Two days along the polar front

ATM 210 -- Fall 2023 -- Fovell

Surface charts as analyzed/produced/disseminted by National Weather Service
https://www.wpc.ncep.noaa.gov
00Z 15 December 2007

High pressure over most of CONUS

1008 mb low in NM, 1012 mb L in New Brunswick

Zoom in on TX/Gulf

00Z = 00 UTC = 00 GMT = 7 PM EST 14 December
Stationary front along Gulf coast. Lowest SLP about 1012 mb
6 h later, a low center has formed in E TX. Still 1012 mb. Stationary front reshaped into cold and warm fronts.
18 h later, low has moved NE. Now 1002 mb and has already occluded

A new 1007 mb low is analyzed along the front on MS/GA border

Kinks are appearing along warm front off NC
Original low deepens to 990 mb but is left to die in OH, far from front

GA low deepens to 1003

Coastal low deepens more quickly, to 995 mb

All along the same air mass boundary
Coastal low deepens to 974 mb but is already occluded

Other cyclones dead or dying

The air mass boundaries will move on, spawning more short-lived cyclones
Bjerknes’ original life cycle figure