# Supplementary materials

June 3, 2020

## 1  Evolution sequences of some selected AR tracks
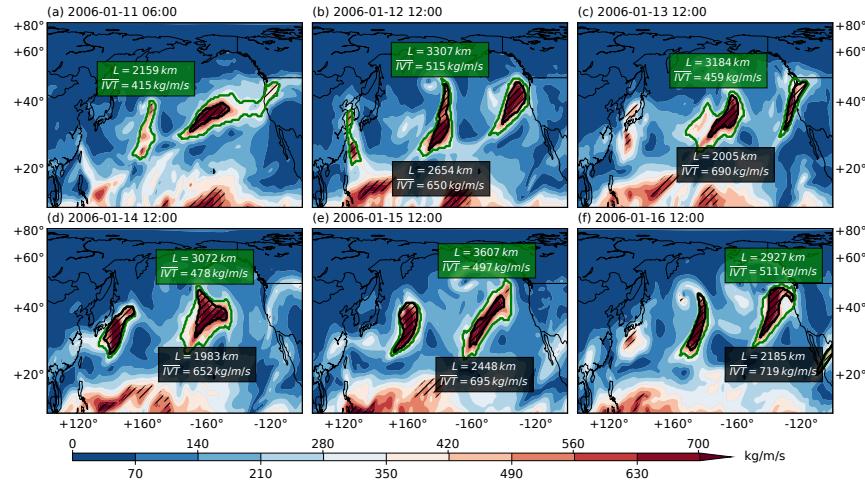
Figure 1: IVT distribution snapshots following an selected AR track from 2006-01-11 06 UTC in (a) to 2006-01-16 12 UTC in (f). ARs found by the THR-t4-s6 method are drawn in green contours, and those by IVT250ano method in black contours. Hatching indicates areas where the IVT anomalies are above the $250\,kg/m/s$ threshold. Length (in $km$) and averaged IVT (in $kg/m/s$) of the selected AR are labelled in a green box for the THR method, and a black box for the IVT250ano method.
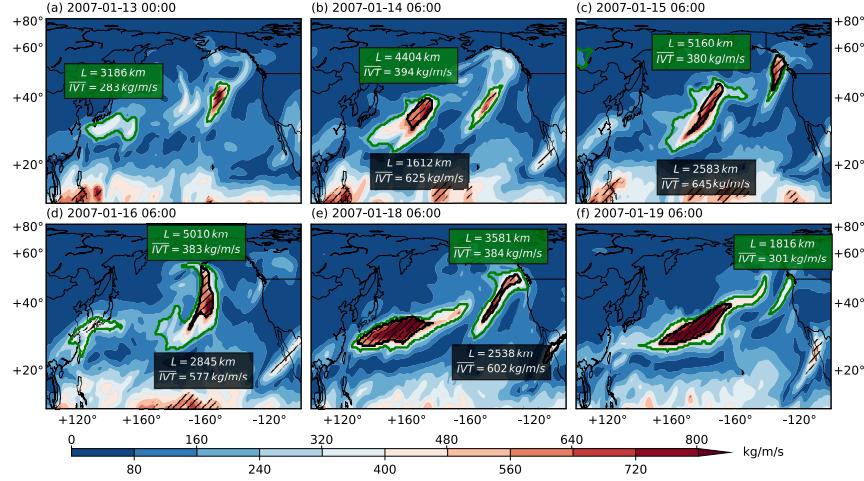
Figure 2: Similar as Fig.1 but for an AR track during 2007-Jan.
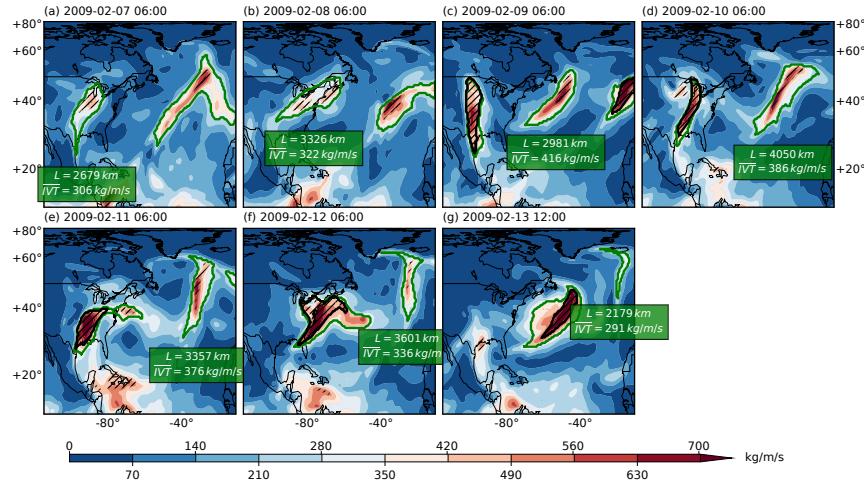
Figure 3: Similar as Fig.1 but for an AR track during 2009-Feb over North Atlantic.