

WGNE

(https://www.wmo.int/pages/prog/arep/wwrp/rescrosscut/resdept_wgne.html)

WGNE is supporting **numerical experimentation research activities** of the

- WMO/ICSU/IOC-UNESCO World Climate Research Programme (**WCRP**)
- WMO World Weather Research Programme (**WWRP**)
- WMO Global Atmosphere Watch Programme (**GAW**)
- research links to operational **weather and climate** prediction

The Working Group on Numerical Experimentation (WGNE), **jointly established by the WCRP Joint Scientific Committee (JSC) and the WMO Commission for Atmospheric Sciences (CAS)**, which is responsible for WWRP and GAW.

WGNE

“...responsibility of

- fostering the **development of atmospheric circulation models**
- for use in weather, climate, water and environmental prediction **on all time scales** and
- **diagnosing and resolving shortcomings**

WGNE promotes co-ordinated numerical experimentation for

- **validating** model results
- exploring the natural and forced **variability and predictability** of the atmosphere
- refining **numerical techniques**
- and the formulation of atmospheric **physics processes**

WGNE also

- **monitor the advances in data assimilation** and analysis methods
- is the focal point in the WCRP for encouraging and reviewing the reanalysis projects... and homogenous **data set for a range of atmospheric and climate diagnostic studies”**

WGNE

In sum, main mission is to help

improve numerical models

through

- *advice*
- *liaison*
- *co-ordination of experiments*
- *promotion of workshops, publications, meetings*

WGNE

Ongoing activities

- *WGNE Exercise: Evaluating **Aerosols Impacts** on Numerical Weather Prediction*
- *The **Drag Project***
- *The **MJO Task Force***

and publications

- *WGNE **Blue Book**: Research Activities in Atmospheric and Ocean Modelling*

WGNE

Objectives achieved thanks to participation / contribution / help from all members:

- *leading projects*
- *acting as liaison*
- *coordinating activities*
- *representing WGNE*
- *reporting back to WGNE*

*(Please note: WGNE needs help from **all** members)*

CAS

WCRP JSC

GAW

WWRP

WGNE

WGCM

CMPI

JWGFVR

PPP/YOPP

PDEF

DAOS

S2S

HIW

**Nowcasting
mesoscale WG**

**Tropical meteo
research**

MJO-TF

Drag Project

Aerosol Project

SPARC

GEWEX

GASS

GLASS

Acronyms

CAS = Commission of Atmospheric Sciences

WCRP = World Climate Research Programme

WCRP JSC = Joint Scientific Committee

WCRP Grand Science Challenges

- Clouds, Circulation and Climate Sensitivity
- Melting Ice and Global Consequences
- Climate Extremes
- Regional Sea-Ice Change and Coastal Impacts
- Water Availability

WWRP = World Weather Research Programme

SPARC = Stratospheric Processes and their Role in Climate
WGCM = Working Group on Coupled Modelling
GEWEX = Global Energy and Water Cycle Experiment
YOPP = Year of Polar Prediction
PPP = Polar Prediction Project
GOV = Global Ocean Data Assimilation Experiment (GODAE)
Ocean View
MJO-TF = Madden-Julian Oscillation Task Force
CMIP = Coupled Model Intercomparison
JWGFVR = Joint Working Group on Forecast Verification
Research
CMDP = Climate Metrics and Diagnostic Panel
GASS = Global Atmospheric System Studies panel
GLASS = Global Land-Atmosphere System Studies panel
PDEF = Working Group on Predictability, Dynamics and
Ensemble Forecasting
DAOS = Working Group on Data Assimilation and Observing
Systems
S2S = Subseasonal to Seasonal Prediction Project