CCMVal-2 Questionnaire: Atmosphere Model Structure

1. Identification

* 1. Please enter your memorable word - eg the name of your model. This is used to enable us to link the submissions you make in the different parts of the CCMVal questionnaire.

2. Atmospheric Variables

Prognostic and Diagnostic Variables

2. Enter your model's prognostic variables

- ∈ Temperature
- ∈ Potential Temperature
- ∈ Surface Pressure
- ∈ Log Surface Pressure
- ∈ mass (kg/m^2)
- ∈ Northward Wind
- ∈ Eastward Wind
- ∈ V Wind
- ∈ U Wind
- ∈ Meridional Velocity
- ∈ Zonal Velocity
- ∈ Velocity Potential
- ∈ Stream Function
- ∈ Vorticity
- ∈ Divergence
- ∈ Specific Humidity
- ∈ Specific Humidity of water vapour
- ∈ Water Vapour
- ∈ Total Water

- ∈ Atmospheric moisture (vapour, liquid and ice)
- ∈ Total Water Condensate
- ∈ Ice Water
- ∈ Liquid Water
- ∈ Grid box averaged liquid condensate amount
- ∈ Grid box averaged ice condensate amount
- ∈ Cloud Liquid Water
- ∈ Cloud Ice
- ∈ Cloud Fraction
- ∈ Mixing ratio of total cloud water
- ∈ Nitrous Oxide
- ∈ Methane
- ∈ CFC11
- ∈ CFC12
- ∈ SO2
- ∈ SO4
- ∈ DMS
- ∈ H2O2
- ∈ Ozone concentration

Other prognostic variables (please enter as a comma separated list)

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3. Enter your model's diagnostic variables

The list given below are the daily mean 2-D diagnostic variables from the IPCC standard Output for Coupled Ocean-Atmosphere GCMs.

http://www-pcmdi.llnl.gov/ipcc/standard_output.html

- air pressure at sea level
- air pressure at ground level
- precipitation flux (both liquid and solid phases)
- daily-minimum near-surface air temperature
- daily-maximum near-surface air temperature
- daily-mean near surface air temperature
- surface upward latent heat flux
- surface upward sensible heat flux
- surface downwelling longwave flux in air

- surface upwelling longwave flux in air
- surface downwelling shortwave flux in air
- surface upwelling shortwave flux in air
- eastward wind
- northward wind
- TOA outgoing longwave flux
- specific humidity
- relative humidity

Other diagnostic variables (please enter as a comma separated list)

3. Basic Model Approximation

4. What is your model's basic approximation?

- ⬚ Primitive Equation
- ⬚ Quasi Geostrophic
- ⬚ Other

Other: Enter a short description of your model's basic approximation

5. Enter a reference for the basic model approximation

doi	
Author(s)	
Year	
Title	
Journal	
Volume	
Pages	

6. Is the reference a book?

- ⬚ Yes
- ⬚ No

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7. Enter a link to a web page with further information

4. Horizontal Discretisation

8. What kind of horizontal discretisation method does your model use?

- jn Spectral
- jn Fixed Grid
- jn Other

5. Horizontal Discretisation

Spectral Resolution

9. Enter the triangular truncation wave number of your model.
If your model has a spectral resolution of T159 then enter 159.

6. Horizontal Discretisation

Fixed Grid Resolution

10. Enter the horizontal resolution of your model grid

Number of zonal grid boxes

Number of meridional grid boxes

7. Horizontal Discretisation

Other Horizontal Discretisation

11. Enter a short description of your horizontal discretisation method

12. Enter the horizontal resolution of your model

13. Enter a reference for the horizontal discretisation method

doi

Author(s)

Year

Title

Journal

Volume

Pages

14. Is the reference a book?

ⓙ Yes

ⓙ No

15. Enter a link to a web page with further information

8. Vertical Discretisation

16. How many vertical levels does your model have?
Where is the upper boundary of your model?

number levels

Top model level (hPa)

17. What kind of vertical coordinate system does your model use?

ⓙ Fixed pressure surfaces

ⓙ Sigma layers

ⓙ Hybrid sigma-pressure layers

ⓙ Other

Other: Enter a short description of your vertical discretisation method

18. Enter a reference for the vertical discretisation method

doi

Author(s)

Year

Title

Journal

Volume

Pages

19. Is the reference a book?

ⓙ Yes

ⓙ No

20. Enter a link to a web page with further information about your vertical discretisation method

9. Time Step

21. Enter the time step of your atmosphere model

Time step (hours)

10. Thank you

CCMVal-2 Questionnaire: Atmosphere Model Structure

Thank you for completing the Atmosphere Model Structure part of the CCMVal questionnaire.

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