

# Supporting Information for "Quasi-10-day wave and semi-diurnal tide nonlinear interactions during the southern hemispheric SSW 2019 observed in the northern hemispheric mesosphere"

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1. Figures S1 to S2

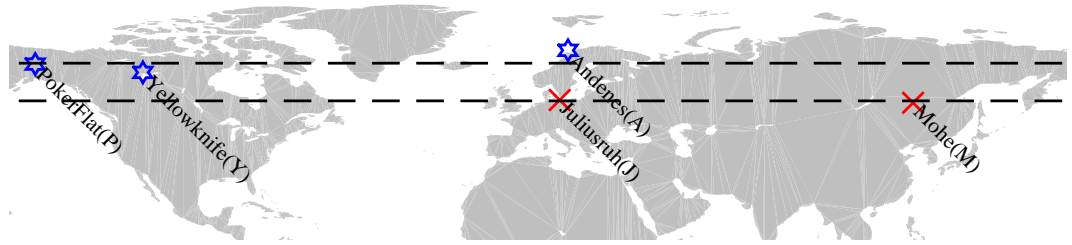
## Additional Supporting Information (Files uploaded separately)

Captions for Figures S1 to S2.

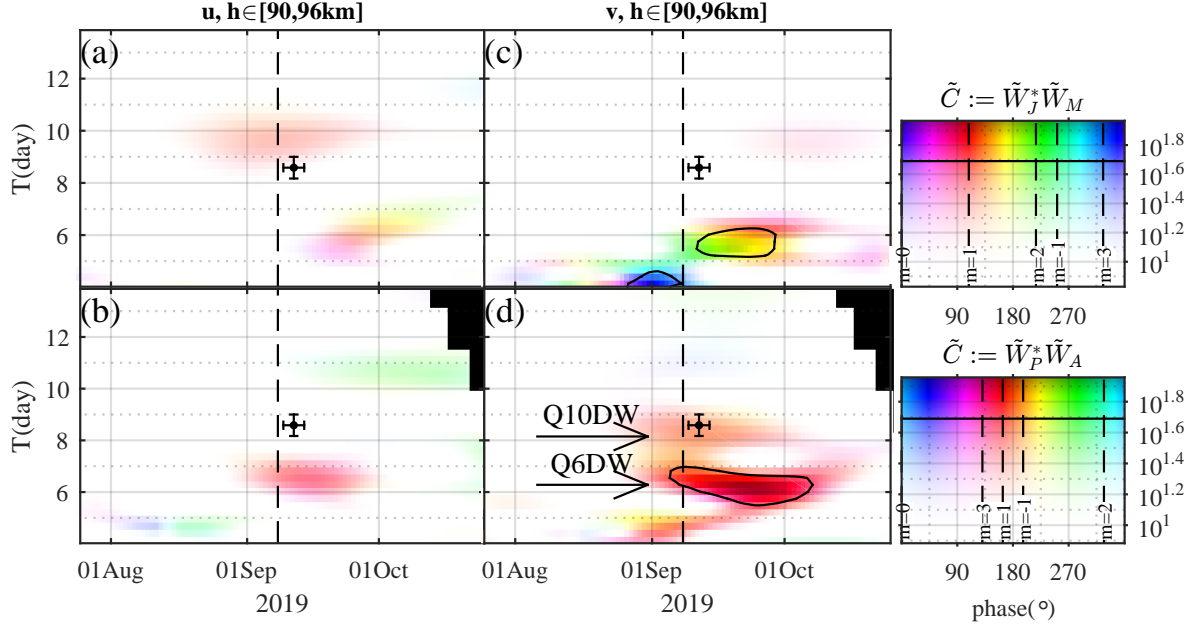
## Introduction

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This SI comprises two figures. Figure S1 illustrates the geographical distribution of the radars used in the current study. Figure S2 illustrates the existence of RWNs, Q10DW and Q6DW, at two latitudes.



**Figure S1.** Distribution of the five meteor radars used for the current work. Two colors represent two latitude groups. Inside each groups, radars are paired to use the dual-station approach, PDT.



**Figure S2.** (a) CWL spectrum for the radar pair J-M, namely, same plot as Figure 1c but averaged between 90 and 96km. (b) Same plots as (a) but for the radar pair P-A. (c, d) Same plots as (a, b) but for meridional wind. In (d), the arrows indicated the maxima of the peaks at  $T=8-9$  and  $5-7$ d. To resolve these two peaks, the wavelet analysis, in all panels here, is carried at a higher frequency resolution than that in Figure 1. Consequently, the time resolution is lower here, and the peaks are smeared out in time domain.