

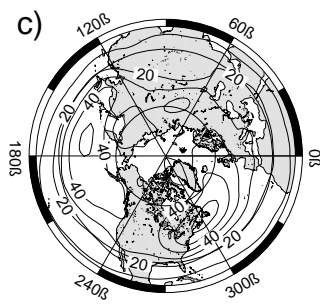
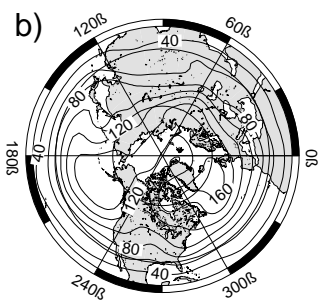
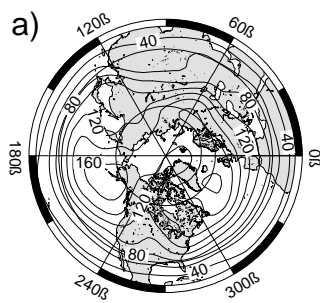
Supporting Information for

Ghil, M., and A.W. Robertson (2002) *Proc. Natl. Acad. Sci. USA*, **99** (Suppl. 1), 2493–2500 (10.1073/pnas.012580899).

Fig. 6. Maps of Northern Hemisphere (NH) 500-hPa height variance for the winter months (December, January, and February) and the years 1958–1999, computed from NCEP/NCAR reanalysis data. (a) Total, (b) low-pass (>10 days), and (c) band-pass (2.5–6 days). The variance is computed at each point and plotted as rms, i.e., as standard deviation at each point. Contour interval = 20 m (a and b) and 10 m (c).

Fig. 7. Observed intraseasonal oscillations: log-linear spectral plot of banded atmospheric angular momentum (AAM) as calculated from National Meteorological Center data and averaged over 13 years (1976–1988) and all seasons. (a) The NH extratropics. (b) The tropics. (c) The Southern Hemisphere extratropics. Each spectrum is compared with the appropriate red-noise process (i.e., an auto-regressive process of order one with the same variance and lag-one auto-correlation as the corresponding time series), and the mean and 95% confidence limits of this process are indicated. Note the difference in the linear scale on the ordinate, from panel to panel. [Reproduced with permission from Dickey, J. O., Ghil, M. & Marcus, S. L. (1991) *J. Geophys. Res.*, **96**, 22643–22658 (Copyright 1991, American Geophysical Union).]

Fig. 8. Bifurcation diagram of a 25-mode quasi-geostrophic model on the sphere. The potential energy of the solutions is plotted against a nondimensional measure of the forcing. The stability properties of the three steady-state branches are indicated as follows: x, stable; open circles, exponential instability; +, oscillatory instability; dot, three or more unstable modes. Notice the oscillatory instability on the blocking branch for fairly low forcing. The Hopf bifurcation occurs at $\square \square 0.1$ (not shown). [Reproduced with permission from Legras, B. & Ghil, M. (1985) *J. Atmos. Sci.*, **42**, 433–471 (Copyright 1985, American Meteorological Society).]



NMC DATA

