Figure S1. (a) and (b) The seasonal variations of the pentad-averaged cloud overlap parameter α, and vertical velocity at 500hPa for the continuous clouds over the TP ; (c) and (d) The seasonal variations of the pentad-averaged α and vertical velocity for the continuous clouds at given layer distances (red: 2km; black: 3km). Here, positive velocity: updraft; negative velocity: subsidence;
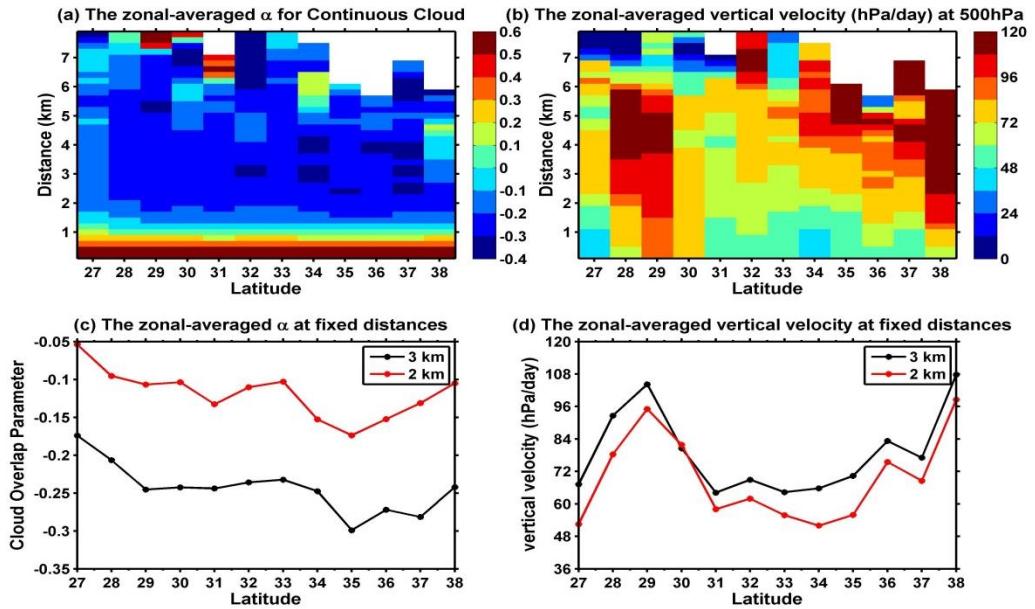
Figure S2. (a) and (b)The zonal variations of the α and vertical velocity at 500hPa for the continuous clouds over the TP; (c) and (d) The zonal variations of the α and vertical velocity for the continuous clouds at given layer distances (red: 2km; black: 3km). Here, positive velocity: updraft; negative velocity: subsidence;
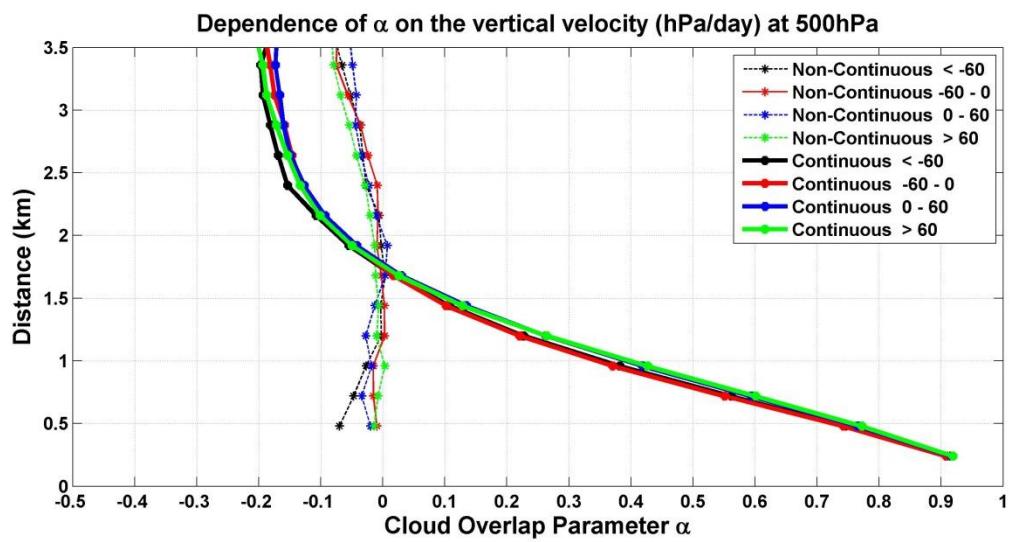
Figure S3. The variation of overlap parameter α with layer distance under different vertical velocity at 500hPa for given upper limit thresholds of cloud cover (50%). Here, positive velocity: updraft; negative velocity: subsidence;