



Characteristics of Upper-level Cyclogenesis Precursors

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Surface cyclogenesis in the extratropics is often linked to tropopause-level flow features that take the form of small-scale troughs and/or jet streaks. These precursor features are in turn usually associated with transient fine-scaled positive potential vorticity (PV) structures within the stratospheric part of the "middle-world".

The present study is prompted by the significance and prevalence of these precursor features, and constitutes a preliminary examination of their general characteristics.

Consideration is given to aspects of (a) the dynamical distinctiveness of the stratospheric middle-world and (b) the nature of the precursors (including their geographical distribution, structure, duration and movement).

The accrued information should help to shed light on the origin and dynamics of the precursor, and concomitantly on an earlier phase of the associated cyclogenesis.