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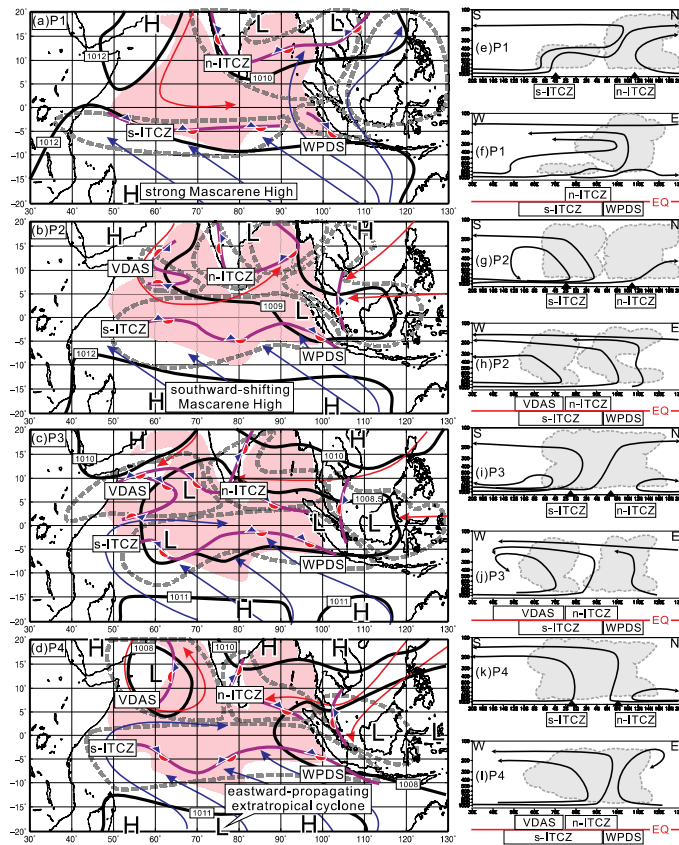


Figure 11. Schematic illustrations of the initiation processes of the MJO event in late October in 2011 for the stages of P1 (convectively suppressed), P2 (developing convection just before MJO onset), P3 (developing convection just after MJO onset), and P4 (mature MJO convection).

- The initiation processes of the October-MJO during CINDY2011 that consisted of four distinct convective components are schematically illustrated in Figure 11.
- The equatorially anti-symmetric features of the MJO (Fig. 11b) were due to distinct dynamical features of the four convective components: s-ITCZ (the southern intertropical convergence zone) between 10°S and 0° along the meridional sea surface temperature gradients, n-ITCZ at the southern edge of the high SST above 29°C over the Bay of Bengal, VDAS (vortex disturbance over the Arabian Sea) in association with the zonal SST gradients, and WPDS (westward-propagating diurnal convection originating from Sumatra WPDS).
- A single larger-scale upward motion of the MJO was barotropically formed over the equator as a result of the merging of the four convective components in association with the weakening of the Mascarene High (Fig. 11c) and the propagating of the extratropical cyclone in the Southern Hemisphere (Fig. 11d).