# *NCEP GDAS Relative Humidity and Forecasts*

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*24th CERES Science Team Meeting*
*Hampton, VA*
*5/1~3/01*

* Legacy NCEP global analysis puts out RH only up to 300mb.

* Since introducing T170/L42 model in Jan 2000, post processed RH analysis is up to 100 mb.

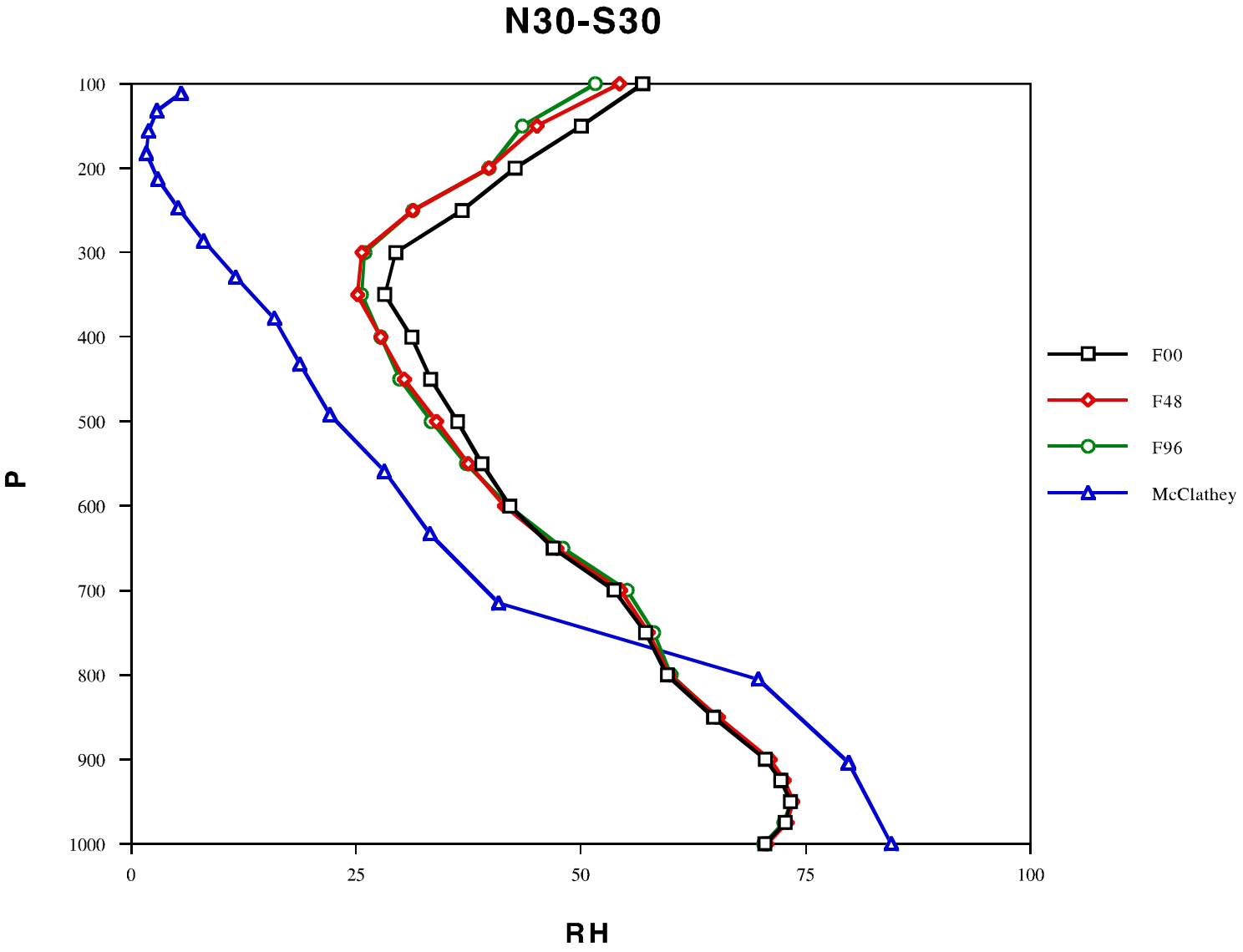
* Obs input to this level is mainly from HIRS water vapor ch. 12 (7.2 μm) in orbital swath.

* Mixing ratio to RH conversion is still w.r.t. water vapor pressure.

* NCEP To implement prognostic cloud scheme in May, 2001.

* Will also change mixing ratio to RH conversion w.r.t. various water phases.

* Period studies 3/7/01~4/4/01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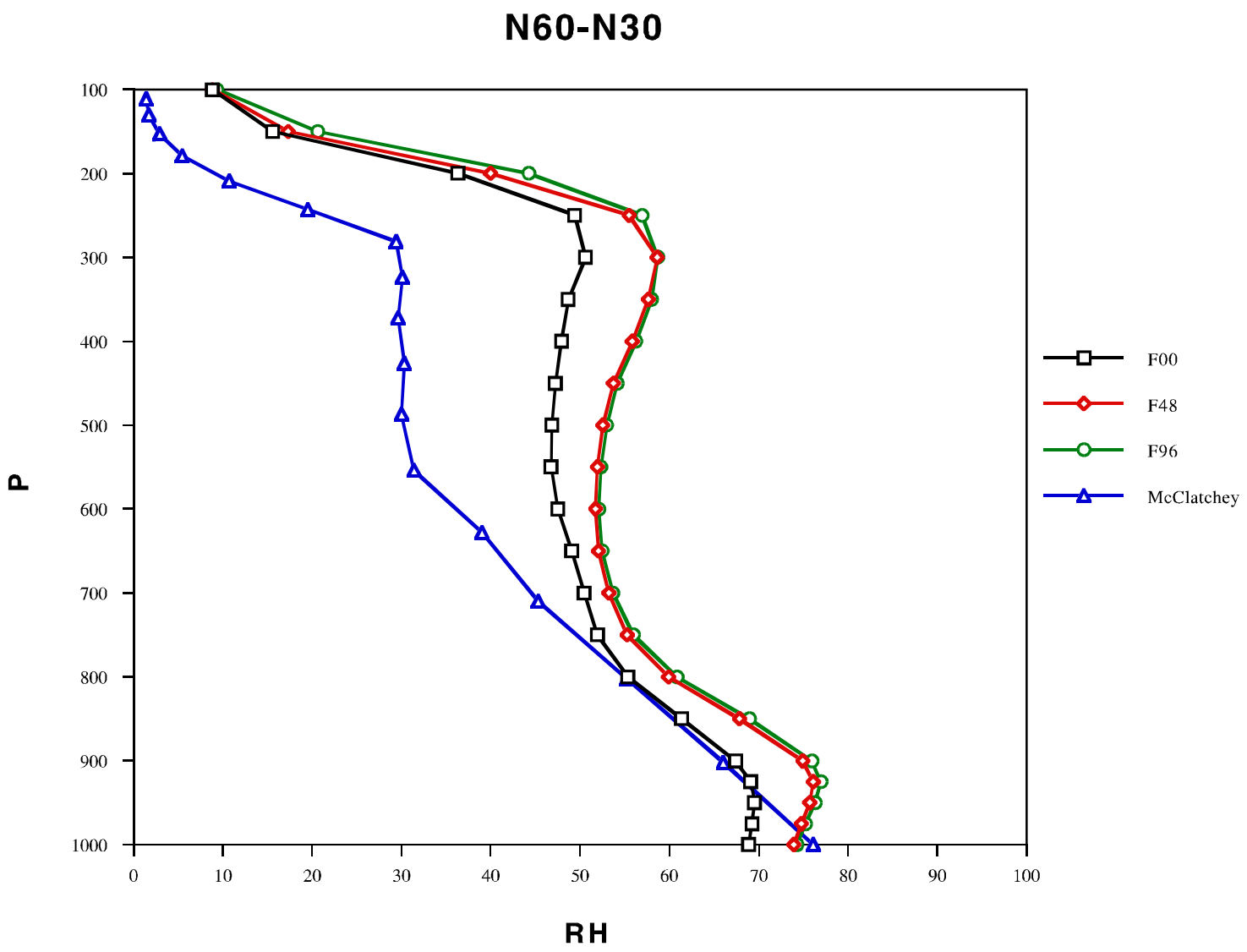
McClathey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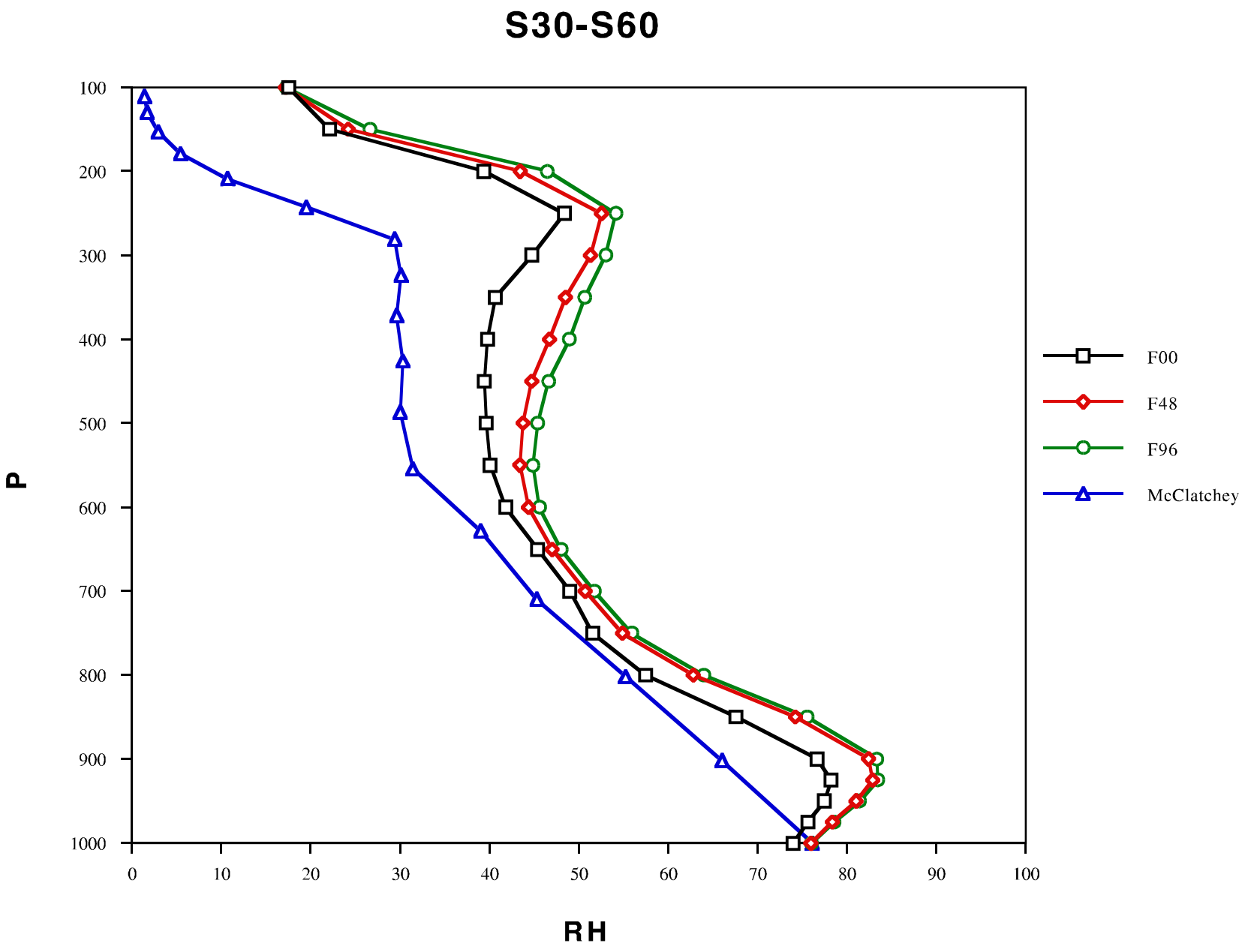
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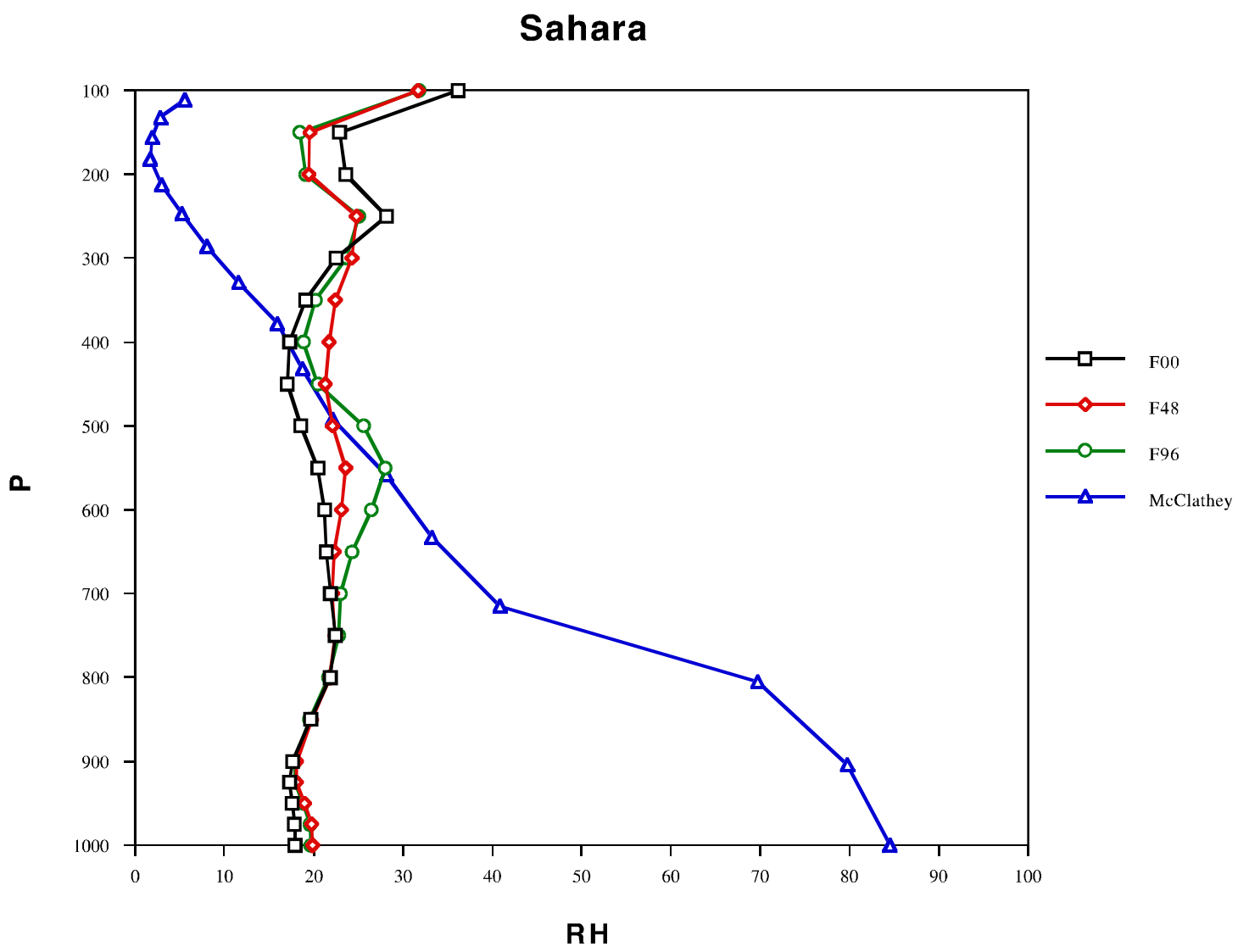
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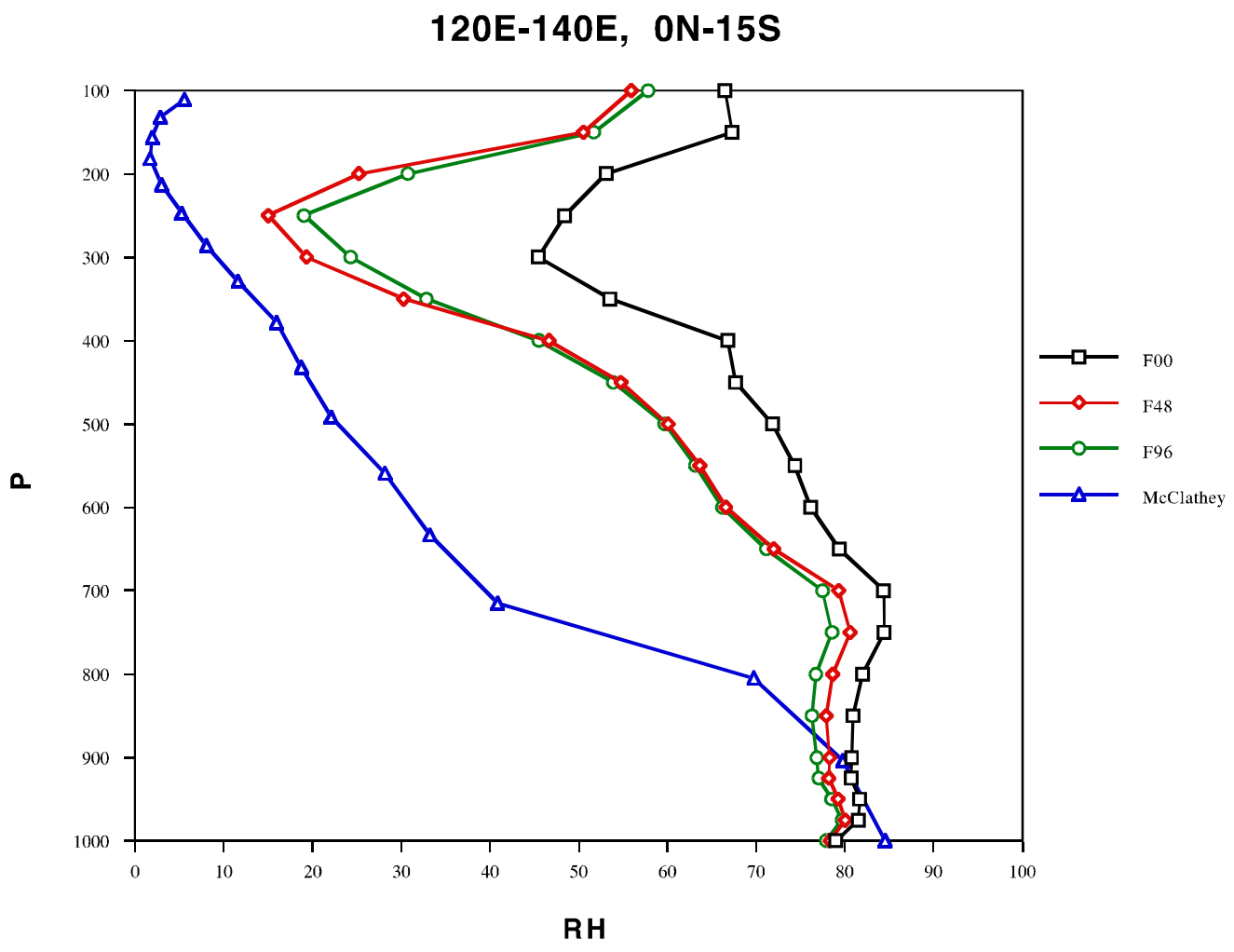
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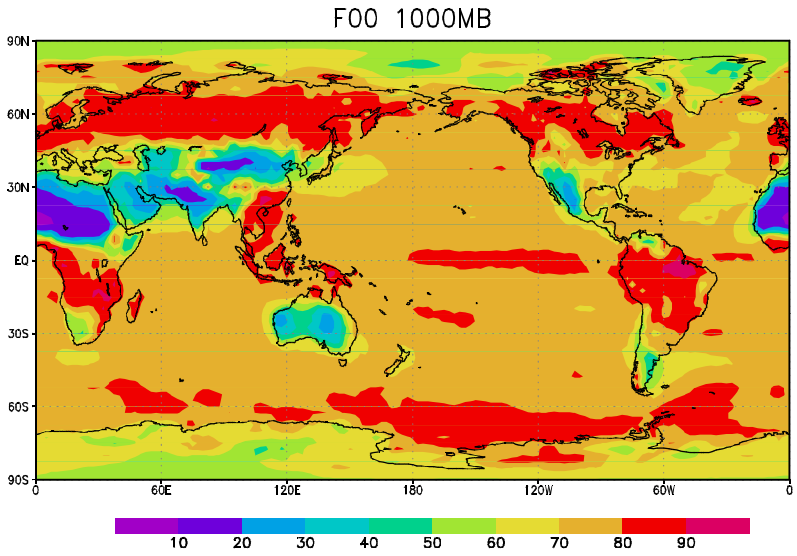
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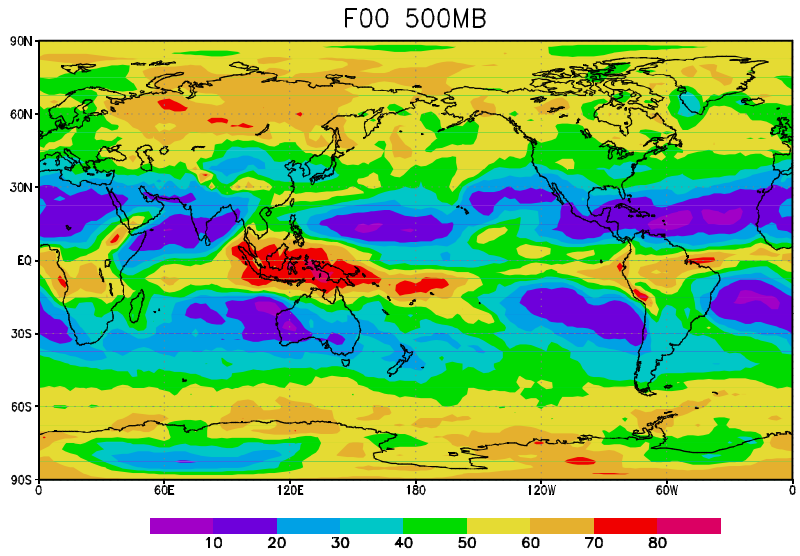
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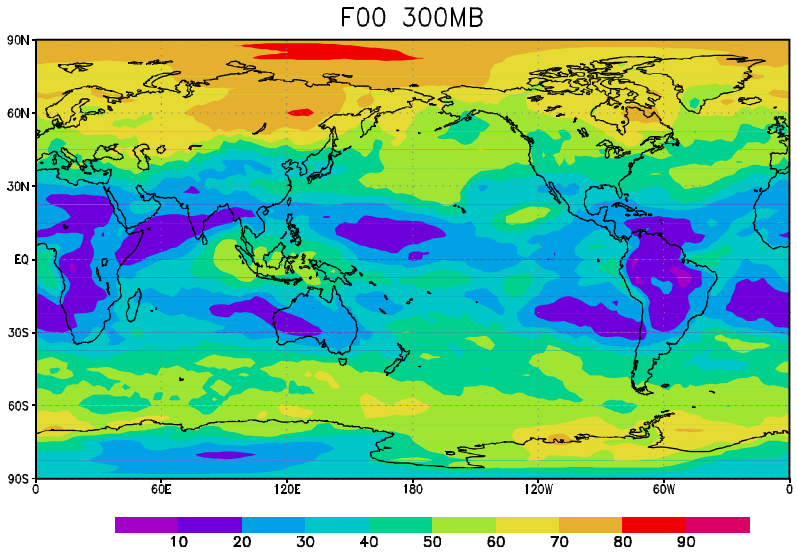
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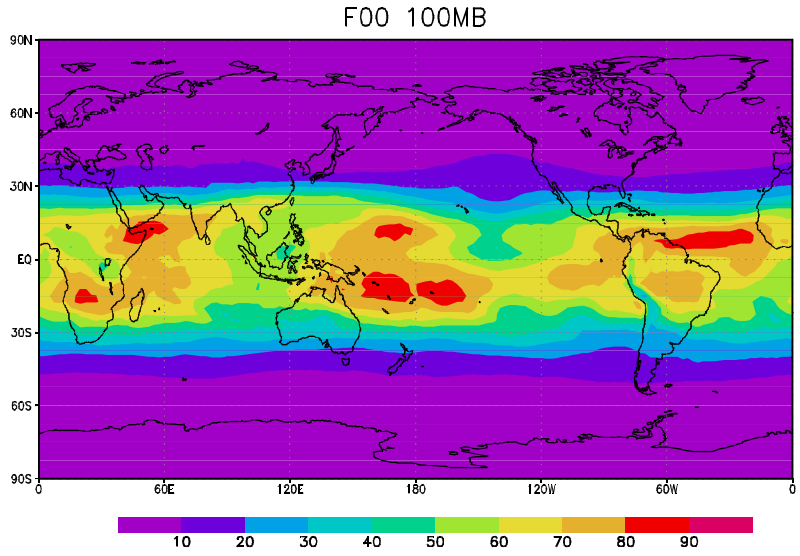
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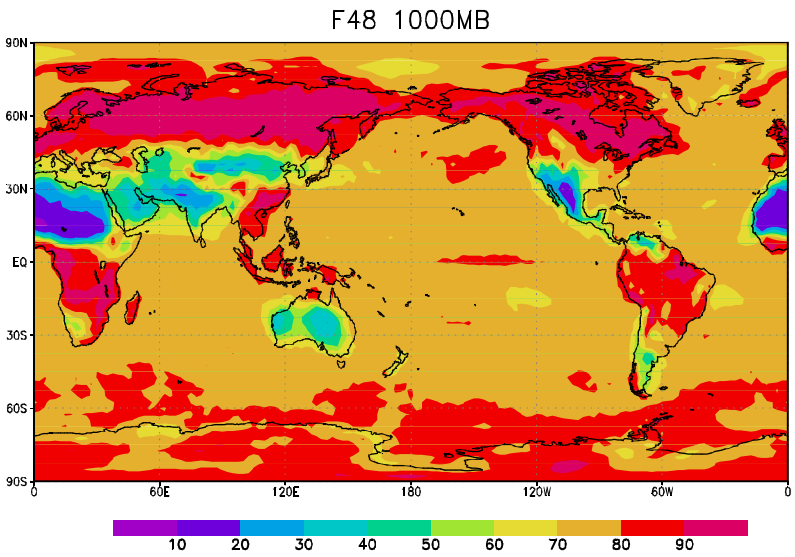
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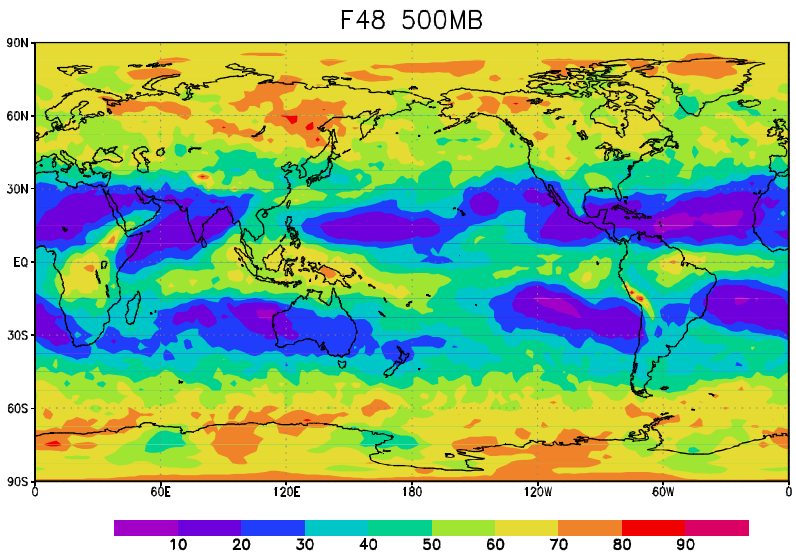
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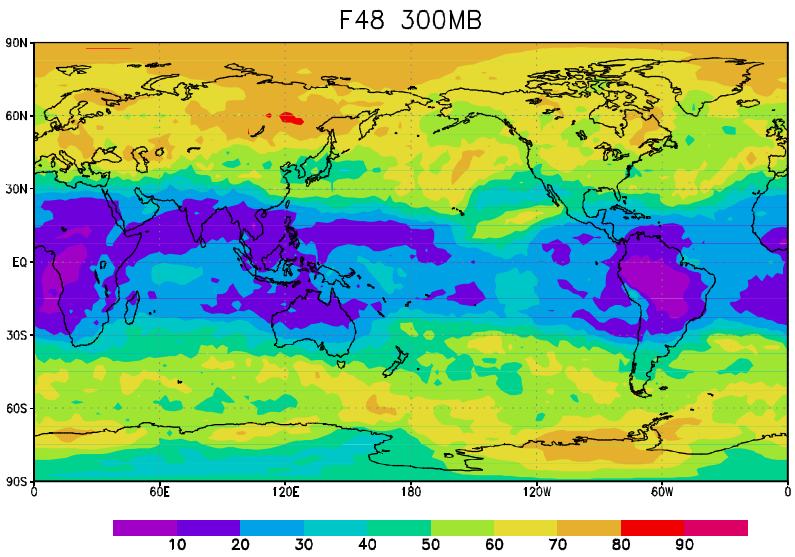
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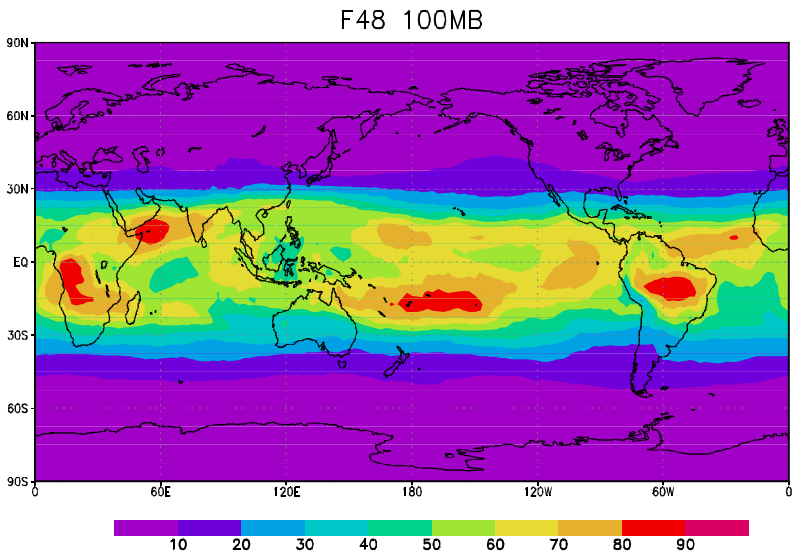
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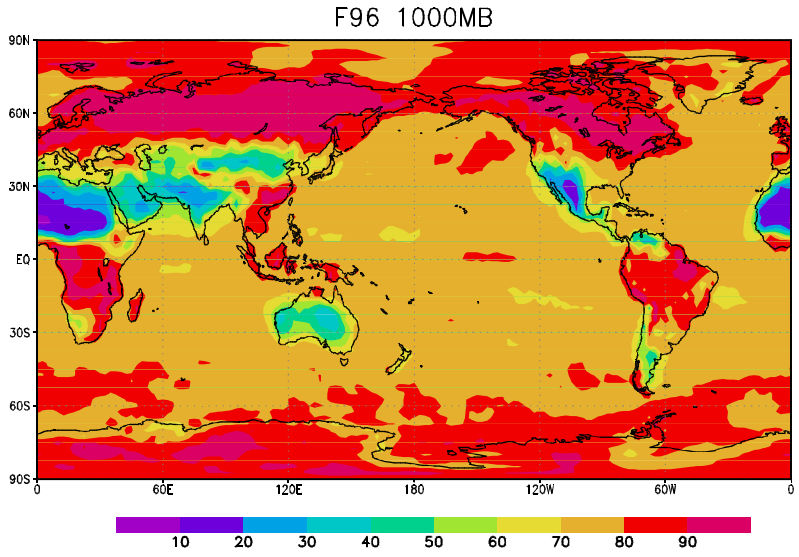
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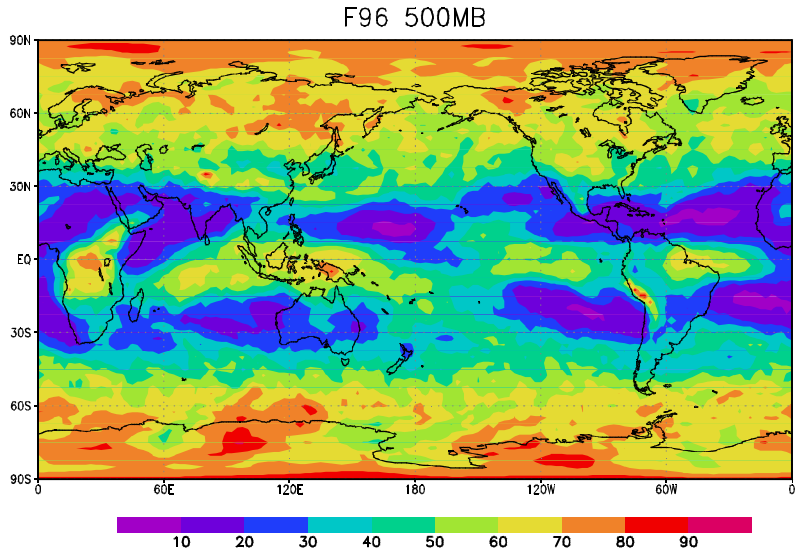
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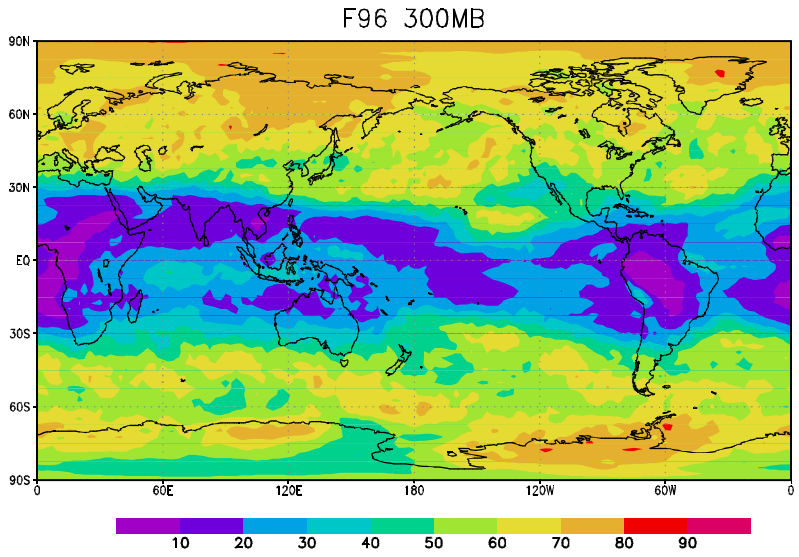
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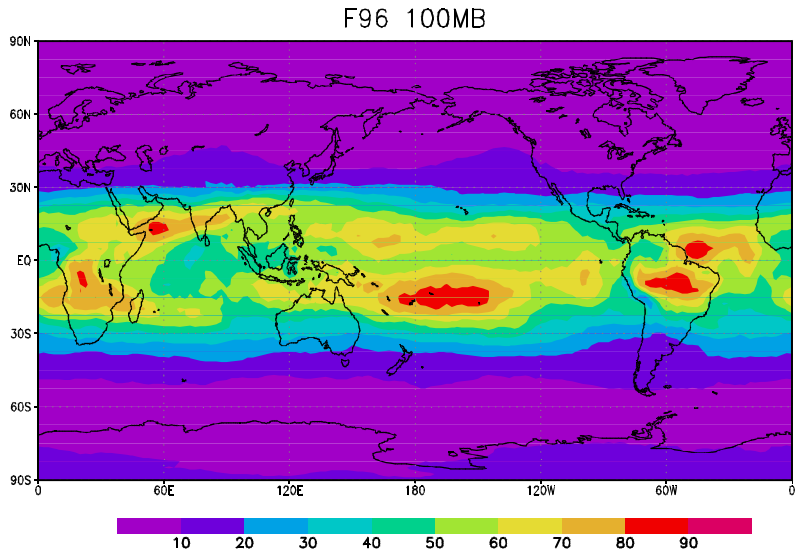
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## *Summary:*

*For forecasts:*

*current model exhibit drying in the tropics, moistening at the high latitudes for all levels.*

*1D vertical profiles:*

*Large area averaged profiles are wetter than McClatchey at the 400 hPa and above.*

*2D analysis:*

*Major convection centers, warm pool, Amazon and Congo, are the strongest sources of RH, and transporting to the higher latitudes in the lower levels, but not necessary in the high levels.*