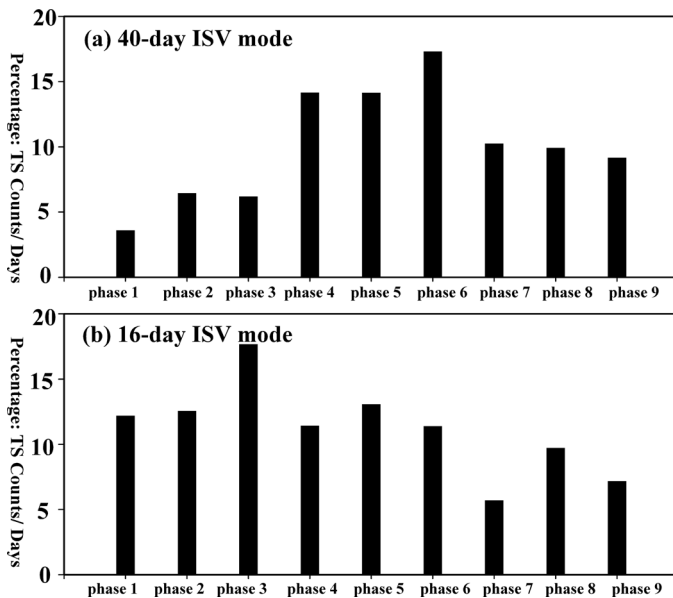
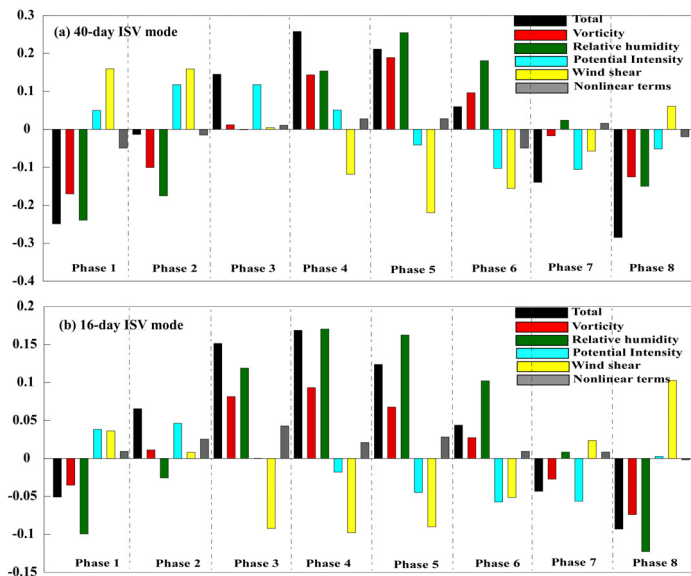


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<https://doi.org/10.2151/jmsj.2015-006>



←
Figure 1 TC genesis rate (TC counts/ ISO days) during the different MJO (a) and QBWO (b) phases over the WNP basin. Phase 1 to 8 for strong MJO and QBWO phases while phase “9” represents weak MJO or QBWO phase.



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Figure 2 Contributions of the four terms to the total observed GPI anomalies over the WNP basin as a function of MJO (a) or QBWO (b) phase.

- A majority of TC geneses over the WNP is found to occur during the period when both of these two modes are active (Fig.1), suggesting a joint influence of these two ISV modes on TC genesis over the WNP.
- Modulation of TC genesis over the WNP by the two leading ISV modes can be well depicted by the genesis potential index (GPI) (Fig.2).
- Further investigations indicate that while in general, the low-level absolute vorticity and mid-level relative humidity are the two most important factors affecting WNP TC genesis, relative roles of the four GPI factors tend also to be dependent on the ISV phases (Fig.2).