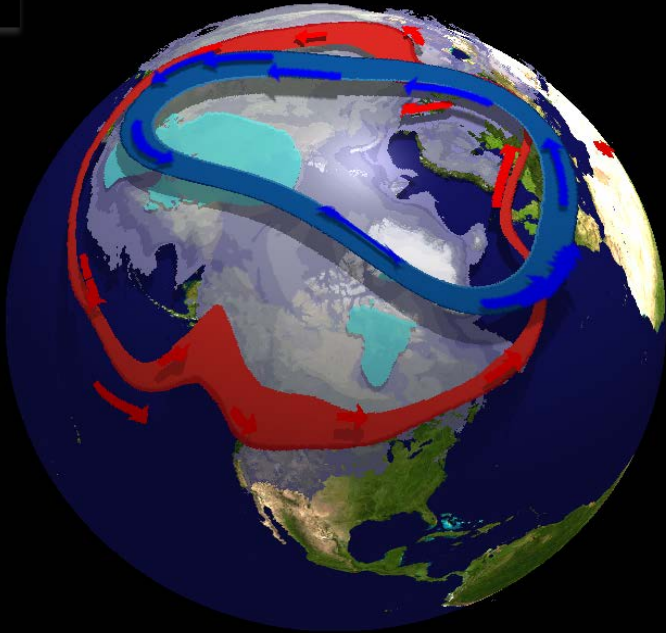
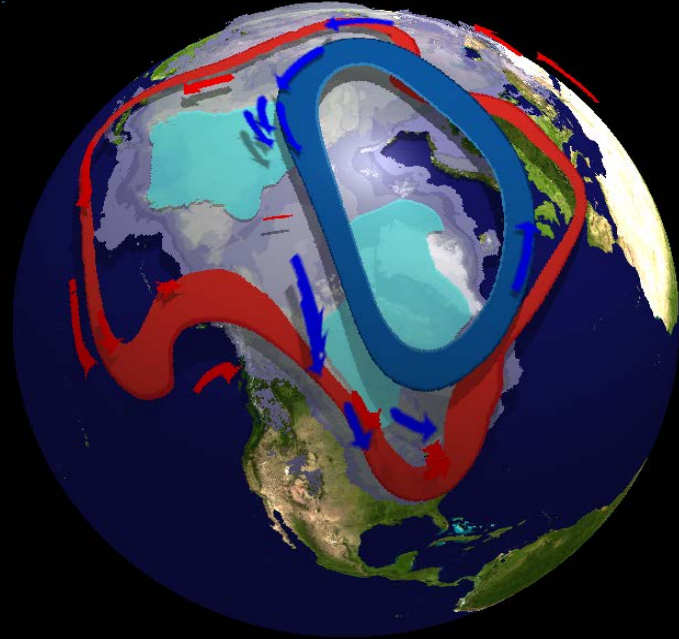


Tropospheric and stratospheric circulation changes related to the cold outbreak over the eastern US during the week of 8-14 February 2016.

Monday 1 Feb 2016 18UTC



Tuesday 9 Feb 2016 18UTC



The polar vortex in the troposphere (**red**) and the stratosphere (**blue**) distorted over North America as an outbreak of cold surface air (**cyan**) moved south over the eastern side of the USA.

30 hPa heights (blue 22.5--23 km)
200 hPa heights (red 11.345--11.5 km)
Surface temperatures ($< 0^{\circ}$ C magenta)
1000-500 hPa thickness (< 5 km cyan)