

EGU22-2285, updated on 19 Aug 2022

<https://doi.org/10.5194/egusphere-egu22-2285>

EGU General Assembly 2022

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## Rossby wave teleconnections to rainfall anomalies over Vietnam

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Remote influences on extreme anomalous rainfall over North and South Vietnam during extended summer (May-October) are explored using a 38-year (1979-2016) ERAi global dataset. Composite WET and DRY events with lags of up to two weeks are assembled for rainfall indices over subregions of Vietnam. The large-scale dynamical precursors to these events are explored through diagnostics of the extratropical flow.

Rainfall extremes of opposing signs show asymmetrical large scale precursors and different pathways of influence. Both WET and DRY events over North Vietnam are seen to originate from Europe and propagate either at high latitudes or along the Asian Jet. A persistent Siberian High is linked with WET events over North Vietnam. Anomalies also develop along the Asian Jet for both regions, but only for DRY events over South Vietnam. Events over South Vietnam are also much more influenced by tropical precursors.

The Dynamical Research Empirical Atmospheric Model (DREAM) was used to examine pathways of influence to the circulation over Vietnam sub-regions in the medium range. A set of stationary wave experiments was conducted with artificial heat sources in different locations around the world, using ERAi summer climatology as a basic state. Influence functions with respect to upper-level divergent flow over the target regions of North and South Vietnam indicate two different pathways: extratropical wave-trains and tropical waves. For North Vietnam, heat sources over Europe give the most influence after 15 days. For South Vietnam, the influence is much weaker and significant precursors are more likely to be tropical Kelvin wave sources.