

## Atmospheric Seasonal Predictability by METRI AGCM

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Atmospheric seasonal predictability is investigated using Meteorological Research Institute (METRI) Atmospheric General Circulation Model (AGCM) which has horizontal resolution of  $4^\circ \text{ lat} \times 5^\circ \text{ lon}$ , and vertical resolution of 17 layers from the surface up to 1 hPa. Combination of 9-member time lagging (Lagged Average Forecasting) method is performed for a period of four months from 1979 to 2001 using observed sea surface temperature (SST) for the boundary condition during the time integration.

The changes of METRI AGCM are included as follows,

1. New surface albedo parameterization;
2. Cloud optics correction;
3. New method for solving linear equation system related to delta-Eddington two stream method;
4. Background aerosol parameterization.

The results are compared and verified by using several methods such as anomaly correlation coefficient, root mean square error, and sign detection rate (SDR), to obtain the prediction skill.