NCMRWF Reanalysis Data Service Web portal Version 0.7

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IMDAA – WRF

1. log in to https://rds.ncmrwf.gov.in and choose **"IMDAA 1-Hourly Single Level Dataset"**, then select the below variables
   1.1. 10m U-Component of Wind
   1.2. 10m V-Component of Wind
   1.3. 2m Temperature
   1.4. Surface Temperature (skin)
   1.5. Mean Sea Level Pressure
   1.6. Surface Pressure
   1.7. 2m Relative Humidity
   1.8. Soil Temperature Layer1 (0-0.1 m below ground)
   1.9. Soil Temperature Layer2 (0.1-0.35 m below ground)
   1.10. Soil Temperature Layer3 (0.35-1 m below ground)
   1.11. Soil Temperature Layer4 (1-3 m below ground)
   1.12. Land Cover (Land Sea Mask)

2. Choose year, month, day, hour. For, example, 2000 (year), January (month), 01 (day), and 6 hourly intervals (00, 06, 12, 18) or 3 hourly intervals (00, 03, 06, 09, 12, 15, 18, 21)

3. Select "GRIB" file format

4. Select either the whole region or subset (use lat, lon box to reduce the domain). But make sure your simulation domain lies within the IMDAA domain.

5. Click the Submit button. After a successful process of submitting a query, you will receive an email with a data download link (wget shell script). Download and run that .sh script, it will download multiple GRIB2 files. (Make a new folder and keep the .sh script inside that folder, then execute the script).

6. Now again choose **"IMDAA 3-Hourly Pressure Level Dataset"**, then select the below variables

6.1. U-Component of Wind
6.2. V-Component of Wind
6.3. Temperature
6.4. Geopotential Height
6.5. Relative Humidity
6.6. Vertical velocity

7. Select “all pressure levels”

8. Select the same year, month, day, hour, and intervals (**same as in step 2**)

9. Select “GRIB” file format

10. Click the Submit button. After a successful process of submitting a query, you will receive an email with a data download link (wget shell script). Download and run that .sh script, it will download multiple GRIB2 files. Make sure to keep the .sh script inside the previously created folder (where surface fields GRIB2 files are downloaded), then execute the script.

11. If you are using the WRF_IMDAA git repository, please keep all downloaded files (both single-level datasets and pressure-level datasets) in a single folder, this is required while running the script.

12. Note: You may choose other variables as well if you have a proper Vtable entry.

13. To run the WRF model using IMDAA data as the initial and lateral boundary conditions, use the instructions given in the following GitHub link:
https://github.com/NCMRWF/WRF_IMDAA

This page will be updated in the future if required.