Table of Abbreviation

ACOR	:	Anomaly COrrelation Coefficient
AGCM	:	Atmospheric General Circulation Model
BGM	:	Breeding of Growing Mode
CMIP5	:	Coupled Model Intercomparison Project phase 5
COBE-SST	:	Centennial in-situ Observation-Based Estimates of the variability of Sea Surface Temperature and marine meteorological variables
CPD	:	Climate Prediction Division
D_{Z500}	:	Difference Z500 field between perturbed and control runs
ECMWF	:	European Centre for Medium-range Weather Forecasts
ERA-interim	:	European Centre for Medium-Range Weather Forecasts reanalysis data interim version
GANAL	:	(Japan Meteorological Agency) Global ANALysis data
GSM	:	(Japan Meteorological Agency) atmospheric Global Spectral Model
GSM0103	:	previous version of GSM whose forecasted data was used in Mukougawa et al.
JCDAS	:	Japan Meteorological Agency Climate Data Assimilation System
JMA	:	Japan Meteorological Agency
JMA-EPS	:	Japan Meteorological Agency -Ensemble Prediction System (operated in 2001 with GSM0103)
JRA-25	:	Japan ReAnalysis (25-year version)
LAF	:	Lagged Average Forecast
MRI	:	Meteorological Research Institute
MRI-EPS	:	Meteorological Research Institute -Ensemble Prediction System
MRI-ESM1	:	Meteorological Research Institute Earth System Model version 1
N	:	normalized perturbation
NCAR	:	National Center for Atmospheric Research
NCEP	:	National Centers for Environmental Prediction
NH	:	Northern Hemisphere
NMC	:	National Meteorological Center in the United States
No	:	orthonormalized perturbation
NTS	:	Abbreviation of NH+TR+SH
NT	:	Abbreviation of NH+TR
NuSDaS	:	Numerical weather prediction Standard Data-set System (in Japan Meteorological Agency)
NWP	:	Numerical Weather Prediction
PDF	:	Probability Distribution Function

RMSE	:	Root Mean Square Error
Pre-BGM	:	a cycle which are performed previously for BGM cycle
SAM	:	Southern Annular Mode
SH	:	Southern Hemisphere
SiB	:	Simple Biosphere Model
SPREAD	:	Ensemble spread
SST	:	Sea Surface Temperature
SSW	:	Stratospheric Sudden Warming
SV	:	Singular Vector
SVD	:	Singular value decomposition
T_0	:	start time of BGM cycle shown in Fig.2
T_{p0}	:	start time of pre-BGM cycle shown in Fig.2
TR	:	Tropical Region
Z500	:	500-hPa geopotential height
χ200	:	velocity potential at 200 hPa level