

GCM-CFS Seasonal Model

Statistic-deterministic model based on global atmospheric (GFS 2.5°) coupled with ocean model (MOM3)

Atmosferic model (GFS COARSE RESOLUTION)

Orizzontal resolution	Triangular truncation (spectral) about 200 km (T62)
Vertical resolution	64 sigma level, system (top at 0.2 hpa)
Domain	GLOBAL
Parameterization	Radiative balance and radiative flux (Hou ,1996-2002), vertical diffusion in ABL(Hong – Pan ,1998), Cumulus convention (Hong-Pan ,1998), Gravity wave drag (Kim – Arakawa ,1995) Cloud condensation diagnostic scheme (Zhao-Carr 1997-Sundquist,1989-Moorthi ,2001)

Oceanic Model (MOM3)

Orizzontal resolution	Spherical coordinate with 1° zonal resolution, 0.3° southern in the 30°NS area , 1° elsewhere
Vertical resolution	Z-coordinate , B Arakawa B grid, 40 vertical level
Domain	74°S – 64°N
MOM3 features	Vertical mixing (Profile K non-local,Large 1994), horizontal mixing (isoneutral method - McWilliams 1990),horizontal momentum mixing
Domain atmosphere-ocean	Cut at 65S – 50N
Time step	1 day
SST in the atmospheric model	Interpolated with a mean on GFS and climatological data; the polar area SST is calculated on climatological data
Ice cover	Climatological data on last 24 year
Assimilation data	GODAS (3D variational tec. – Derber, Rosati 1989),
GODAS Forcing	Heat flux (Q), buoyancy flux(E-P), wind stress vector (tau)

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OUTPUT PARAMETER

CLASS	OUTPUT PARAMETER
PRECIPITATION	Precipitation monthly anomaly and weekly mean value
TEMPERATURE	Temperature monthly anomaly and weekly mean value
PRESSURE	Mean sea level pressure monthly anomaly and weekly mean value
WIND	Mean 10 m wind monthly anomaly and weekly mean value
GEOPOENTIAL	monthly anomaly - 850 hpa 500 hpa level