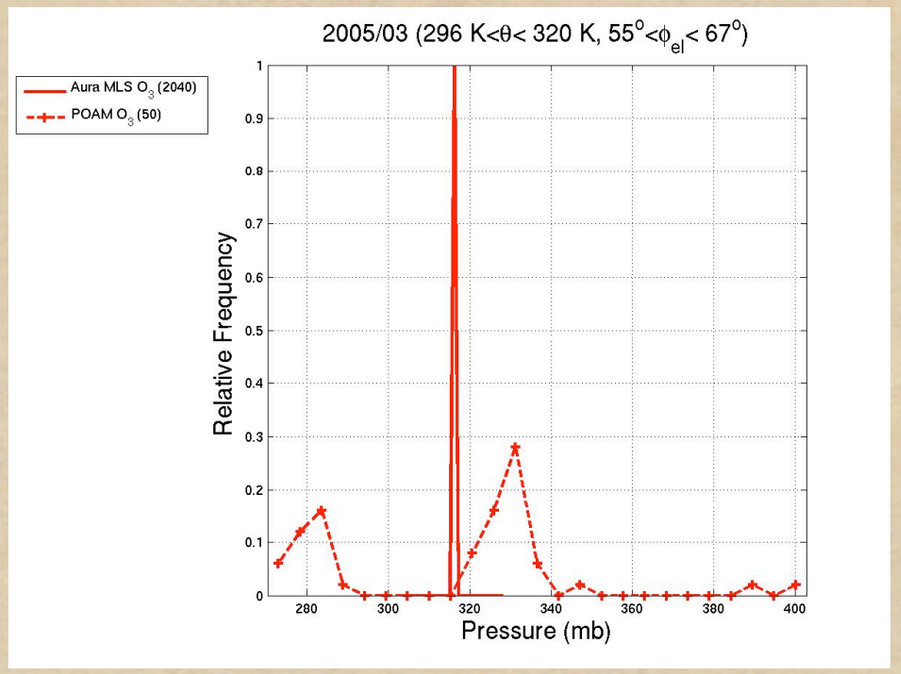
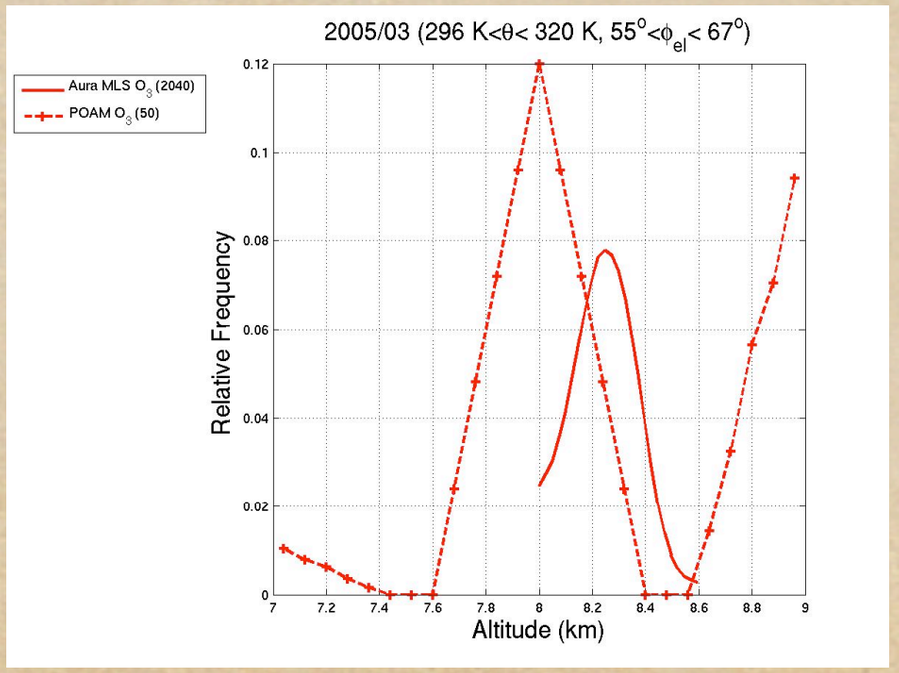
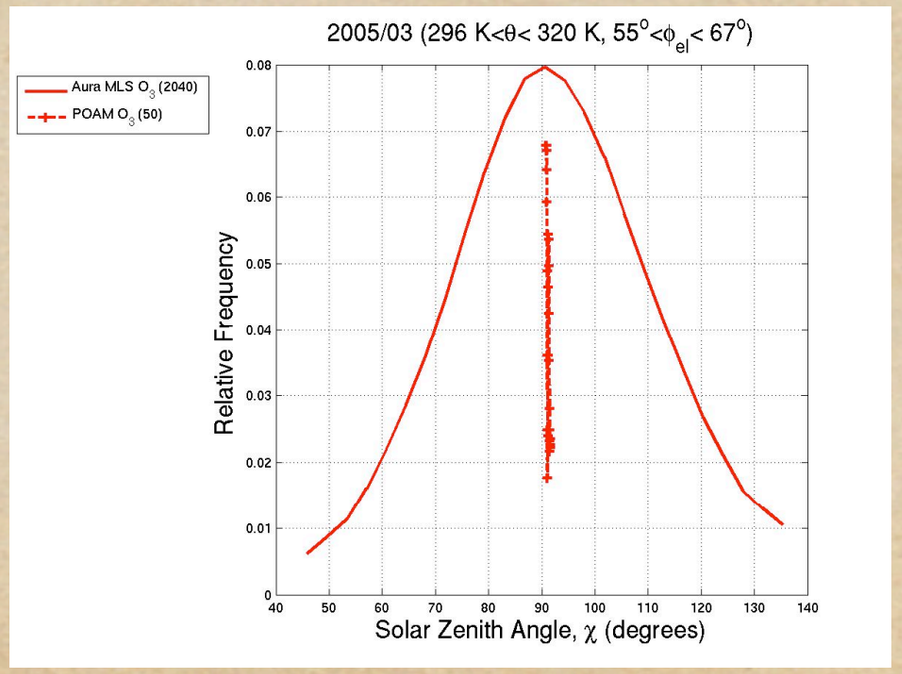
Other factors









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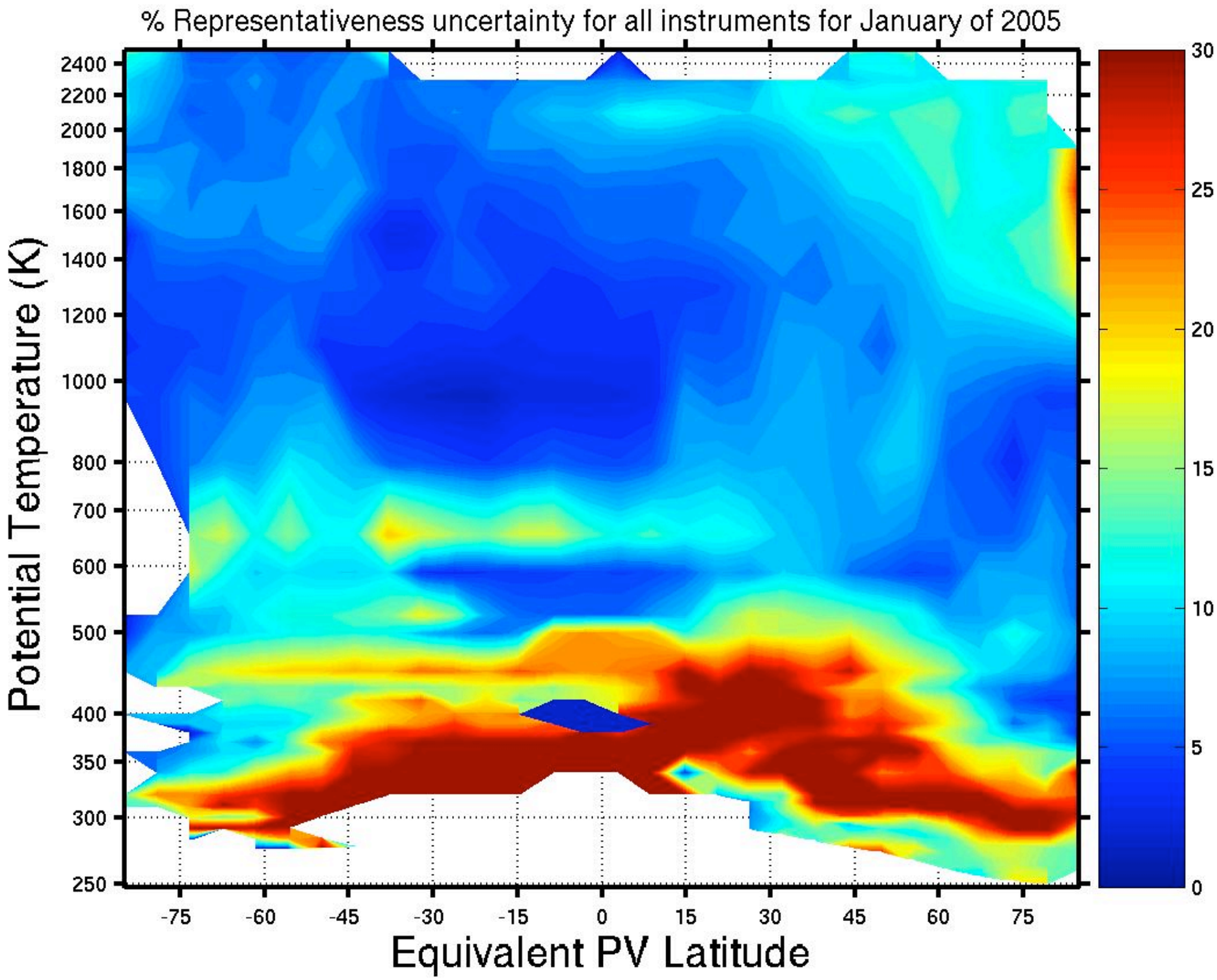

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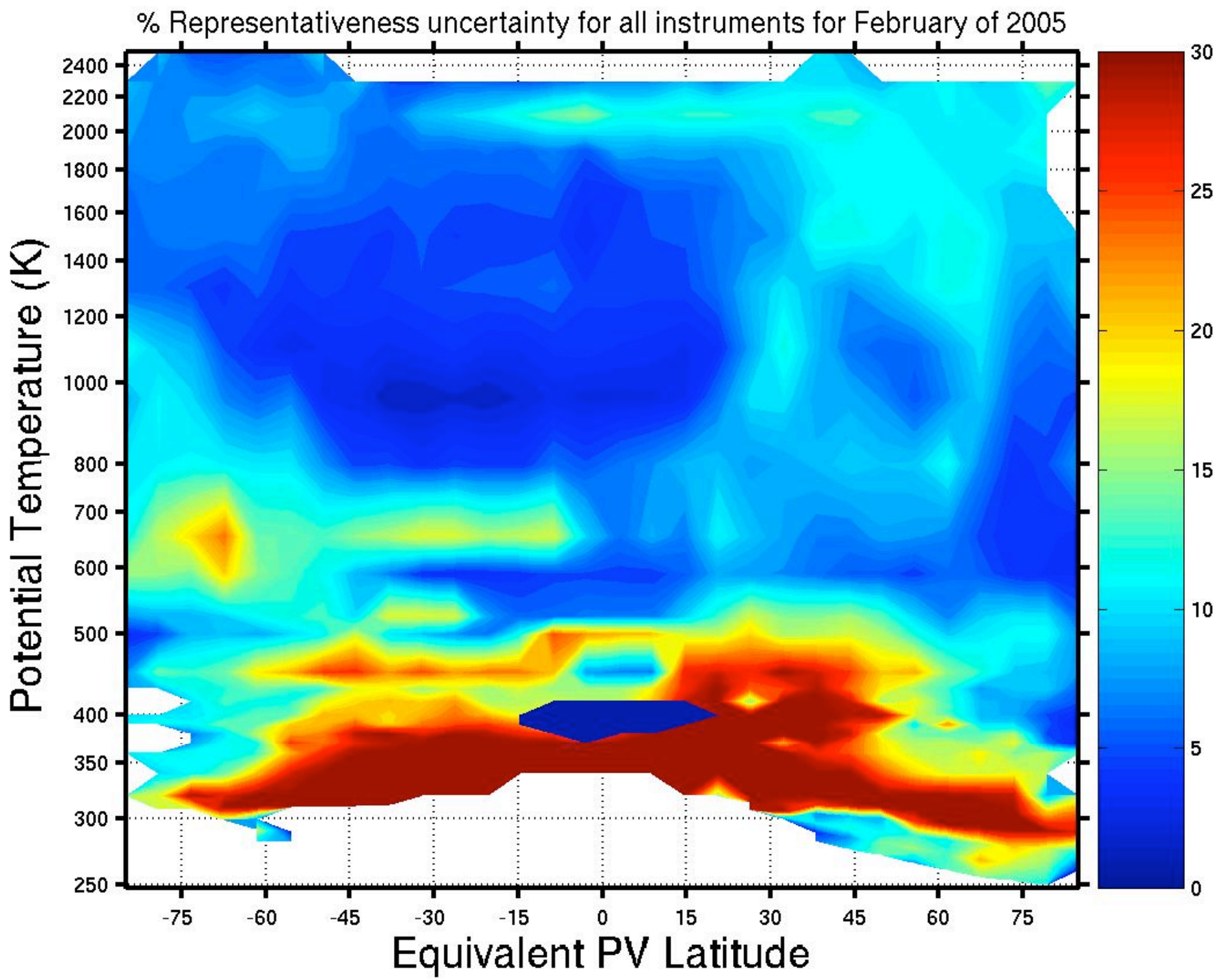
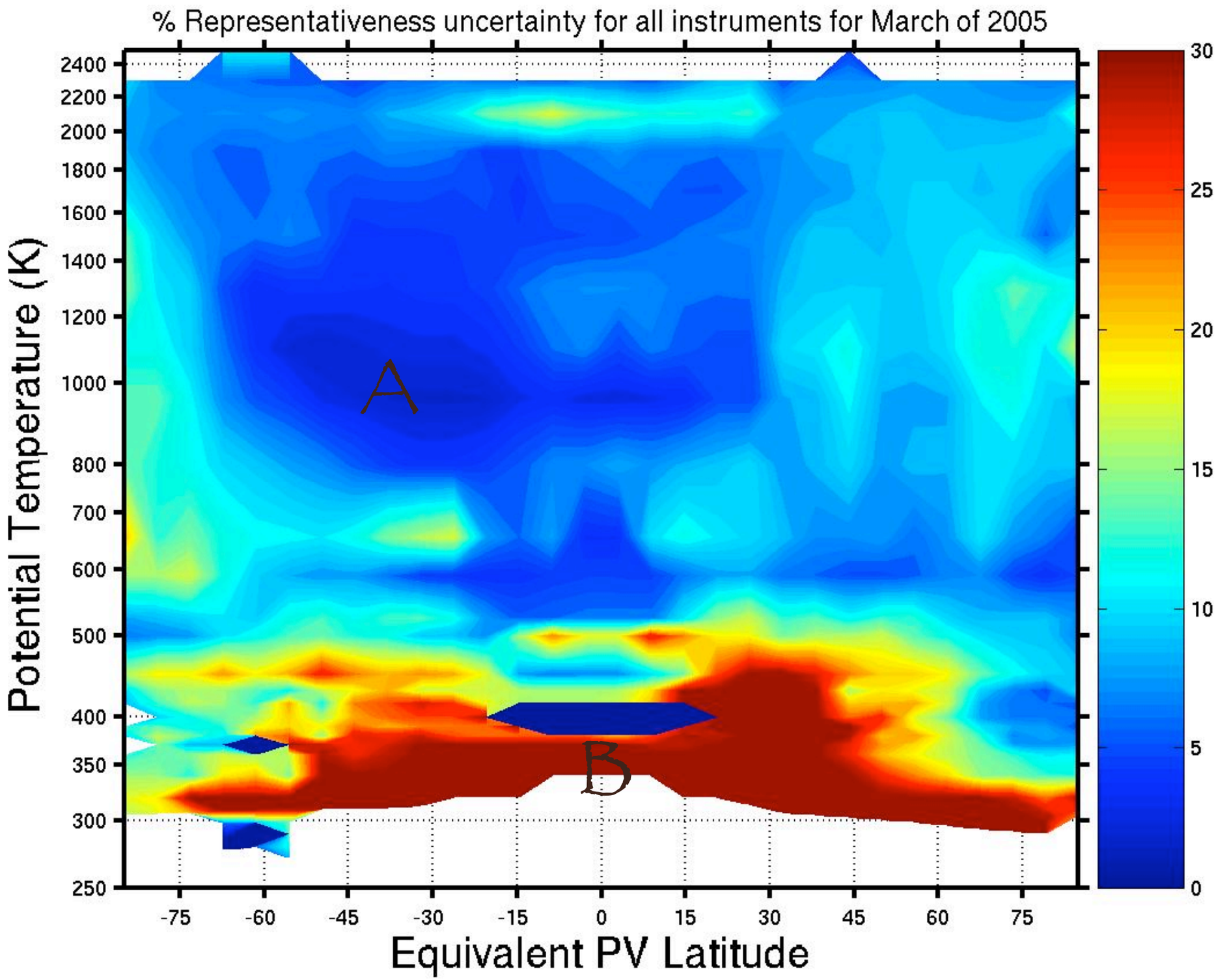
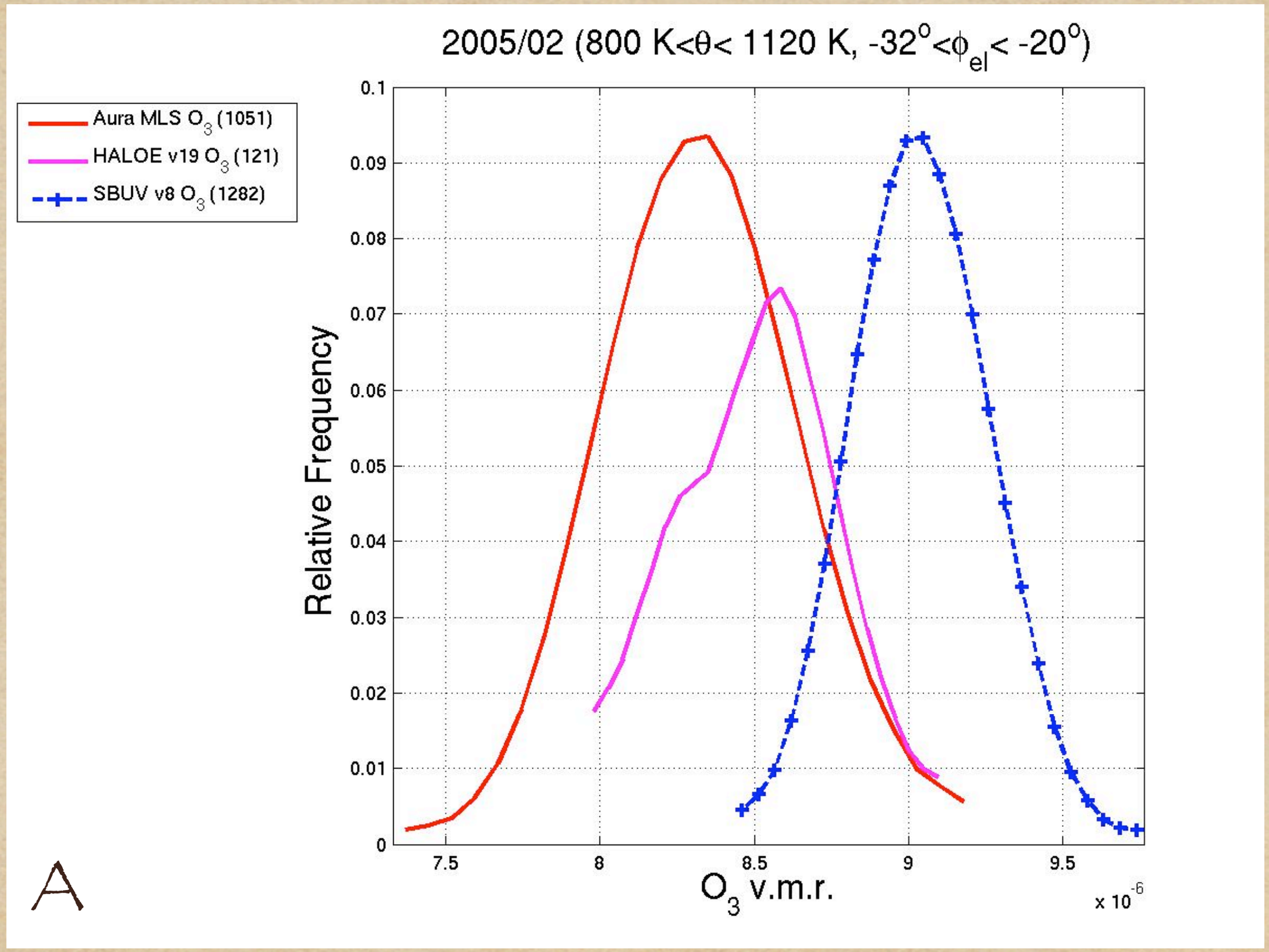


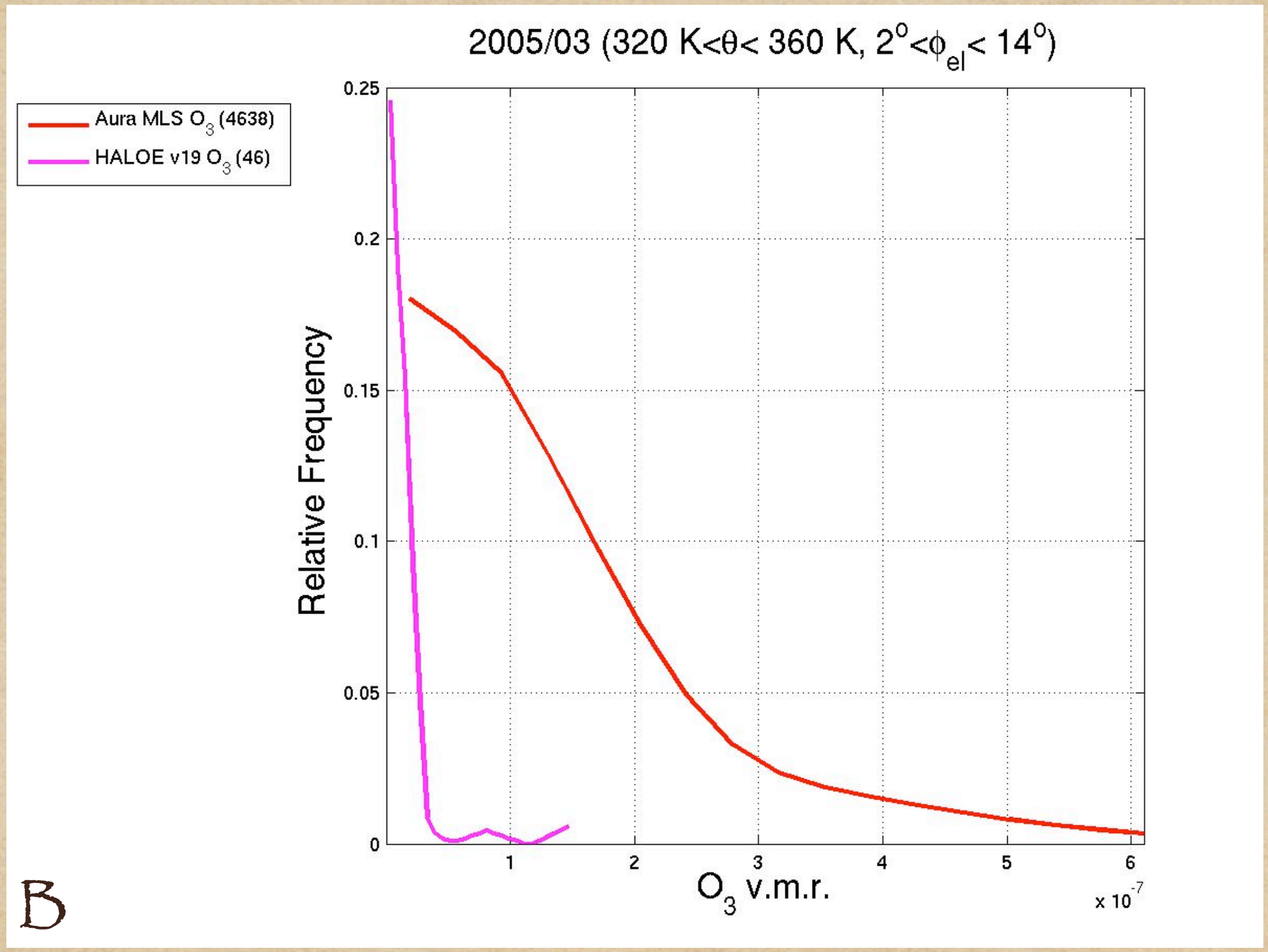
ALL plots come from gest.umbc.edu/PDFCentral



ALL plots come from gest.umbc.edu/PDFCentral



ALL plots come from gest.umbc.edu/PDFCentral



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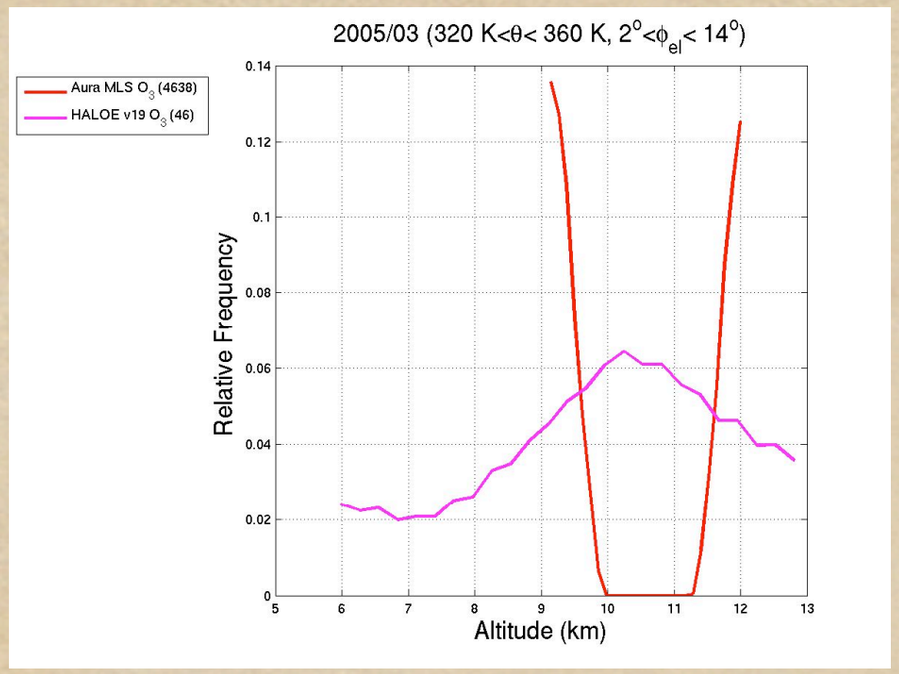

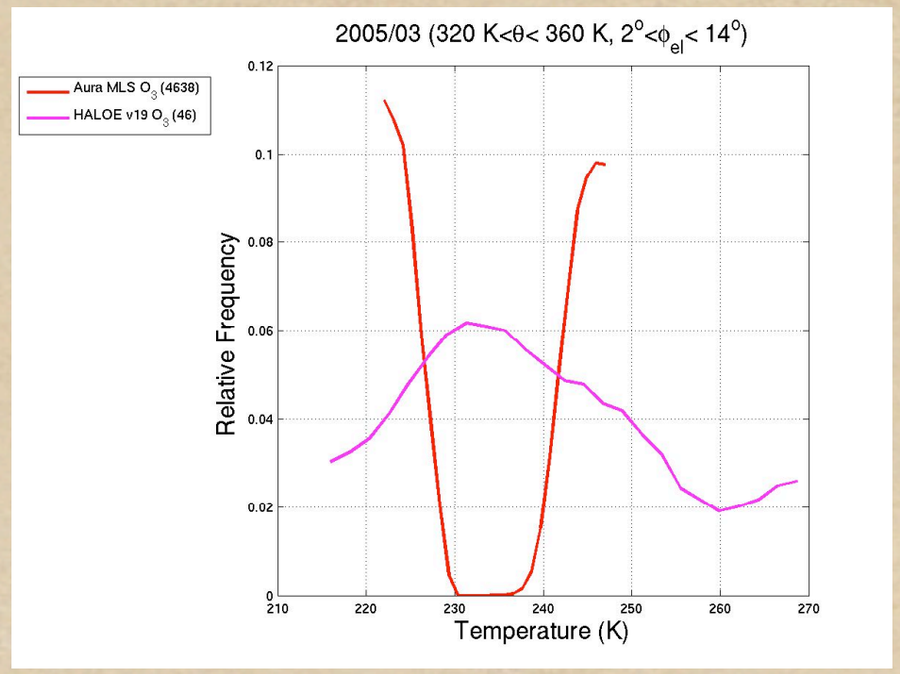

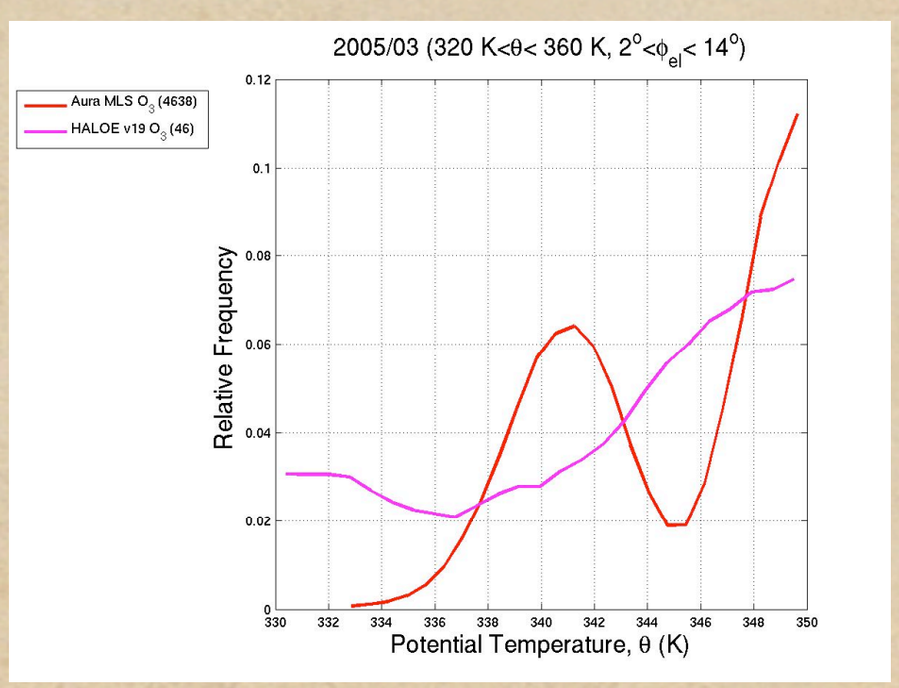

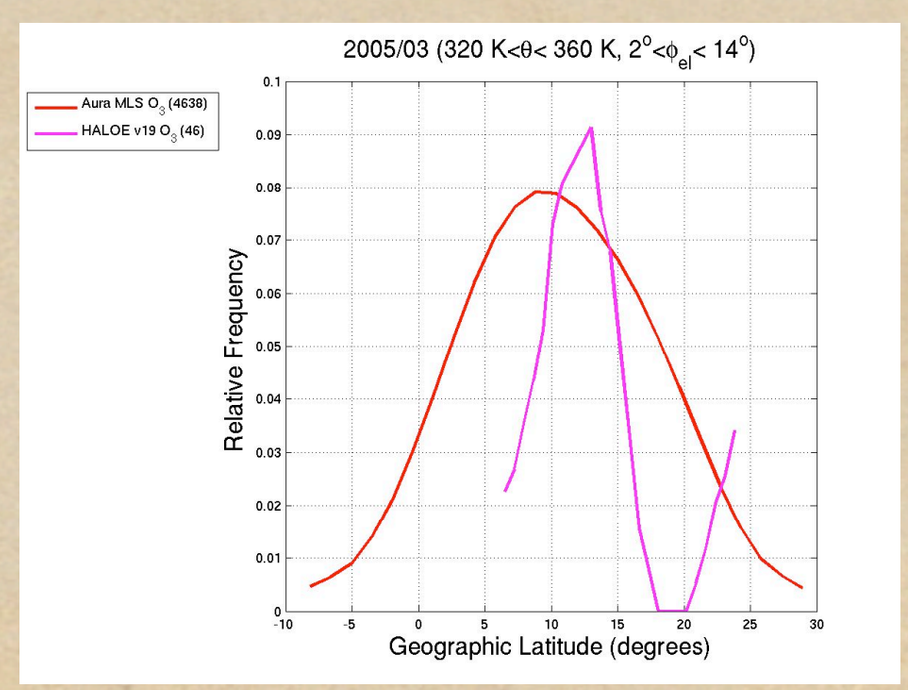

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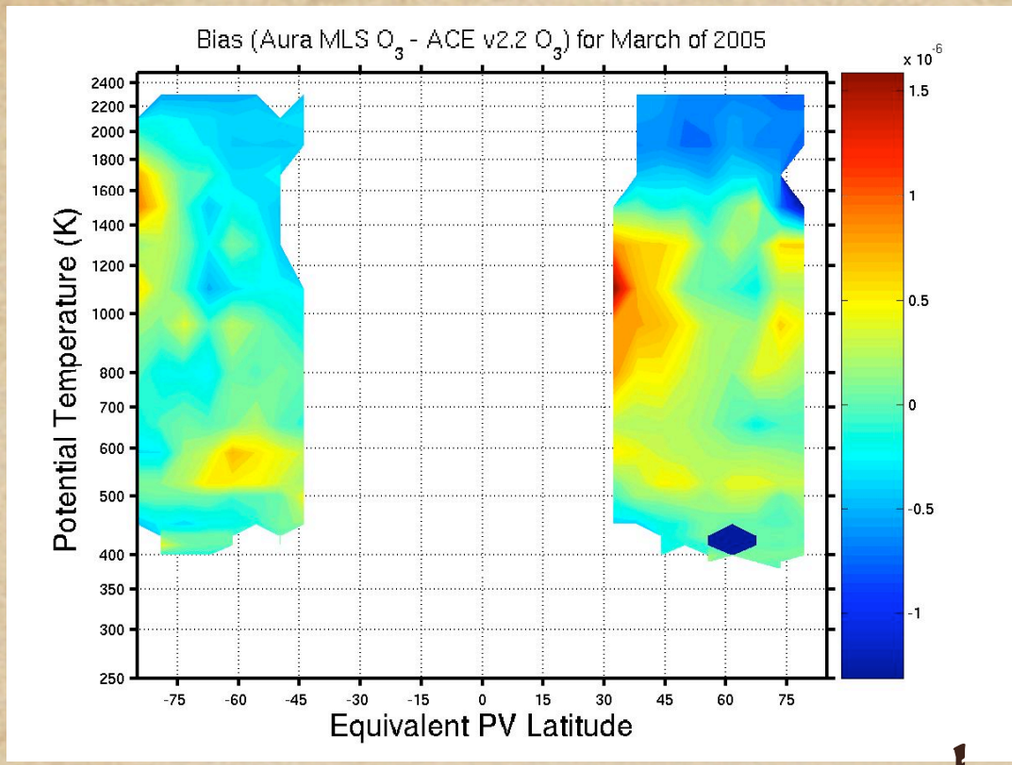
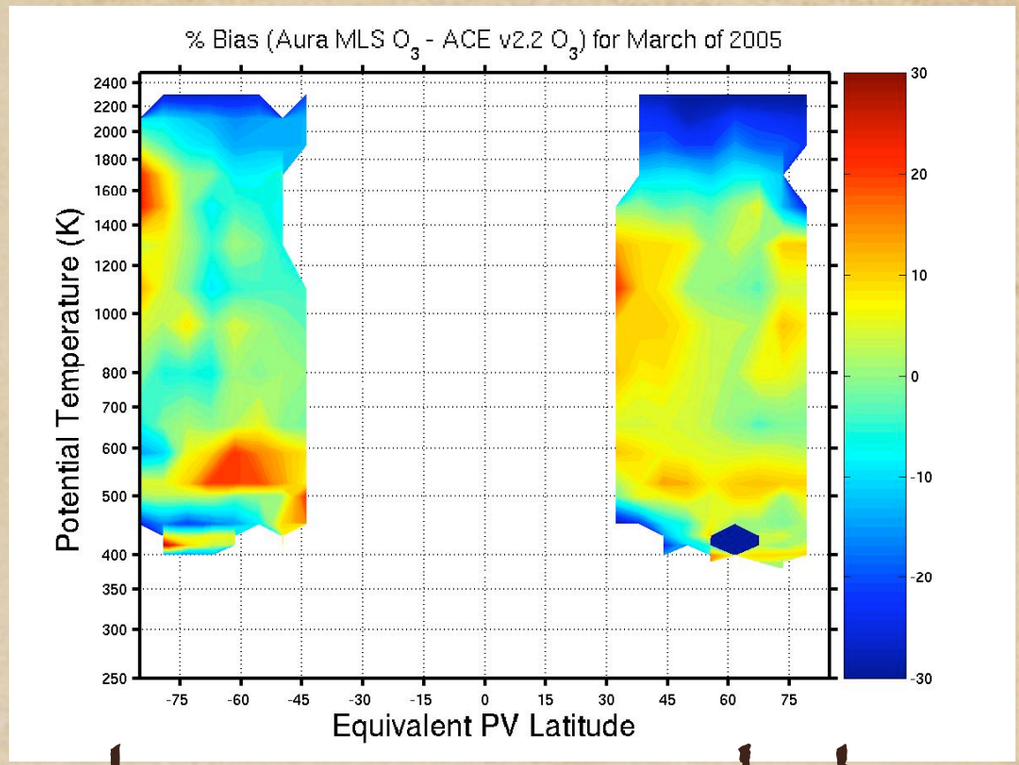
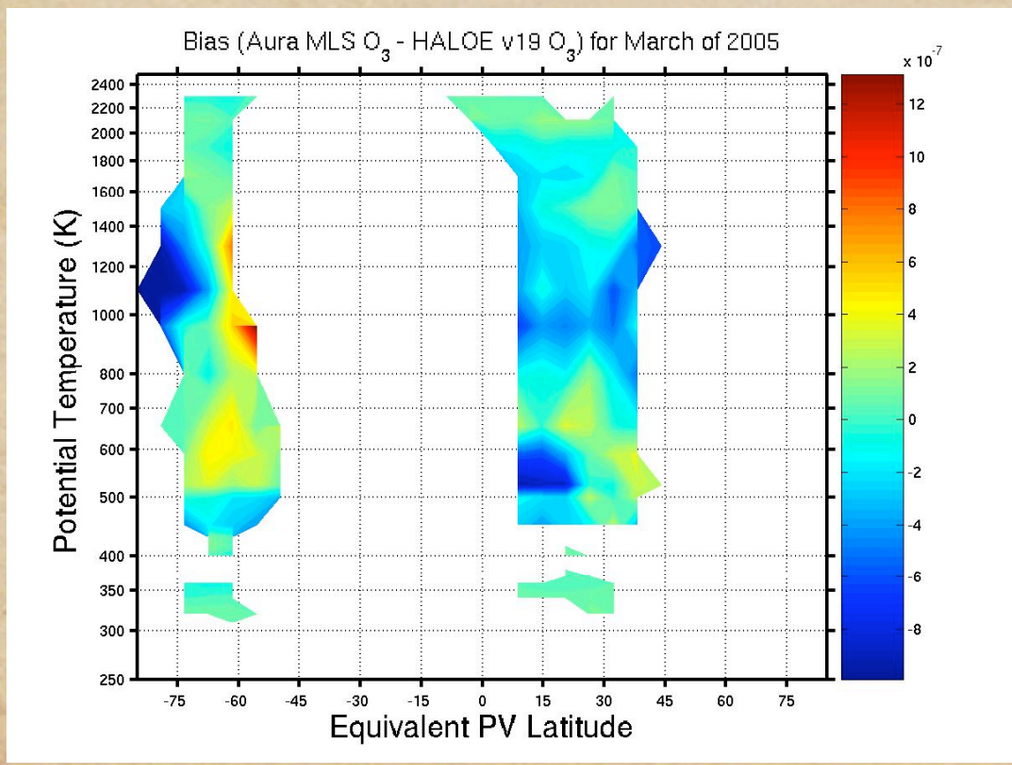
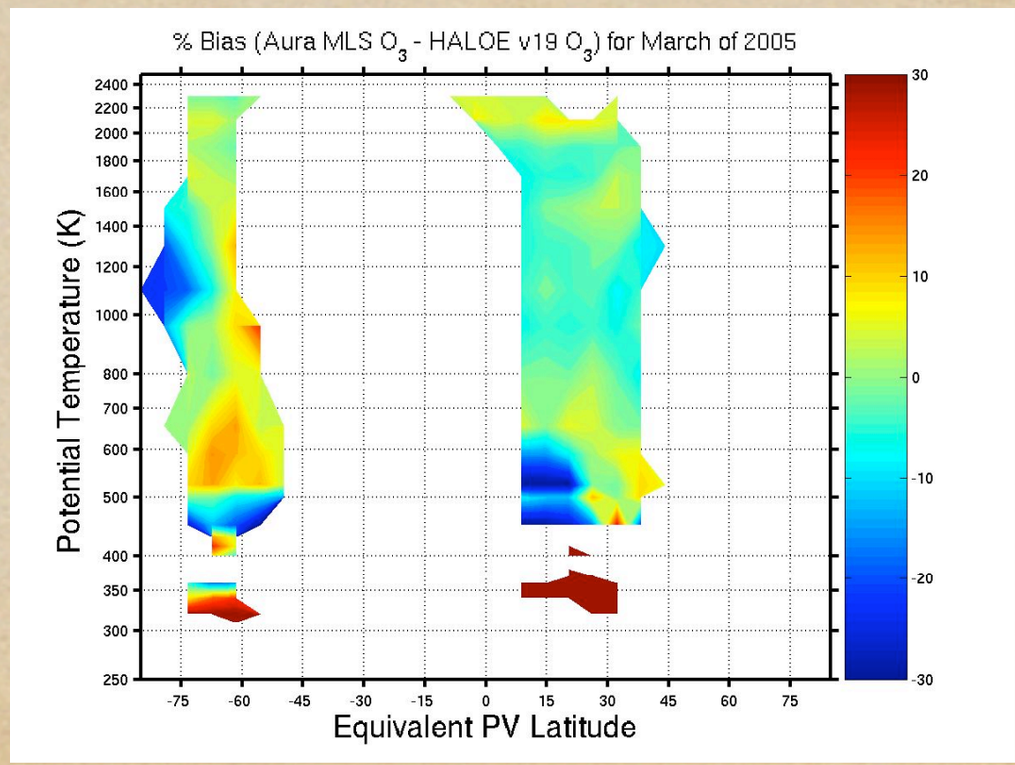




Agreement to within the known variability





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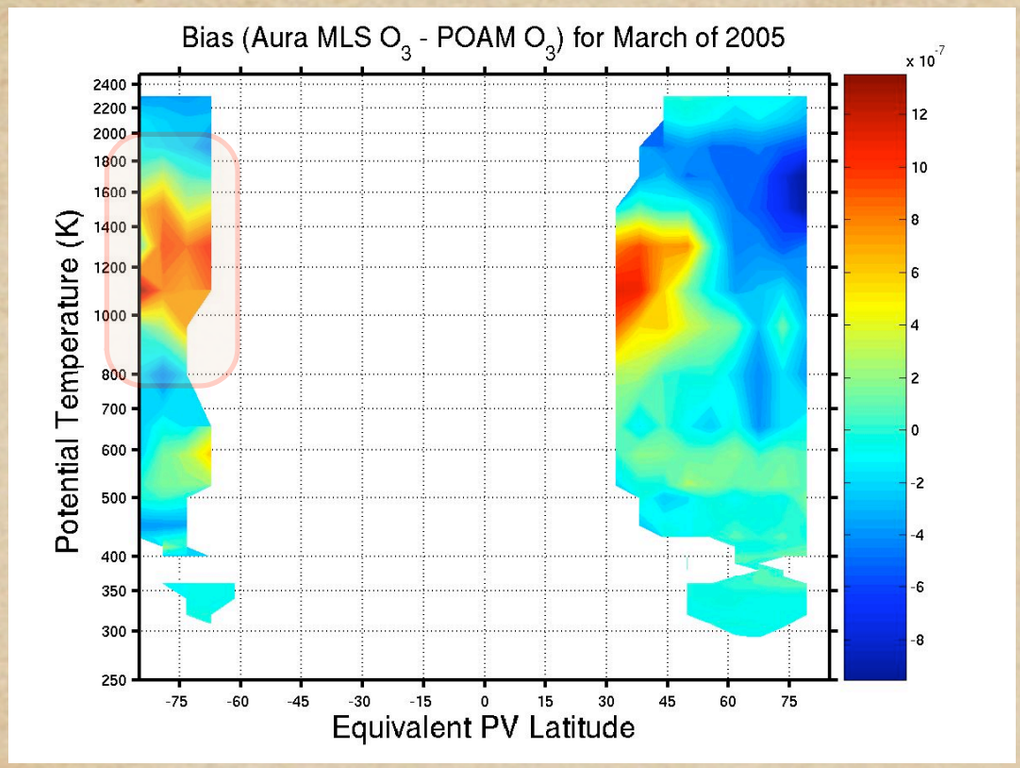

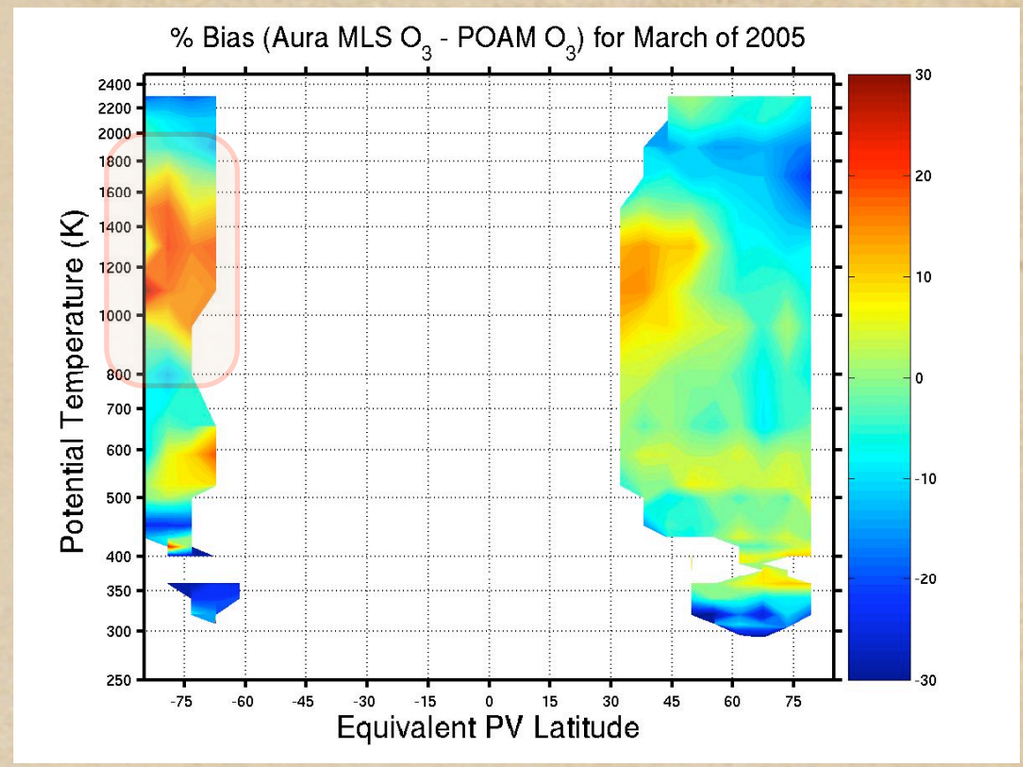

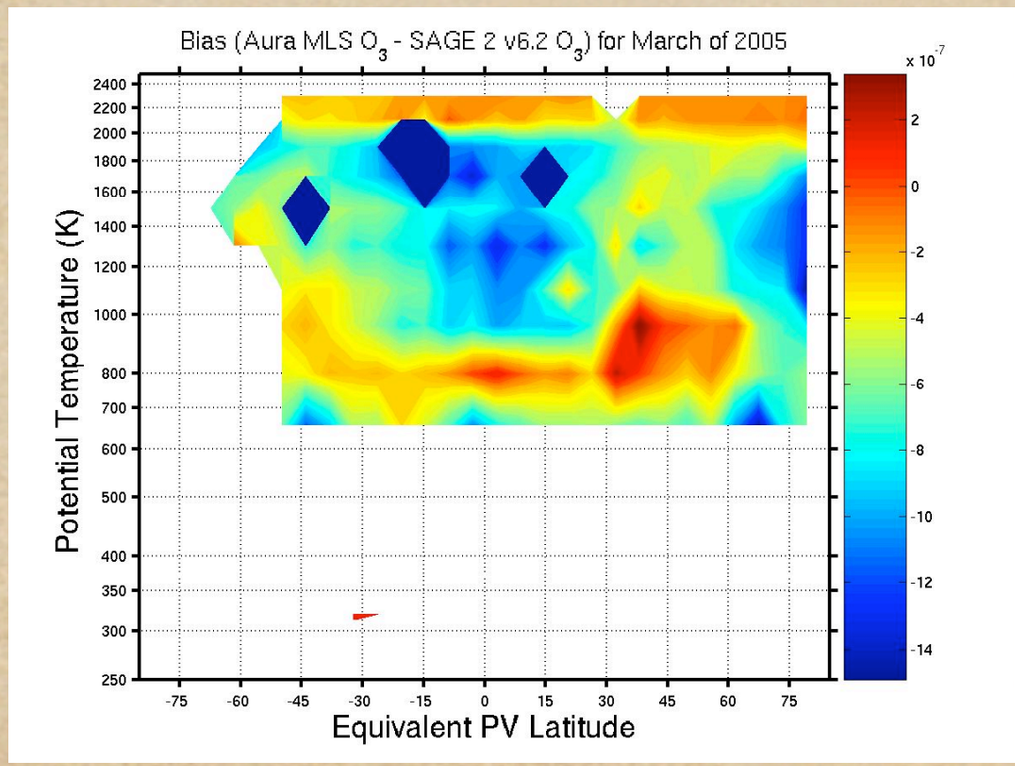

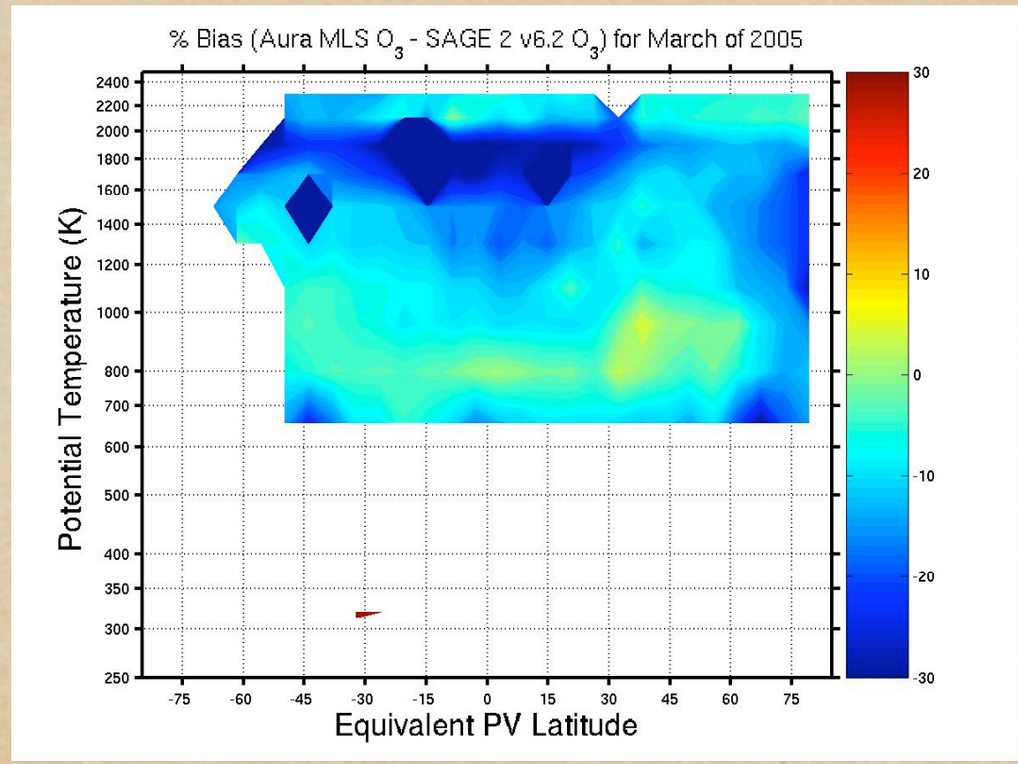

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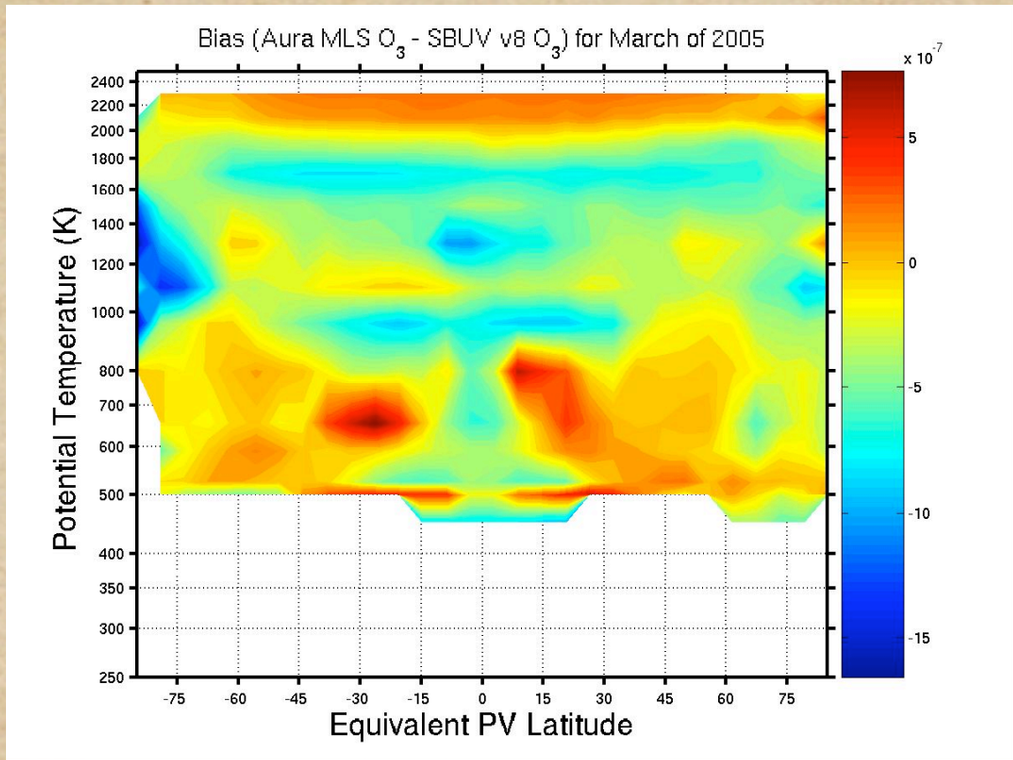
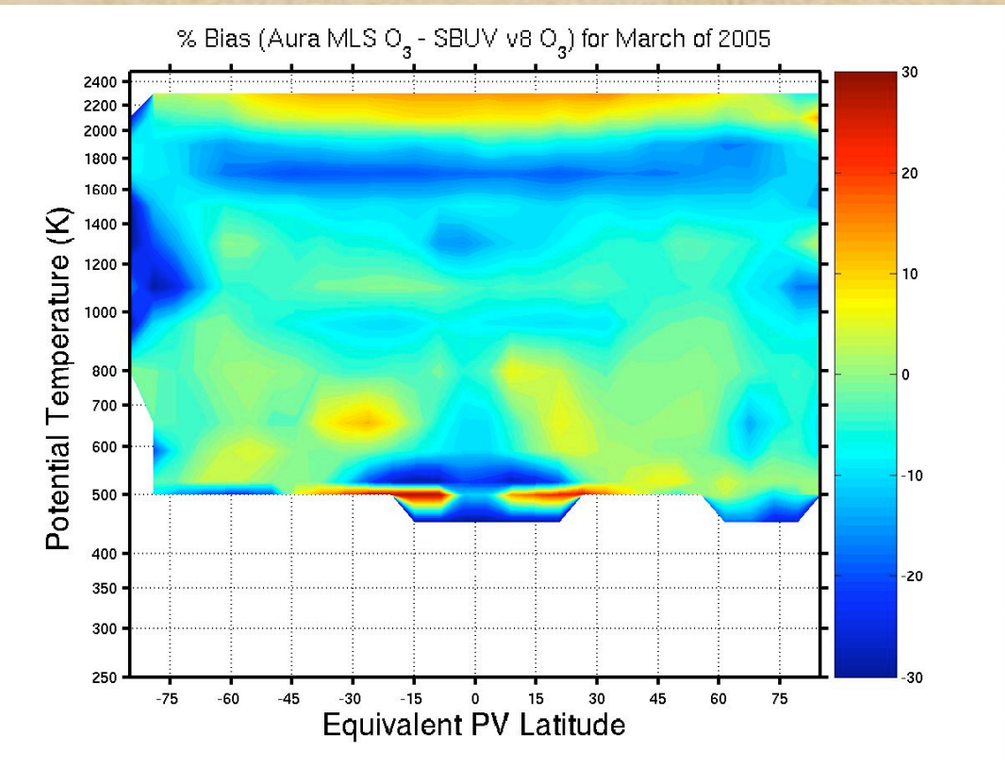


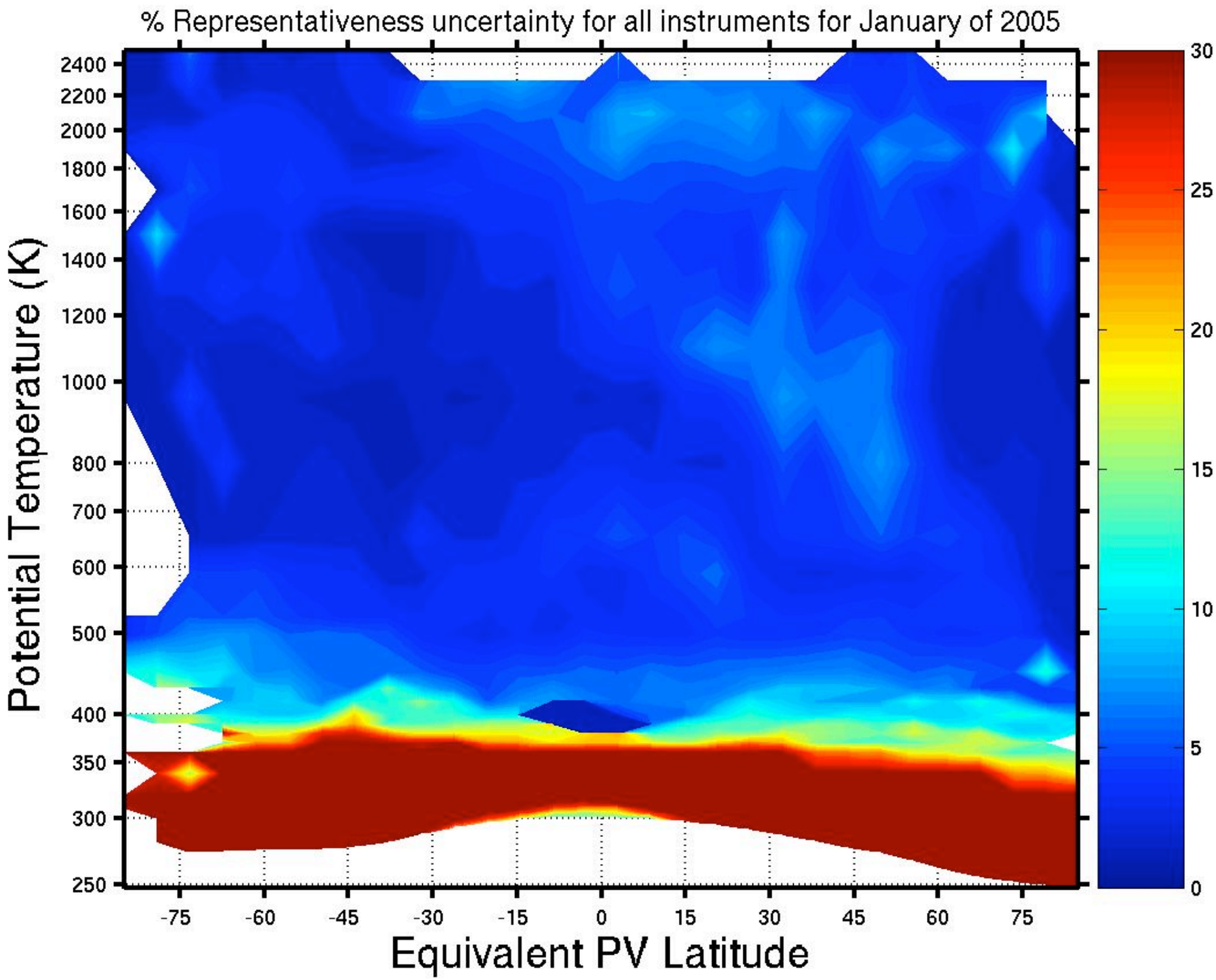


- Aura-Ace and Aura-Haloe generally agree to within known variability for March 2005.

- Aura-POAM difference between 1000 and 1400 K, particularly at high southern latitudes, is larger than known variability. ... also SBUV has differences.

ALL plots come from gest.umbc.edu/PDFCentral

Water



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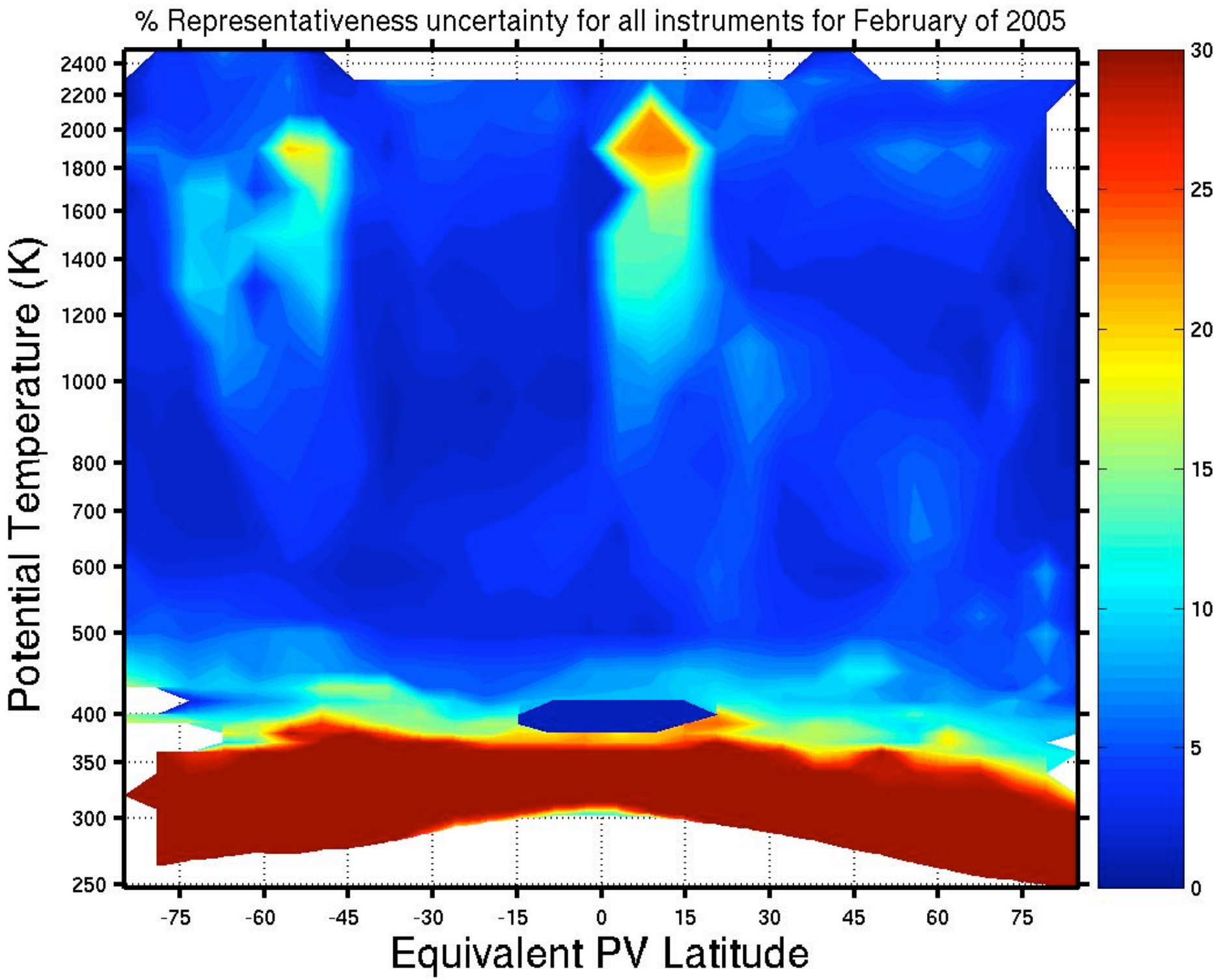

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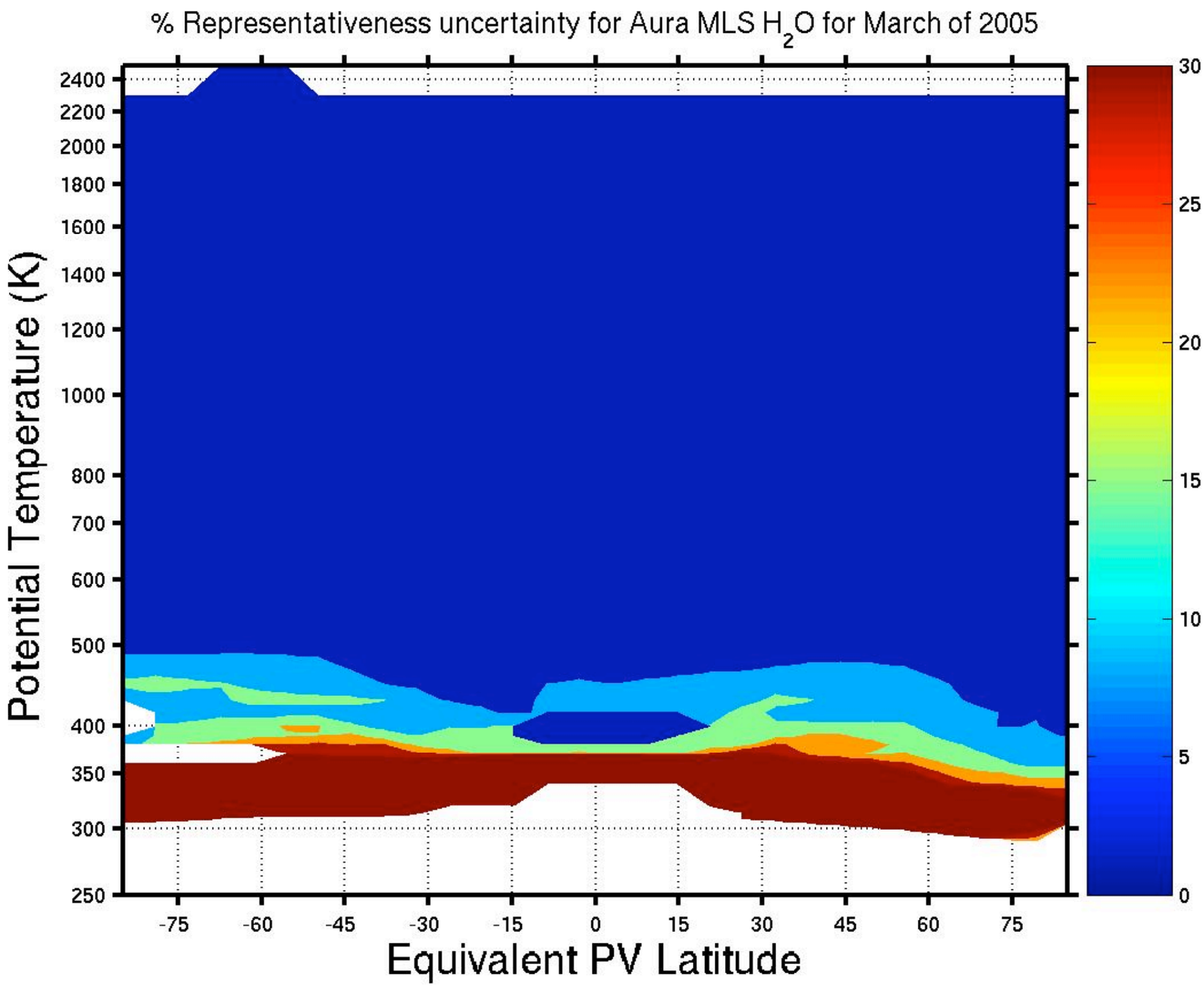

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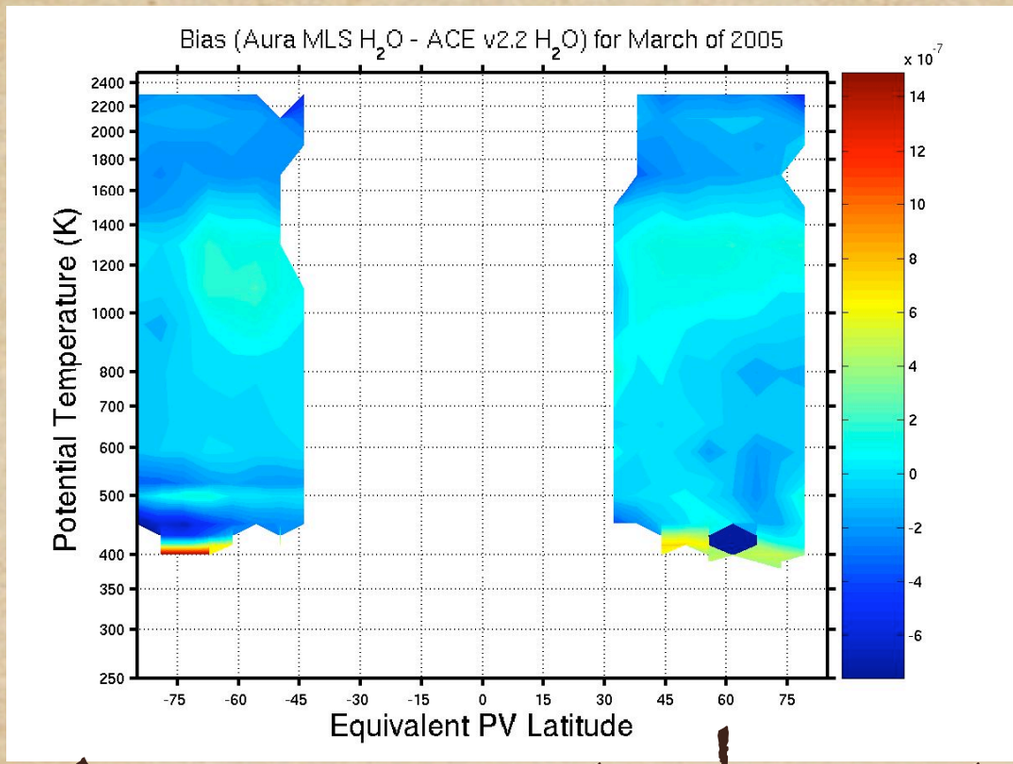
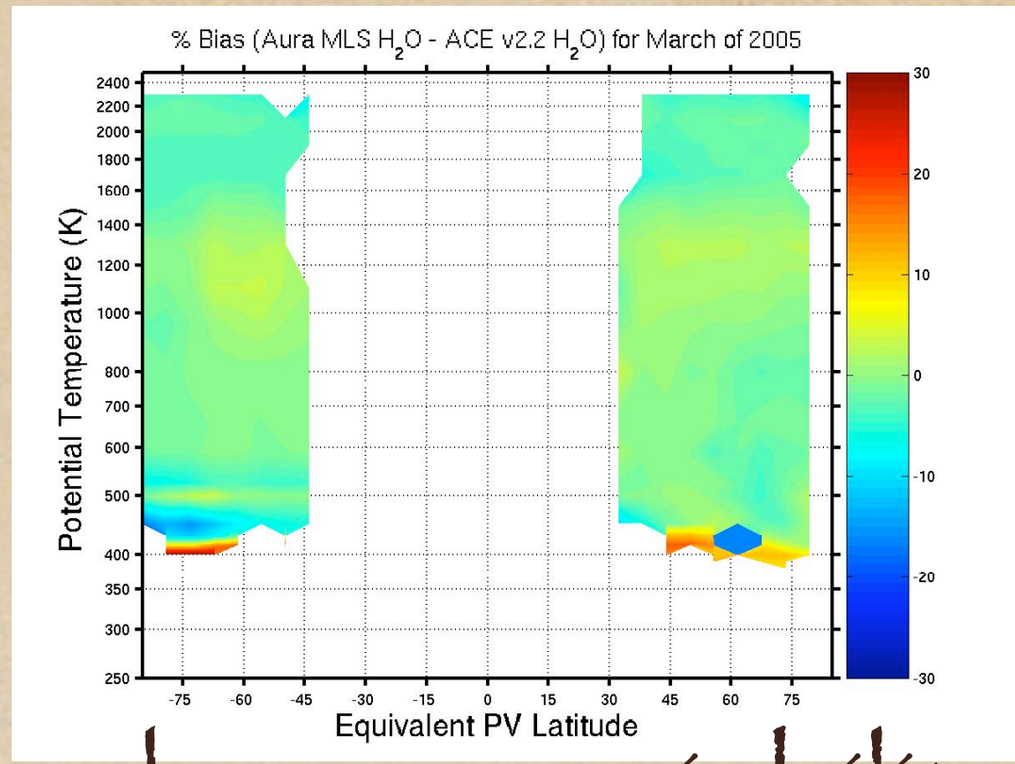
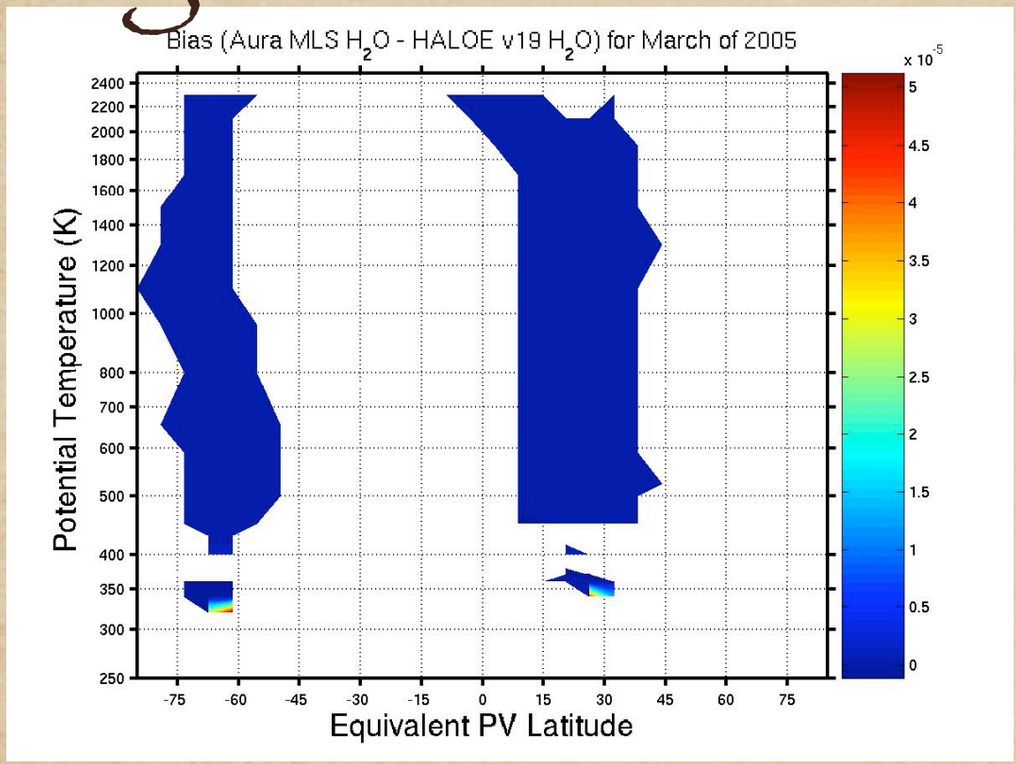
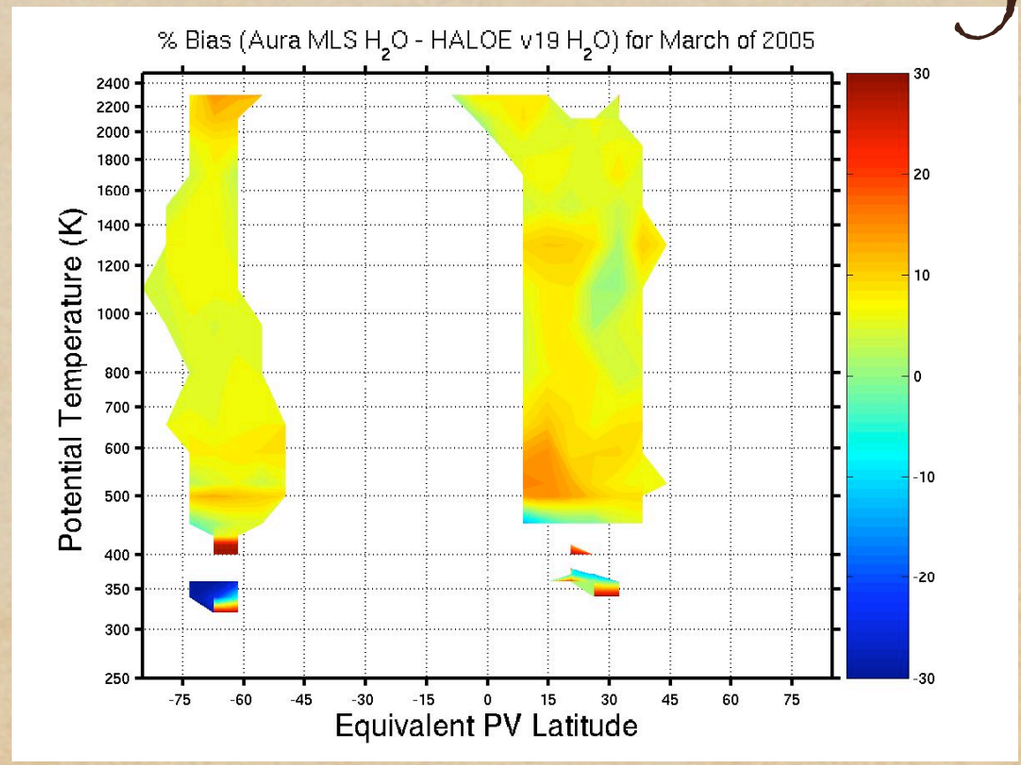




Agreement close to the known variability





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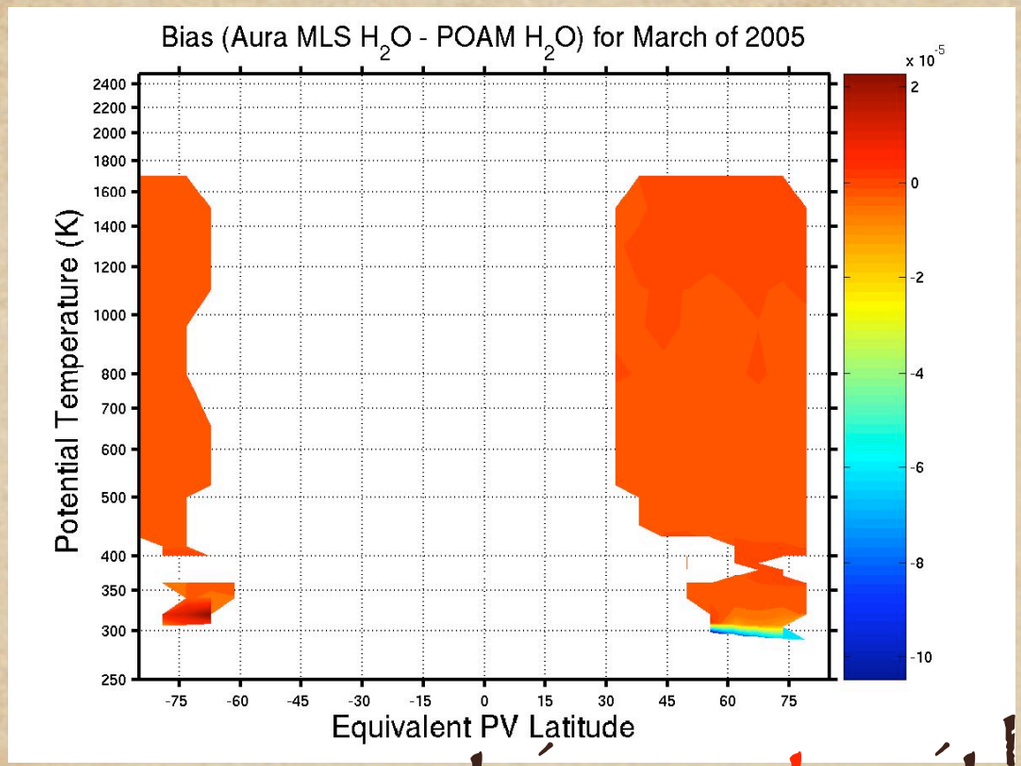
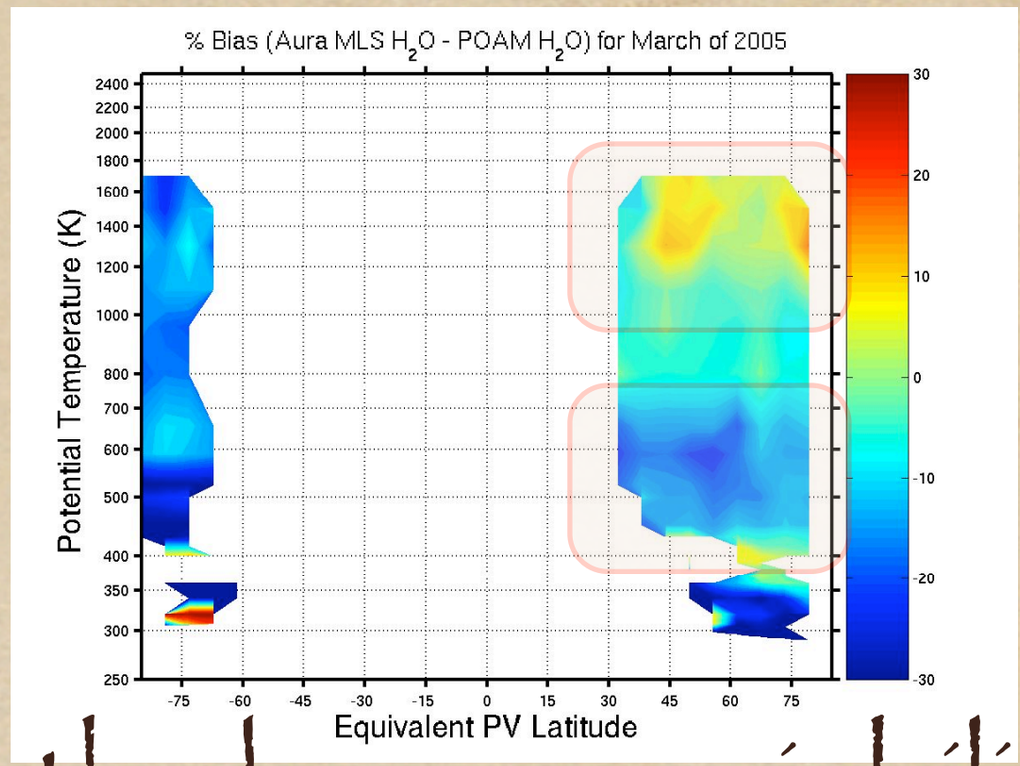
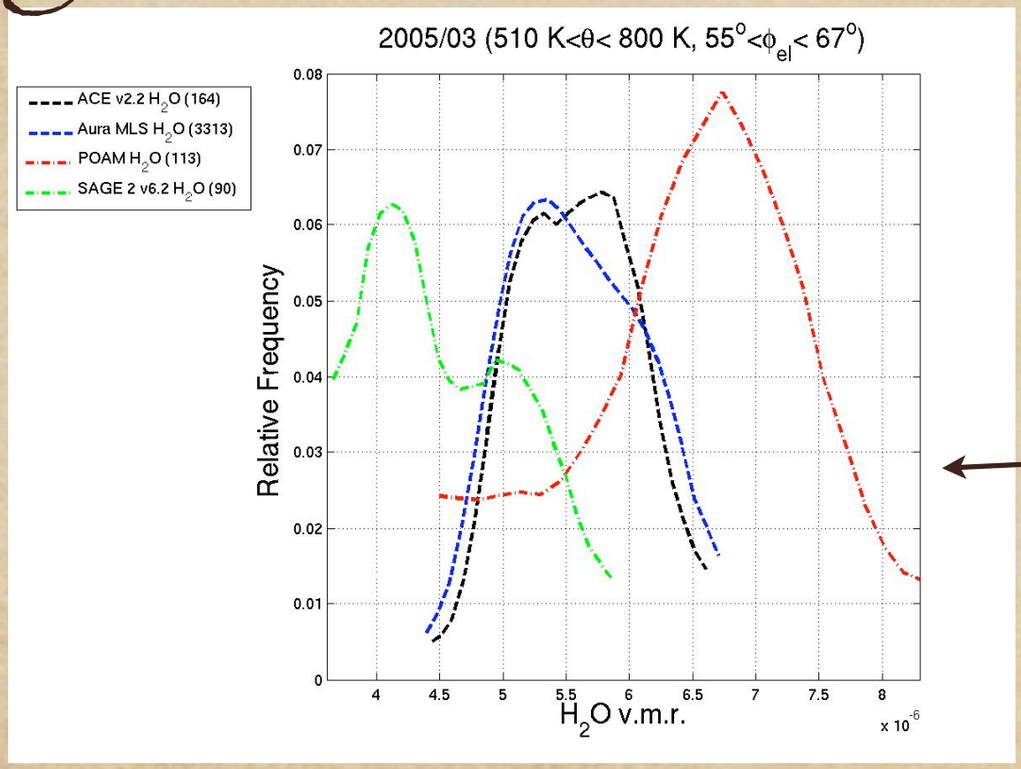
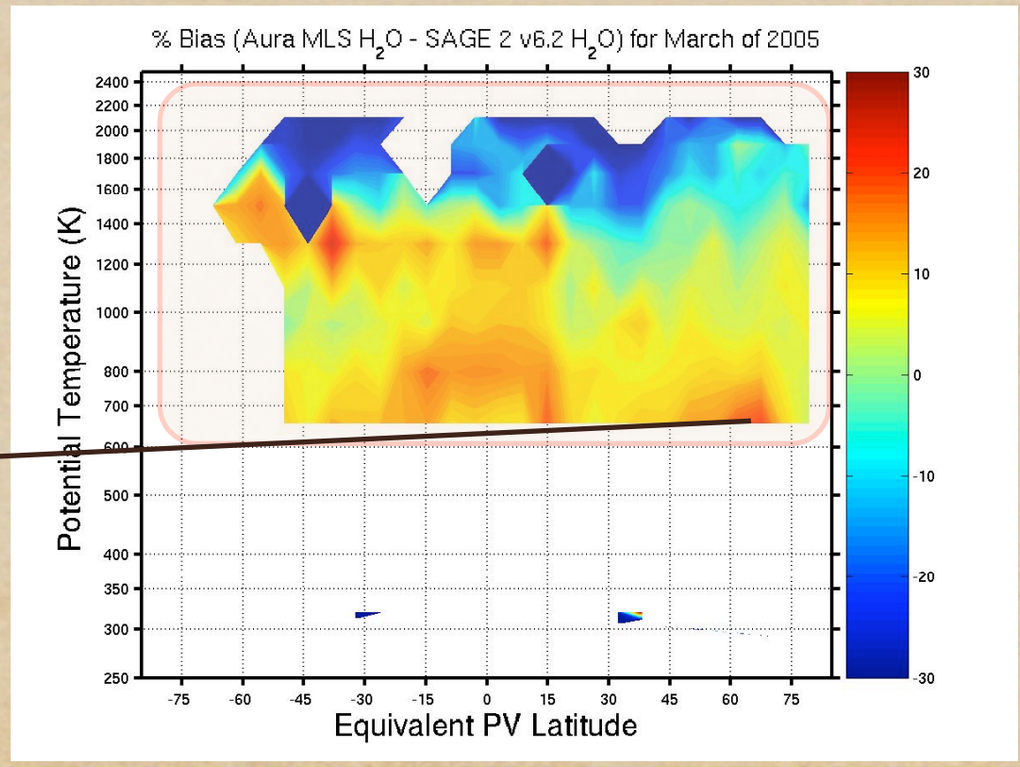




Agreement is not within the known variability





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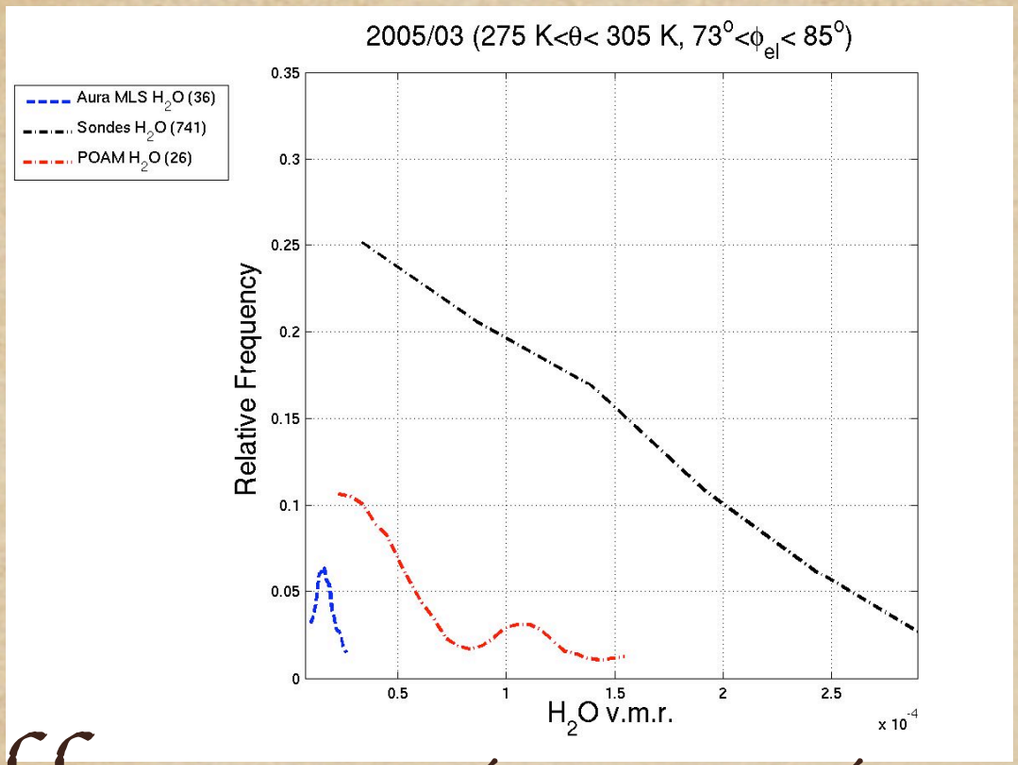
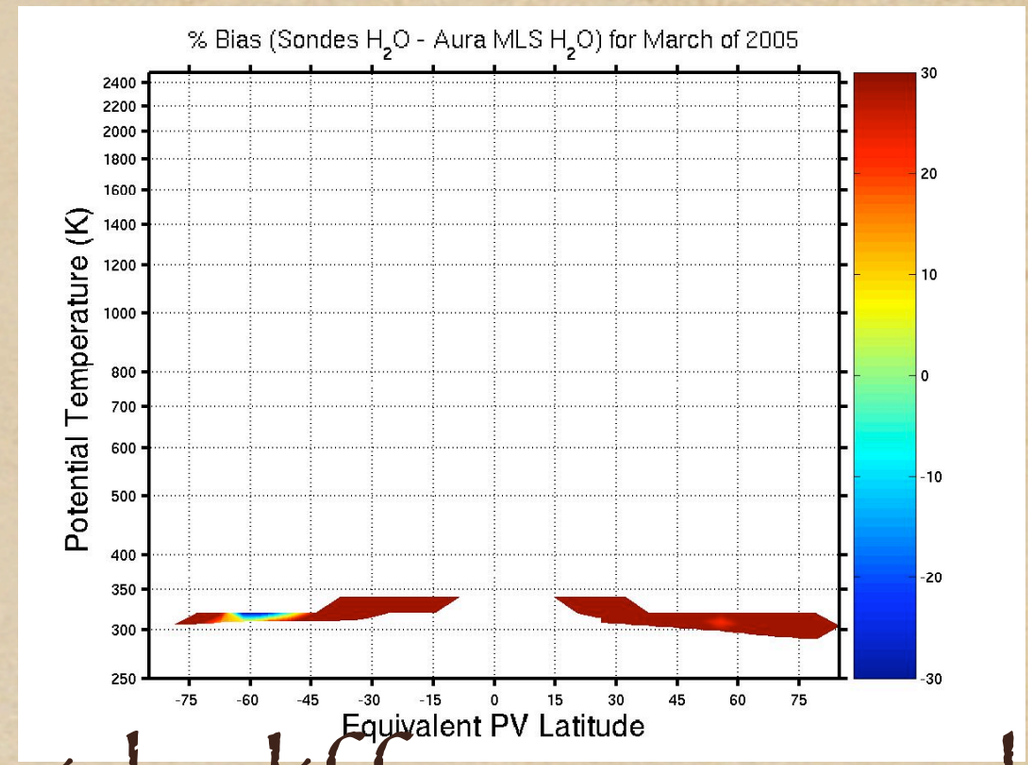
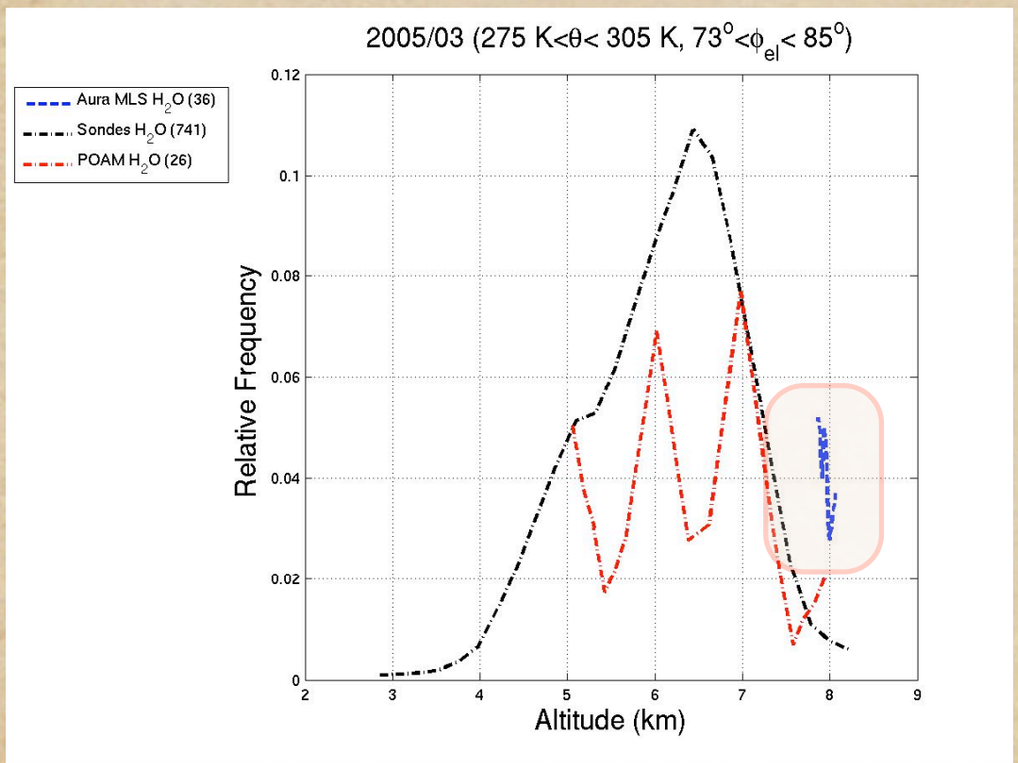
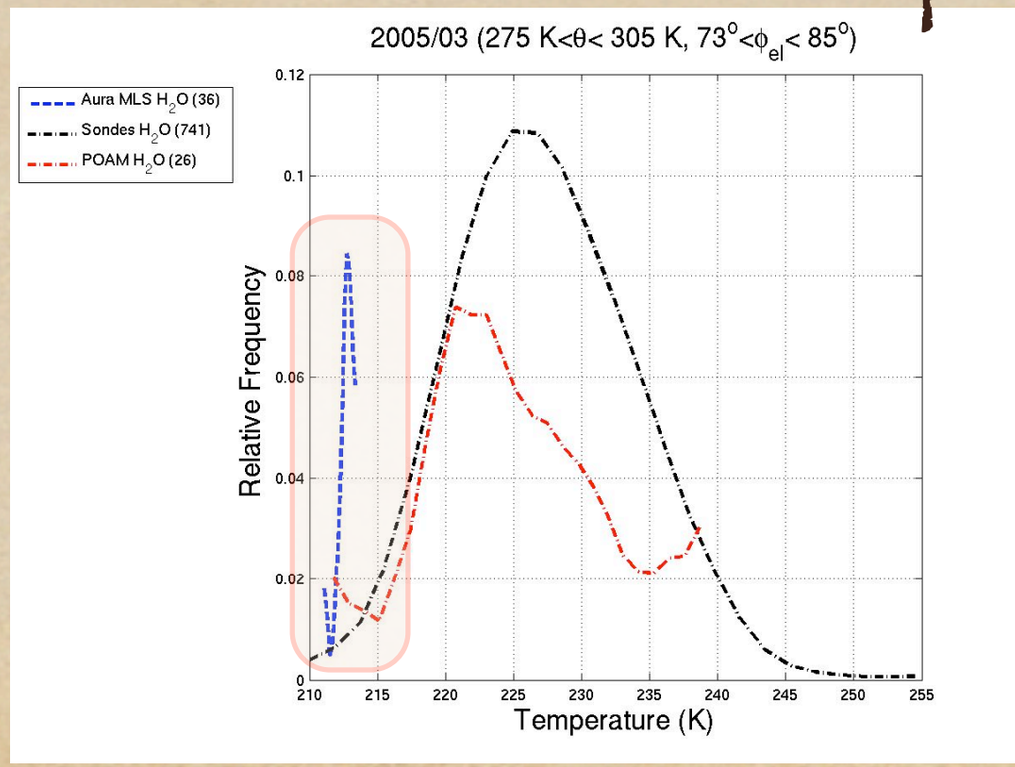




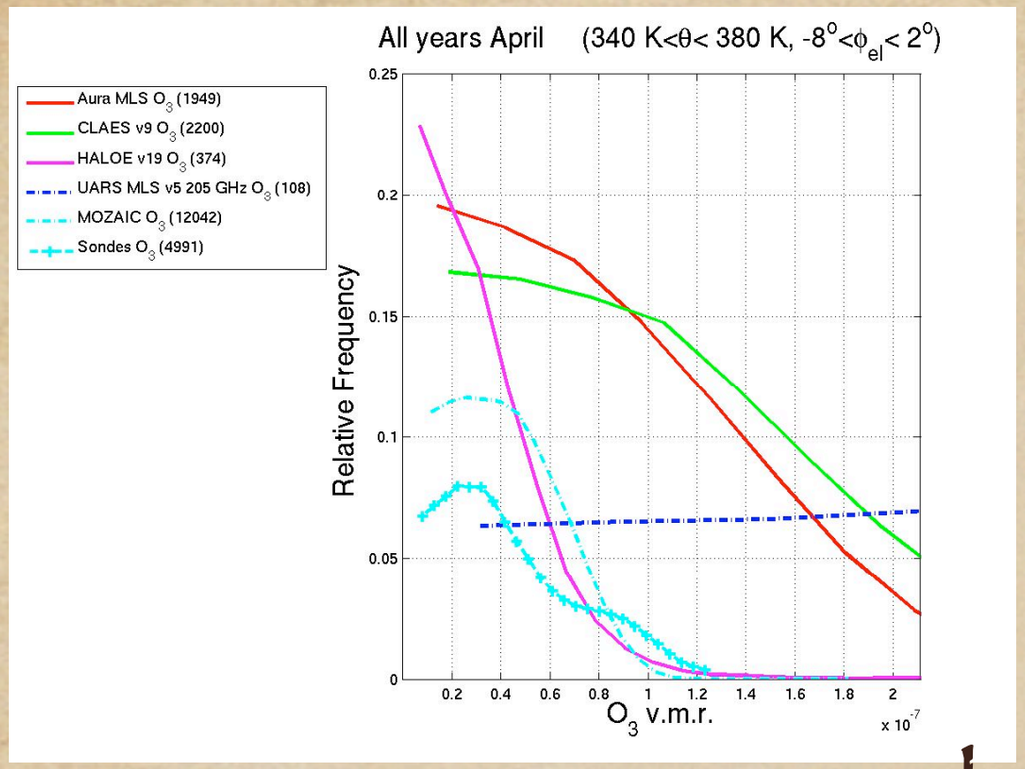
Difference is consistent with different sampling

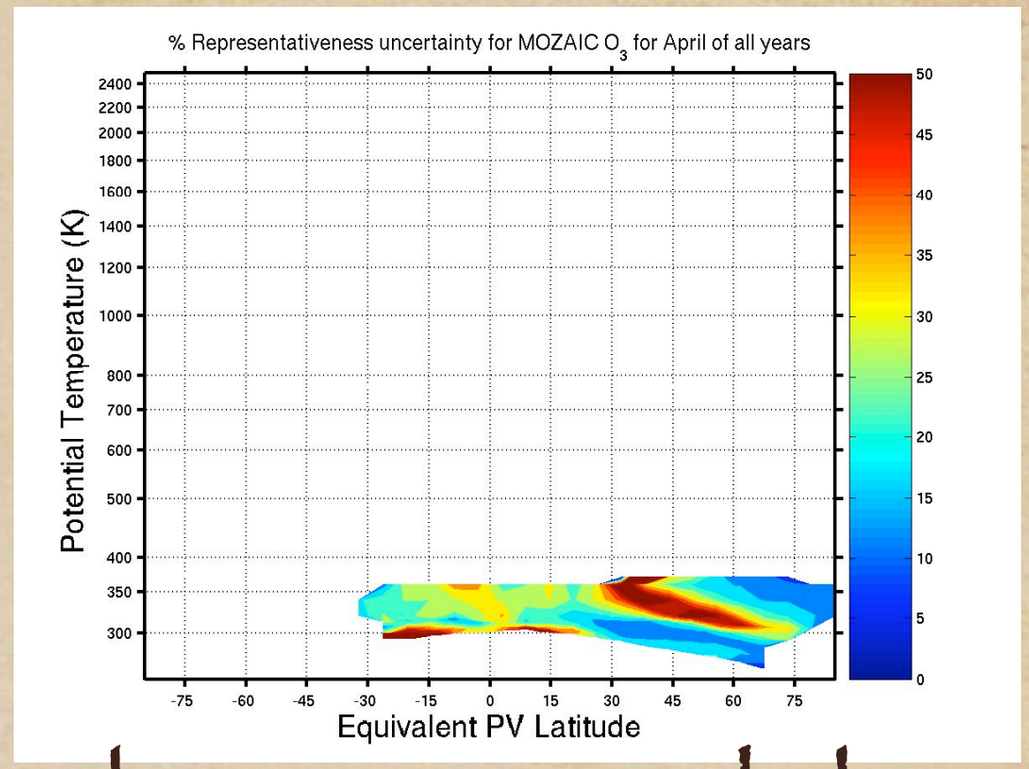




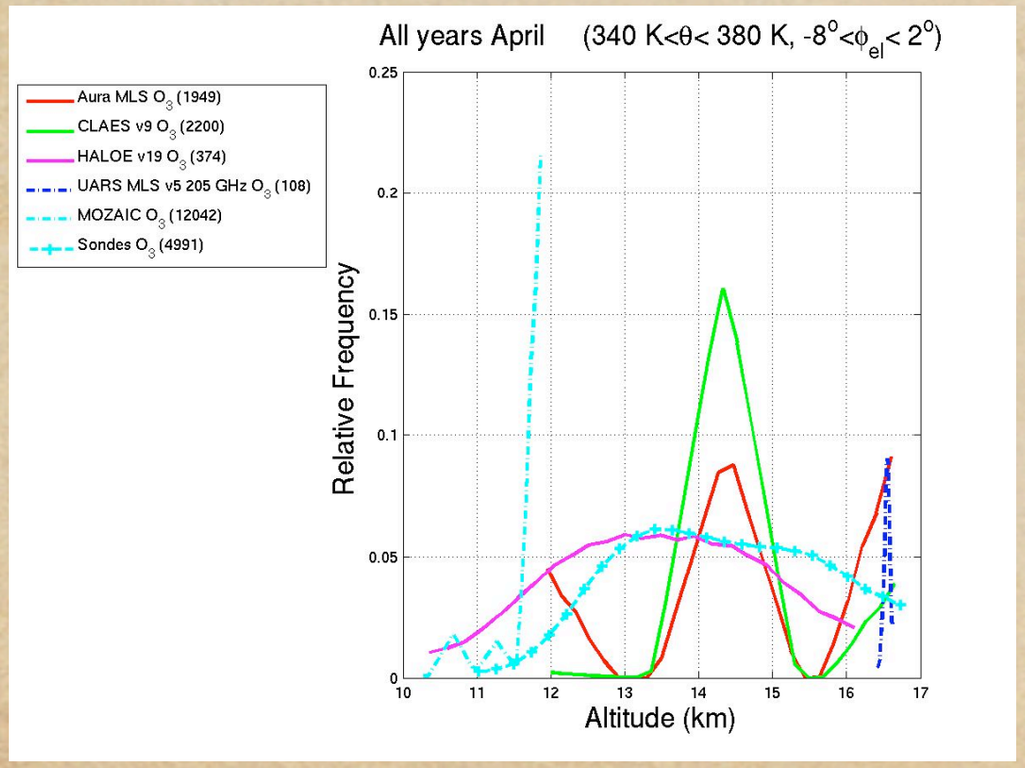
Historical Context

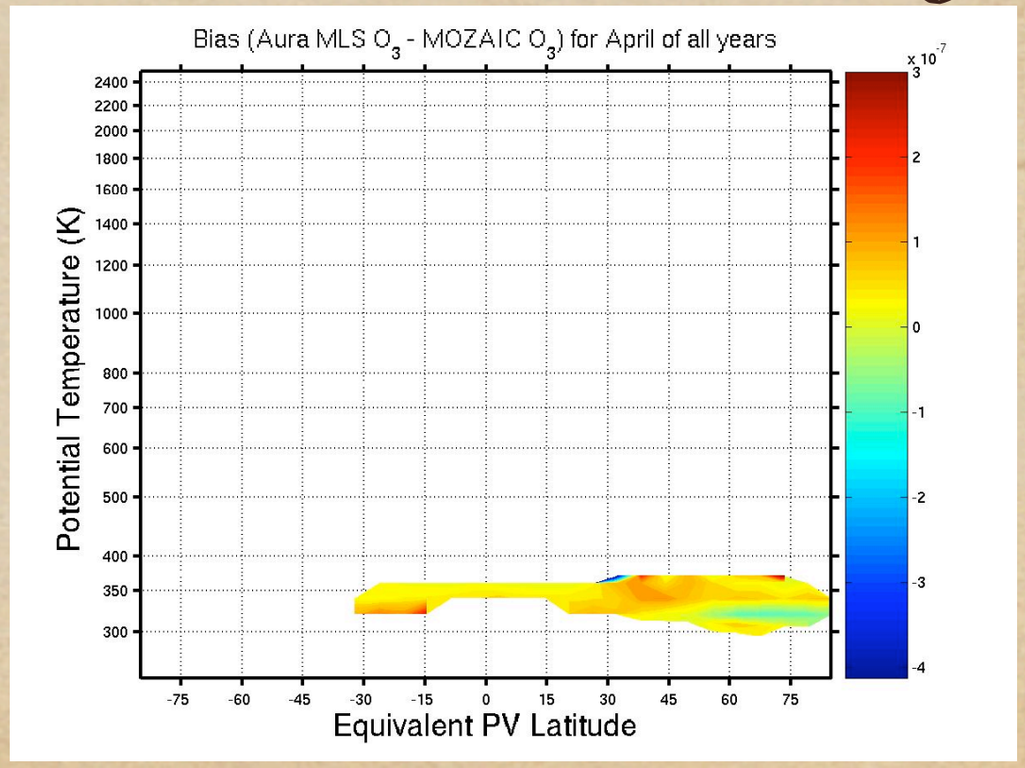
Ozone





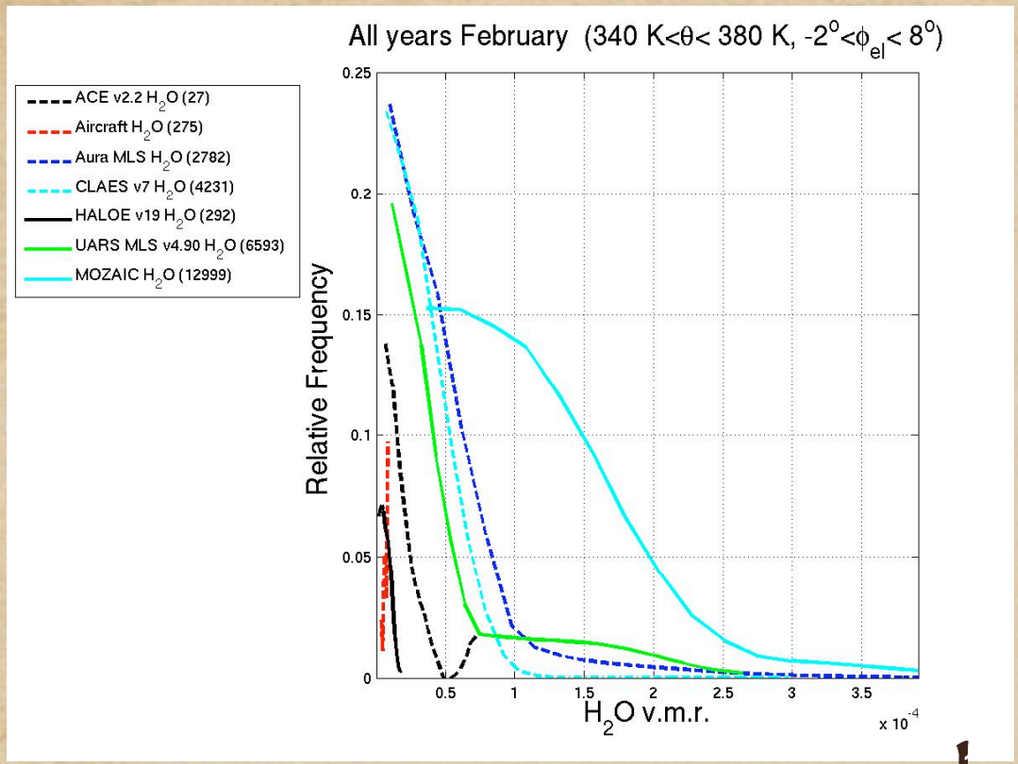
Agreement to within the known variability

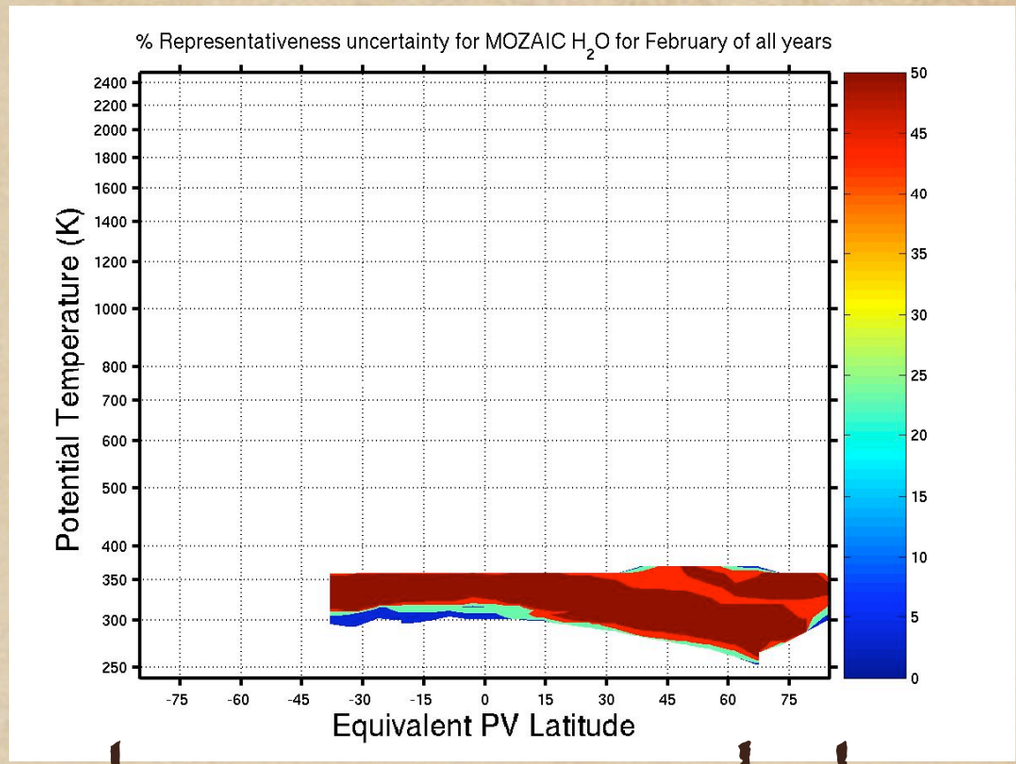




Historical Context

Water





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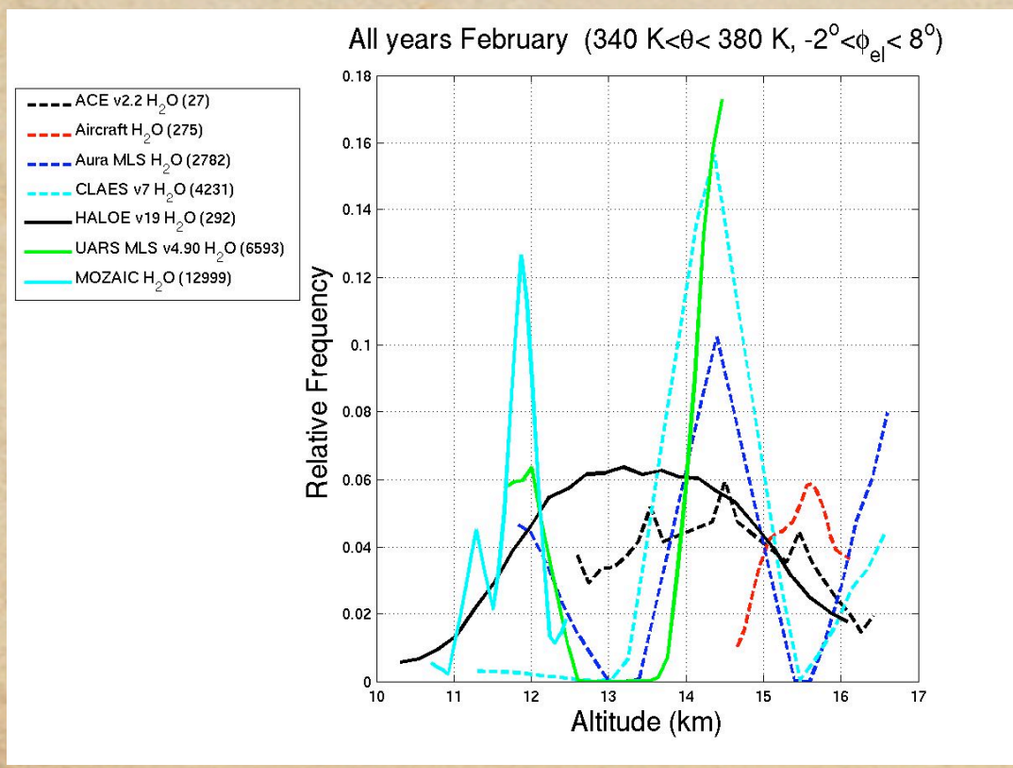

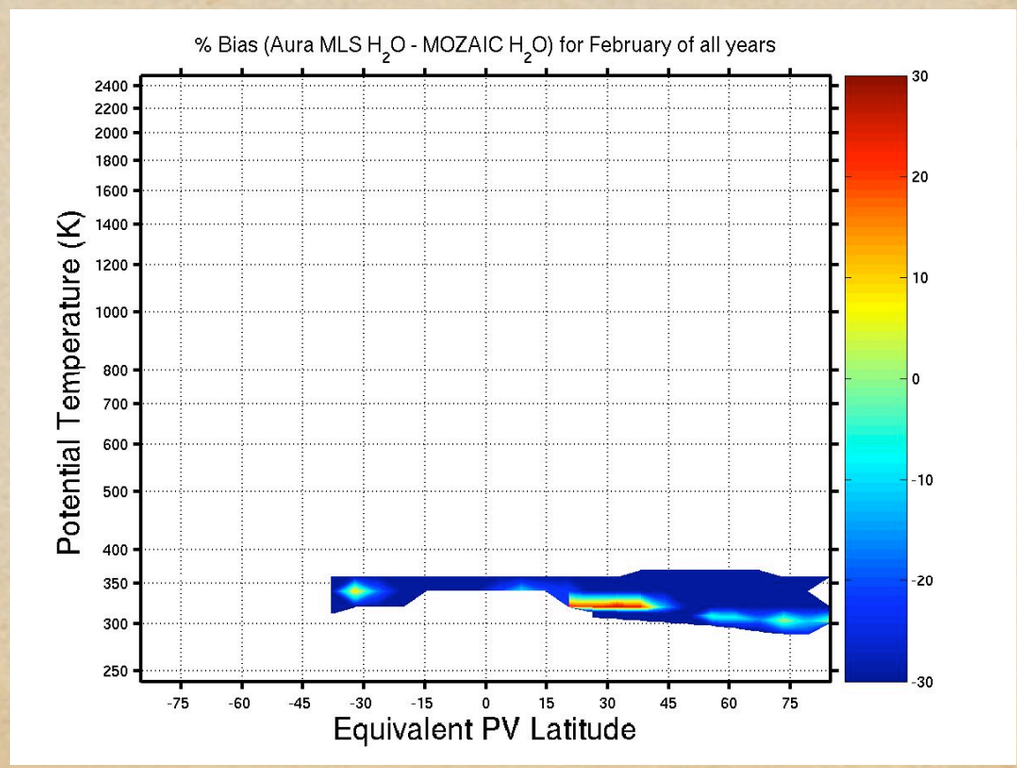

Good job Aura-MLS!

Demonstration of:

http://gest.umbc.edu/PDFCentral/