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Subject: Re: Alex (2004) development scenario: Take 1

Date: Wed, 02 Feb 2005 22:01:34 +0000

> 1. 26-27 Jul:

>
> Western end of a long E-W oriented PV tail 25-30 N backs up
> (westward) toward the eastern Bahamas. Need to assess possible impact
> of a theta min on the DT on any westward-moving disturbances in the
> easterlies.

> 2. 27-29 Jul:

>
> Relatively compact trough over the mid-MS Valley initially
> moves slowly eastward while elongating N-S. Northern end of the
> trough lifts poleward across NY and NW New England by 00Z/29.
> Southern end of trough deepens southward into northern GA/SC by
> 00Z/29.

> A DT theta min (PV max) is centered near 28 N and 70 W at 00Z/29.

> 3. 29-30 Jul:

>
> Southern end of digging weak trough on the DT near GA/SC
> earlier drops SSE and attempts to merge with the aforementioned
> separate DT theta min over the northern Bahamas. Low-level
> circulation appears over the NW Bahamas by 12Z/30.

> 4. 30-31 Jul:

>
> Ridge builds on the DT along the Atlantic coast to the west
> of the now-isolated DT theta min that has birthed a closed cyclone
> center (in the GFS analysis) roughly 100 km east of DAB.

> Second trough in the westerlies crosses the MS River and
> starts to elongate N-S.

> 5. 1-2 Aug:

>
> Alex percolates and slowly intensifies as the aforementioned
> DT theta min (PV anomaly) weakens and shifts south of the storm while
> the aforementioned coastal DT ridge envelops Alex from the north.

> Southern end of the second trough in the westerlies reaches a
> central TN to central MS line by 12Z/2. WSW flow ahead of this trough
> starts to increase to the NW of Alex (10-15 kt....tops....over Alex
> at 12Z/2).

> 6. 2-3 Aug:

>
> Aforementioned trough reaches the Carolinas, passing to the
> NW of Alex. WSW winds on the DT look to increase to 15-25 kt over
> Alex at 00Z/3 and 12Z/3. There is definitely a weak trough
> interaction going on here. It reminds me of the weak trough over the
> Carolinas that interacted with Bertha (1996) as it approached the
> coast of NC.

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> 7. 3-4 Aug:

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> Alex moves ENE along the southern flank of the westerlies and
> is left behind by the second trough that appeared to be important in
> its rapid deepening on 3 Aug.

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> 8. 5-6 Aug:

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> Alex continues moving ENE/NE and begins to experience an ET
> as it starts to approach the equatorward entrance region of a
> downstream jet. Diabatically assisted downstream ridge building
> develops in earnest to the east of Atlantic Canada.