










- is our Local Standard Time (LST) currently MDT or MST?
- what is our LST relative to UTC (= GMT = Zulu = "Z")
- please find and download the Stony Plain ("WSE") radiosonde for 12Z today, in the form of (a) a skew- T chart*, (b) the actual data
- from this sounding, what was the 1000-500 hPa thickness? Does this figure agree with the number you would interpolate from the surface panel of the RDPS 0h prog for 12Z (available at http://weather.gc.ca/model_forecast/index_e.html)?
- at 12Z Saturday, will our weather be categorically different from today's? – access the GDPS* at
 - http://weather.gc.ca/model_forecast/global_e.html, or
 - <http://weather.gc.ca/vizaweb/> (as user: vizaweb, password: vizaweb)

**EDMONTON INTL A
ALBERTA**

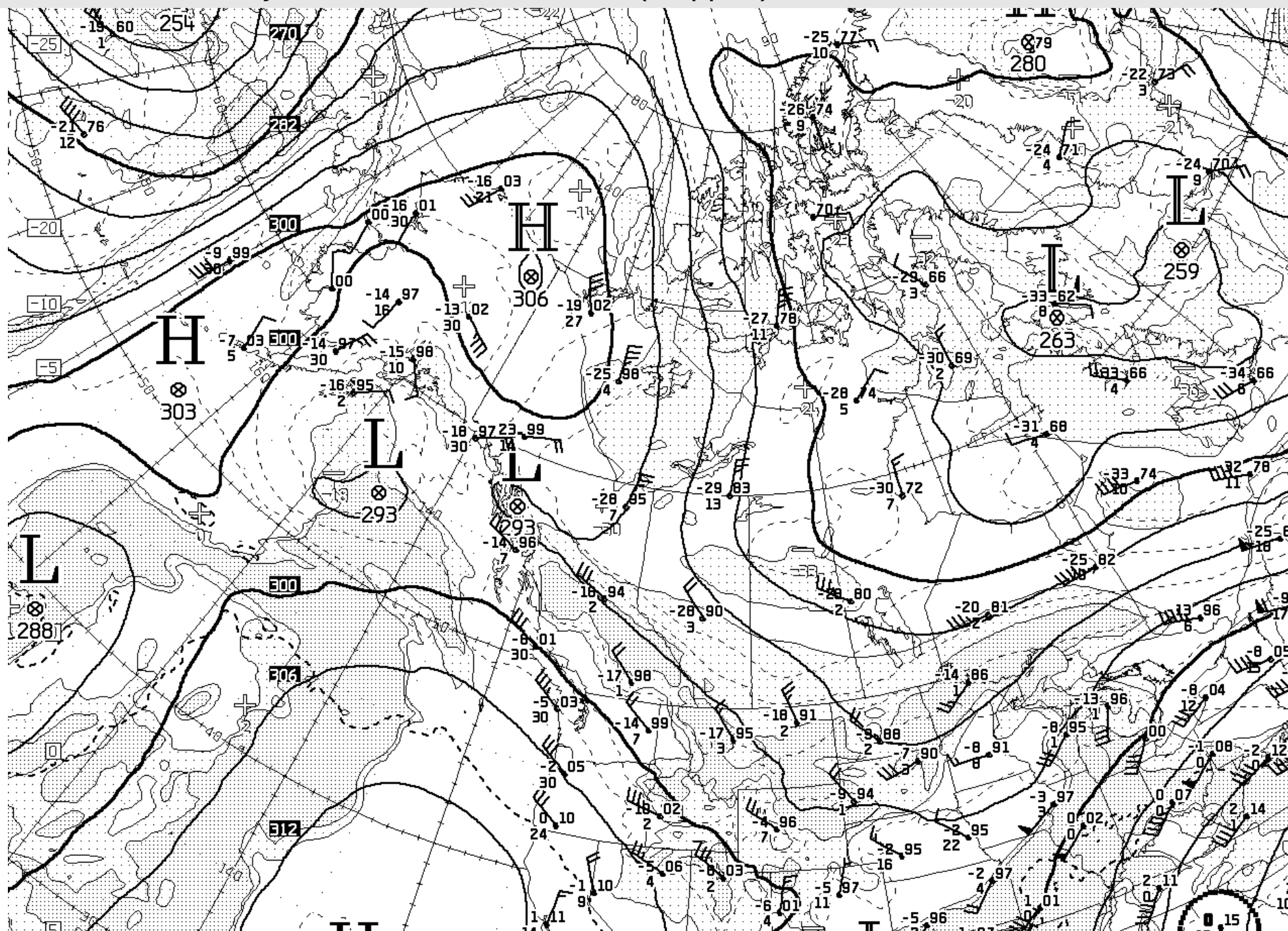
<u>Latitude:</u>	53°18'36.000" N	<u>Longitude:</u>	113°34'46.000" W	<u>Elevation:</u>	723.30 m
<u>Climate ID:</u>	3012216	<u>WMO ID:</u>	71123	<u>TC ID:</u>	YEG

Daily Data Report for January 2015

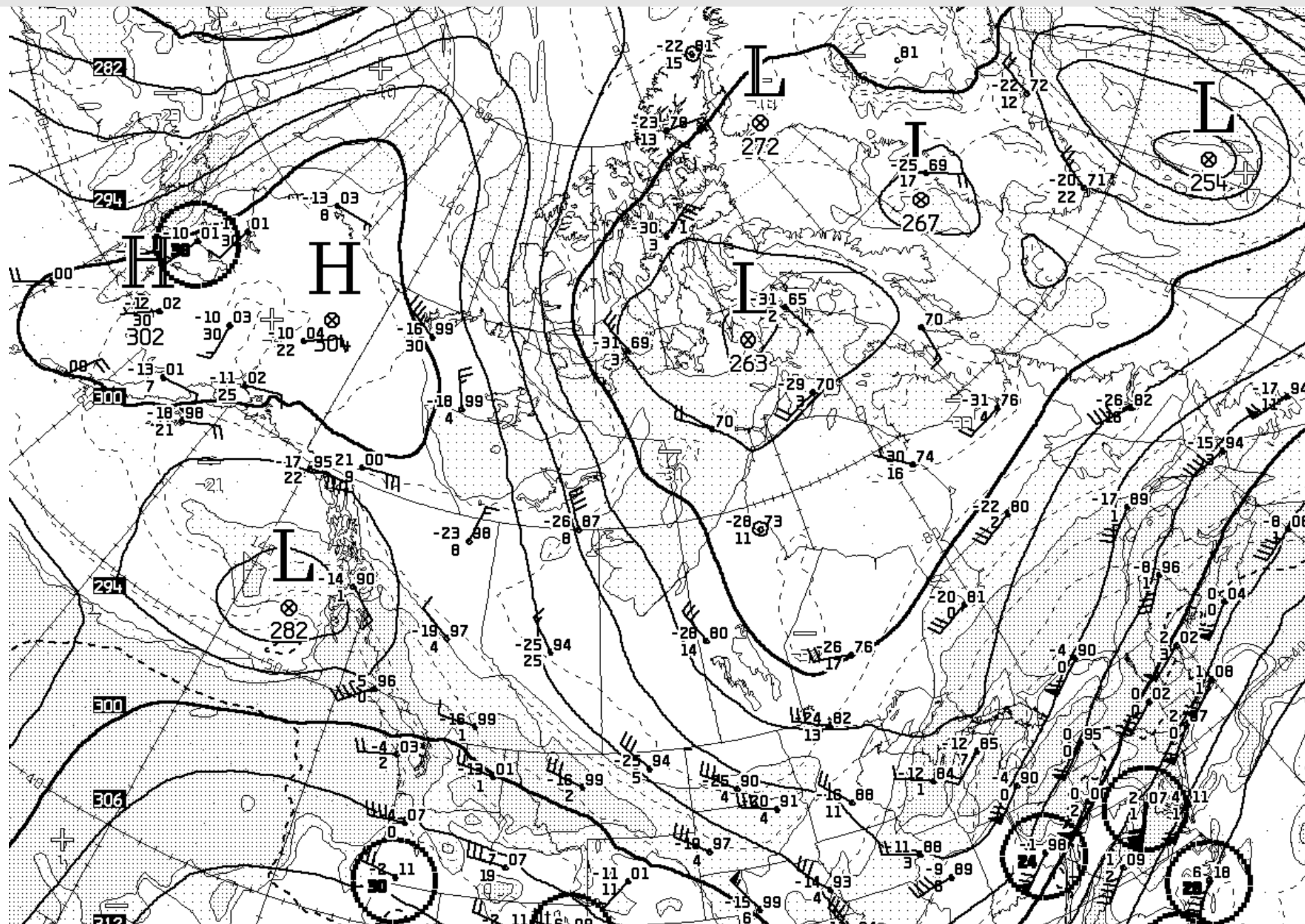
	<u>Max Temp</u> °C 	<u>Min Temp</u> °C 	<u>Mean Temp</u> °C 	<u>Heat Deg Days</u> 	<u>Cool Deg Days</u> 	<u>Total Rain</u> mm 	<u>Total Snow</u> cm 	<u>Total Precip</u> mm 	<u>Snow on Grnd</u> cm 
DAY									
<u>01</u> ±	3.1	-9.2	-3.1	21.1	0.0	0.0	2.6	2.6	8
<u>02</u> ±	-9.2	-26.5	-17.9	35.9	0.0	0.0	5.8	5.8	13
<u>03</u> ±	-20.0	-31.8	-25.9	43.9	0.0	0.0	0.6	0.6	17
<u>04</u> ±	-24.0	-35.8	-29.9	47.9	0.0	0.0	I	0.0	18
<u>05</u> ±	-20.8	-28.4	-24.6	42.6	0.0	0.0	0.0	0.0	18
Sum				191.4^	0.0^	0.0^	9.0^	9.0^	
Avg	-14.2^	-26.3^	-20.3^						
Xtrm	3.1^	-35.8^							

What flow configuration is/was associated with this cold spell?

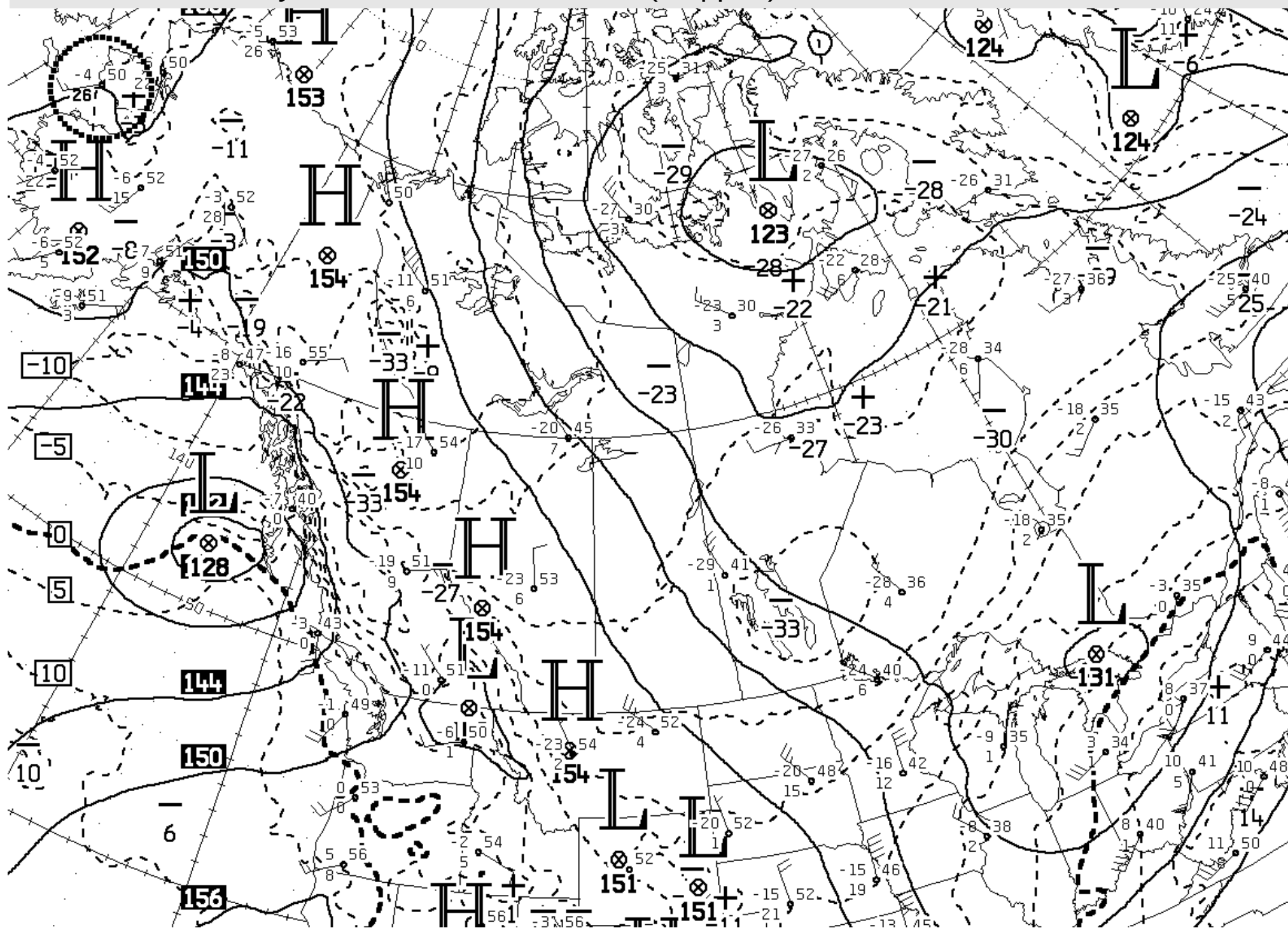
CMC 700 hPa analysis, 12Z Sat. 3 Jan. 2015 (cropped)



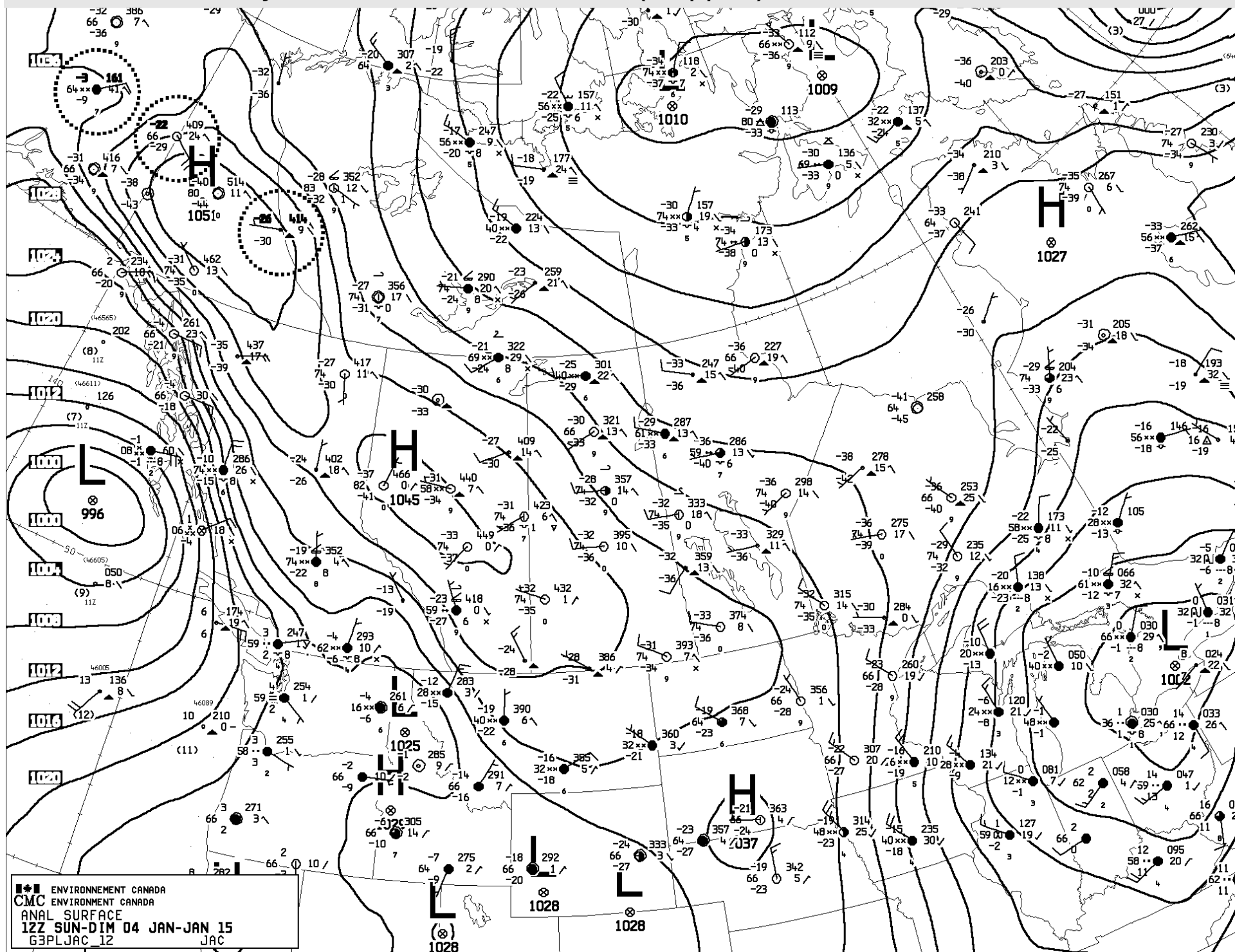
CMC 700 hPa analysis, 12Z Sun. 4 Jan. 2015 (cropped)



CMC 850 hPa analysis, 12Z Sun. 4 Jan. 2015 (cropped)



CMC surface analysis, 12Z Sun. 4 Jan. 2015 (cropped)



SIGNIFICANT WEATHER DISCUSSION ISSUED BY THE PRAIRIE AND ARCTIC STORM PREDICTION CENTRE OF ENVIRONMENT CANADA AT 7:00 AM CST SUNDAY JANUARY 4 2015.

ALERTS AND STATEMENTS IN EFFECT...EXTREME COLD WARNING FOR MUCH OF MANITOBA, SASKATCHEWAN AND ALBERTA

SYNOPTIC OVERVIEW...DEEP **ARCTIC VORTEX** OVER SRN BAFFIN ISLAND WILL RETROGRADE OVER SRN KIVALLIQ BY MONDAY MORNING. FRIGID ARCTIC AIRMASS ENTRENCHED OVER ENTIRE FORECAST DISTRICT WITH SPRAWLING **ARCTIC RIDGE** ACROSS WRN PRAIRIES EXTENDING FROM STRONG 1054 MB HIGH OVER YUKON.

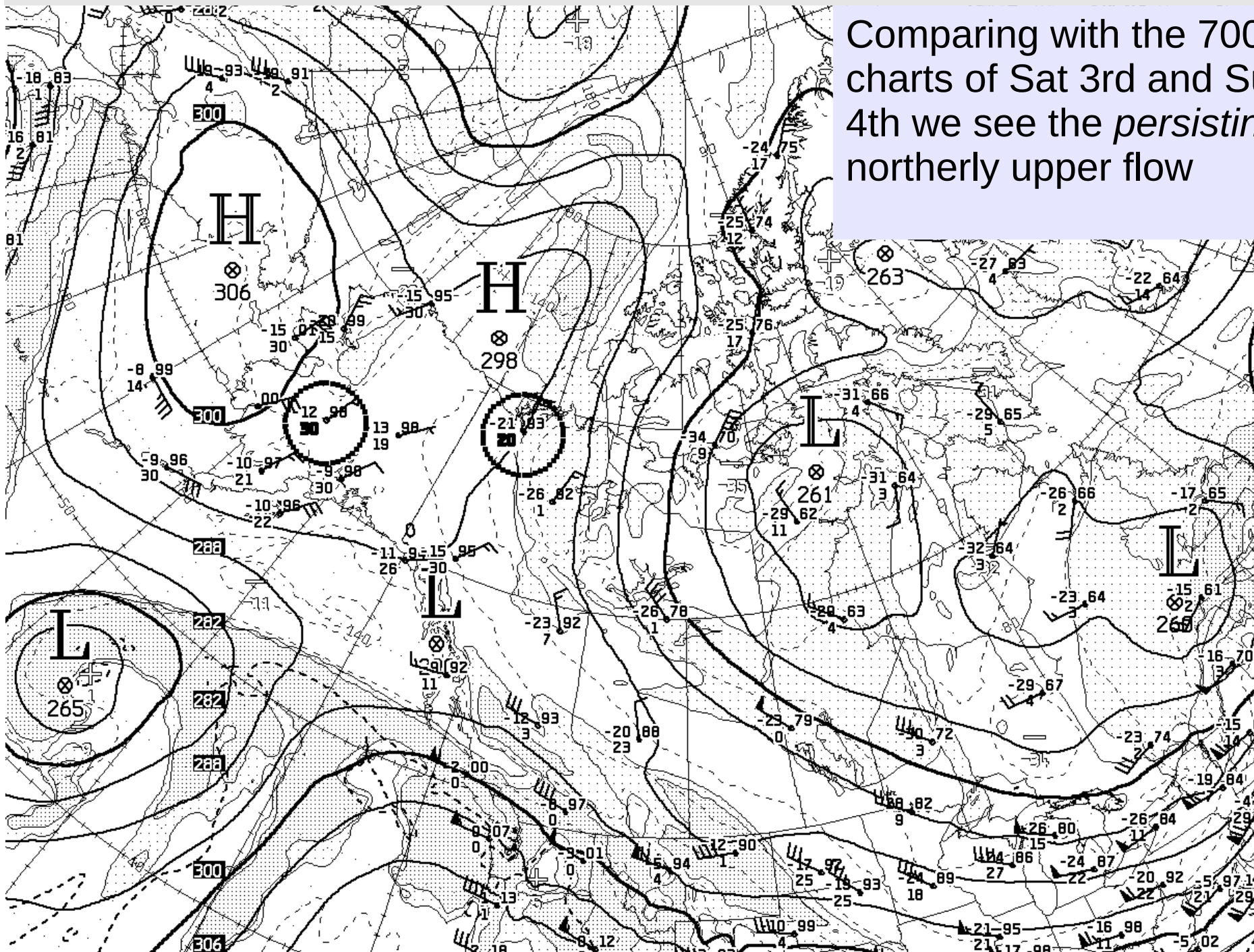
DISCUSSION...WIDESPREAD EXTREME WIND CHILLS ACROSS THE PRAIRIES THIS MORNING. OVER THE EASTERN PRAIRIES, IN THE NORTHWEST GRADIENT EAST OF THE RIDGE, DAYTIME TEMPERATURES WILL BE SLOW TO RECOVER AND EXTREME WIND CHILLS MAY PERSIST THROUGH THE DAY. THE **COLD POOL** CENTRED IN NORTHERN MB WILL MOVE INTO NORTHERN ONTARIO TODAY LEAVING OCCASIONAL LIGHT SNOW IN ITS WAKE. IN ALBERTA TEMPERATURES WILL BE MODERATED VIA A WEAK BACKDOOR **WARM FRONT** MOVING SOUTHWARD FROM THE NWT SO MOST WARNINGS IN THAT PROVINCE SHOULD BE ENDED BY LATE THIS MORNING.

OVERNIGHT TONIGHT ANOTHER ALBERTA CLIPPER FORMS NEAR LETHBRIDGE AND IMMEDIATELY DIVES SOUTHWARD INTO MONTANA RESTRICTING ITS INFLUENCE TO SOUTHERN ALBERTA.

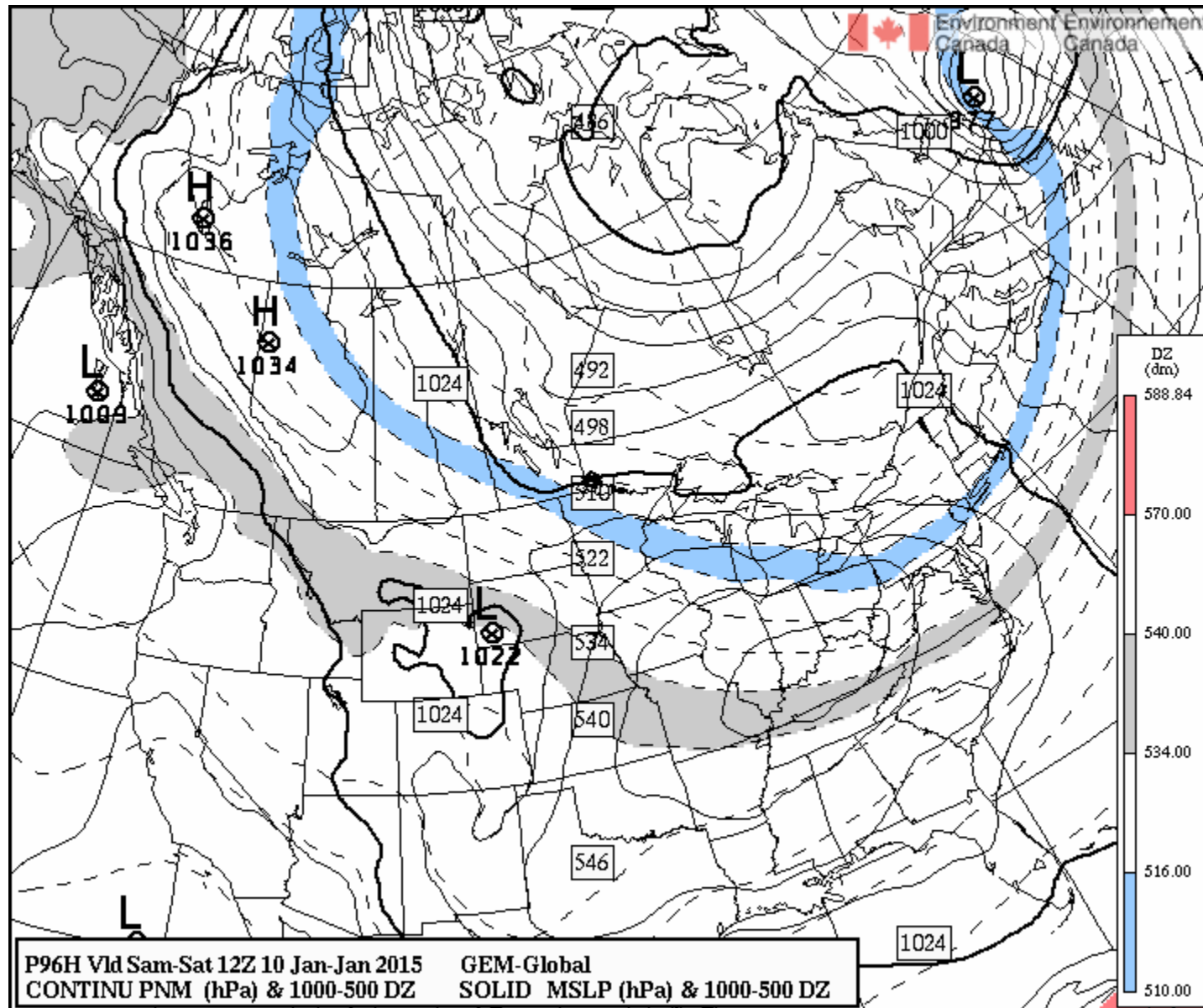
Can you find these features on the preceding charts?

CMC 700 hPa analysis, 12Z Mon. 5 Jan. 2015 (cropped)

Comparing with the 700 hPa charts of Sat 3rd and Sun 4th we see the *persisting* northerly upper flow

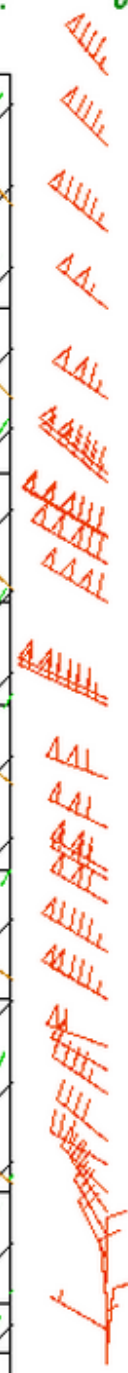


http://weather.gc.ca/analysis/index_e.html



Thickness at Stony Plain as of 12Z today (6 Jan.) was $5480 - 323 = 5157 \text{ m} = 516 \text{ dam}$
 Forecast thickness for 12Z Saturday 10 Jan. is about 522 dam. Thus the fcst is for roughly the same temperature as today (6 dam of warming equates to 3°C change).

02



How likely is it
we'll see cumulus
cloud today?!?