

Meteorology of our foggy weekend: Sat. 21 through Mon 23 Jan. 2017

ENVIRONMENT CANADA AT [2:00 PM CST SATURDAY](#) JANUARY 21 2017.

DISCUSSION... WIDE SPREAD FOG FORMED OVERNIGHT IN EAST-CENTRAL ALBERTA AND EXPANDED WESTWARD TOWARDS THE QEII HIGHWAY THIS MORNING. ADVISORIES WILL REMAIN IN PLACE UNTIL THIS AFTERNOON WHEN FOG IS EXPECTED TO LIFT SOMEWHAT. MAY SEE FOG FORM AGAIN OVER CENTRAL REGIONS TONIGHT AS THE SURFACE RIDGE BUILDS IN FROM THE NW....

ENVIRONMENT CANADA AT [7:00 AM CST SUNDAY](#) JANUARY 22 2017.

SYNOPTIC OVERVIEW...ALOFT THIS MORNING, FLOW AT ALL LEVELS IS VERY SLACK OVER WESTERN CANADA, WITH ONLY A WEAK CYCLONIC FLOW OVER THE PRAIRIES AND AN OCCLUDED LOW OFF THE PACIFIC NORTHWEST... A SPRAWLING AREA OF HIGH PRESSURE CENTERED OVER WESTERN NUNAVUT COVERS THE FORECAST AREA.

DISCUSSION... PRAIRIES... WINNIPEG AIRPORT FINALLY FELL BACK BELOW FREEZING SHORTLY BEFORE 11 PM, GIVING JUST SHY OF 67 HOURS OF CONTINUOUS ABOVE FREEZING TEMPERATURES, A NEW RECORD FOR JANUARY.

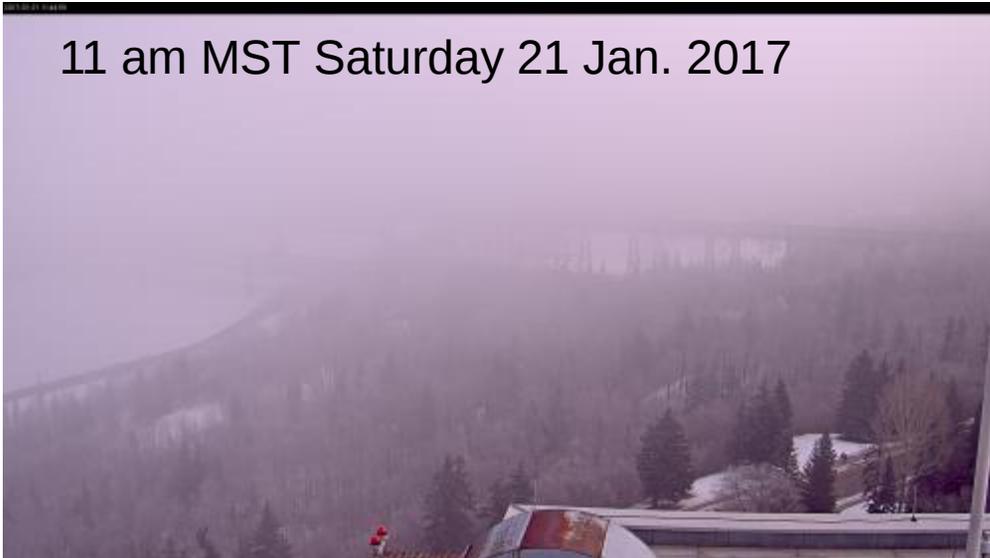
ENVIRONMENT CANADA AT [7:00 AM CST TUESDAY](#) JANUARY 24 2017.

SYNOPTIC OVERVIEW...VERY SLACK FLOW AT 500 MB OVER THE PRAIRIES, WITH SEVERAL CIRCULATIONS DRIFTING LAZILY OVER THE AREA.

DISCUSSION... AB...FOG, LOW CLOUD, AND THE CLEARING OR MAINTENANCE THEREOF IS THE CONCERN FOR THE DAY...

TEMPERATURES WILL CONTINUE TO SLOWLY FALL THROUGH THE COMING WEEK AS COOLER AIR SLUMPS BACK SOUTHWARDS, THOUGH ULTIMATELY STILL A BIT ABOVE NORMAL THROUGH THE END OF THE MONTH.

11 am MST Saturday 21 Jan. 2017



3 pm MST Sunday 22 Jan. 2017



Edmonton Int'l Airport, Alberta

Latitude 53.31° N | Longitude 113.58° W

Past 24 Hour Conditions

Date / Time (MST)	Conditions	Temperature (°C)	Wind (km/h)
22 January 2017			
08:00	 Mist	-9 (-9.1)	NNE 12
07:00	 Light Snow	-9 (-8.6)	NE 22
06:00	 Mist	-8 (-8.1)	NNE 16
05:00	 Mist	-8 (-7.7)	NNE 13
04:00	 Mist	-7 (-7.0)	NNE 13
03:00	 Mist	-7 (-6.7)	N 17
02:00	 Mist	-7 (-6.7)	N 18
01:00	 Light Snow	-7 (-6.5)	NNW 14
00:00	 Light Freezing Drizzle	-7 (-6.5)	NNW 14

21 January 2017

23:00	 Light Snow	-6 (-6.1)	NNW 15
22:00	 Light Snow	-6 (-6.1)	N 18
21:00	 Light Snow	-6 (-6.0)	N 23
20:00	 Snow Grains	-6 (-5.5)	NNW 21
19:00	 Snow Grains	-5 (-5.3) ↑	NNW 14
18:00	 Freezing Fog		
17:00	 Freezing Fog		
16:00	 Freezing Fog		

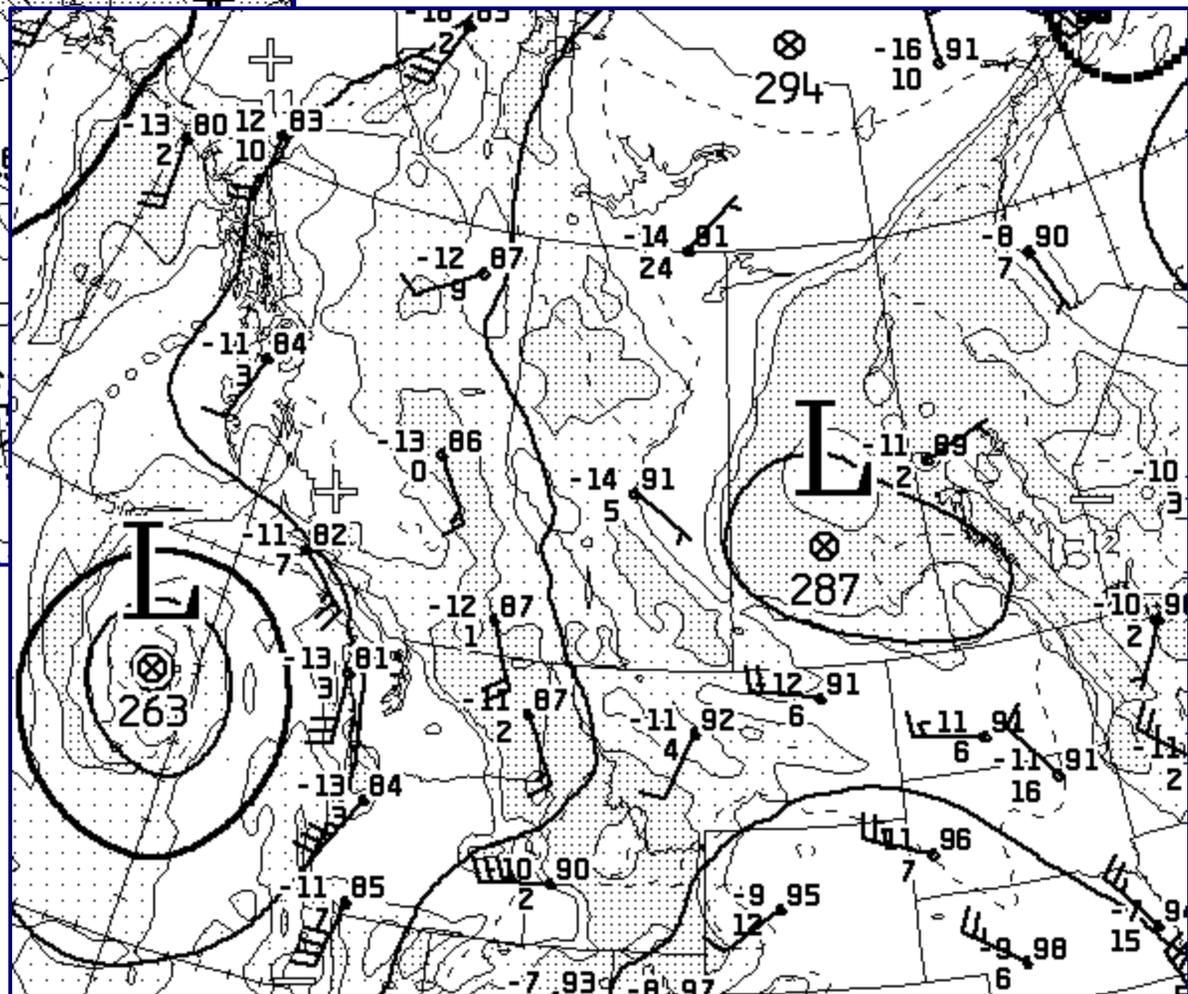
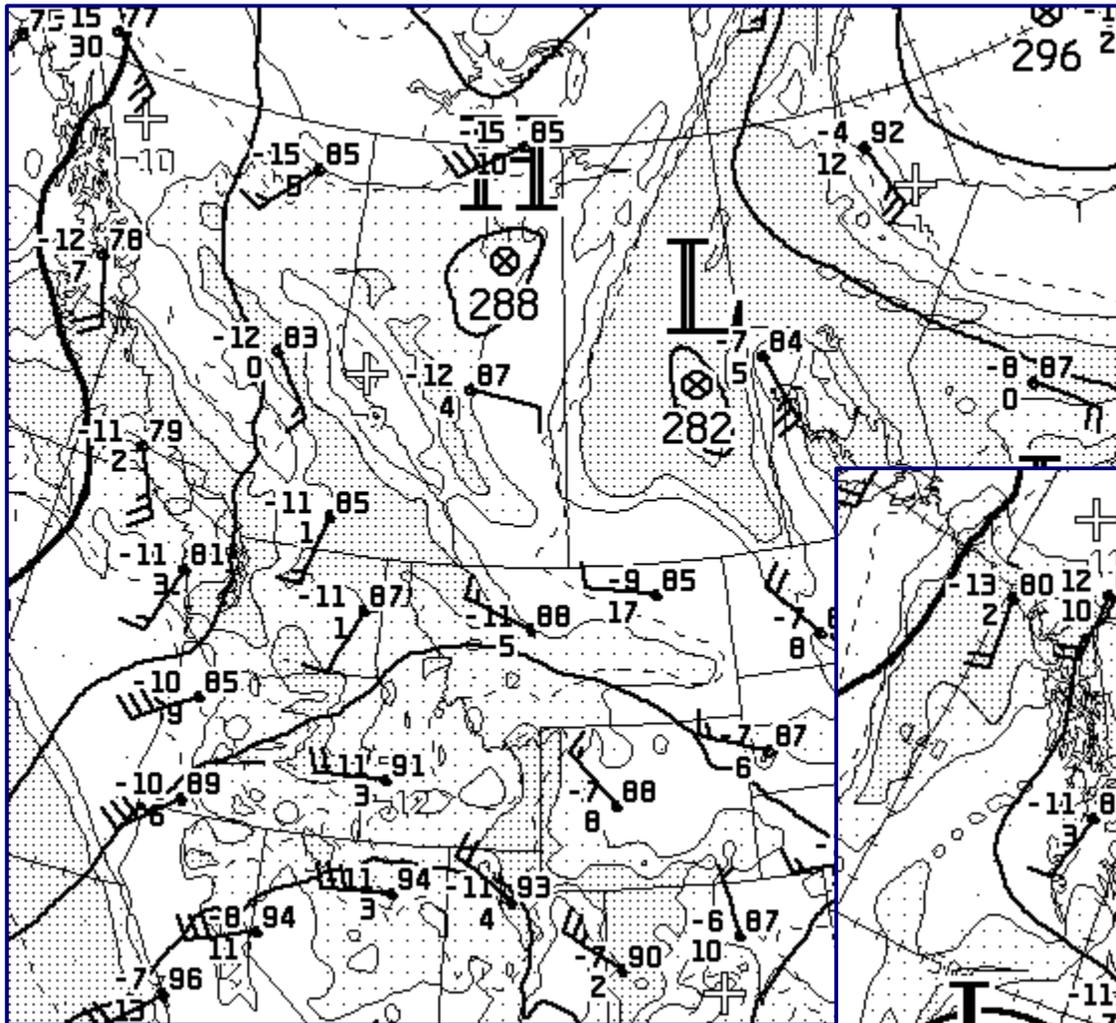
15:00	 Freezing Fog	-7 (-6.9)	NW 12
14:00	 Freezing Fog	-8 (-7.5)	NW 10
13:00	 Freezing Fog	-9 (-9.1)	NW 5
12:00	 Freezing Fog	-10 (-10.2)	NW 4
11:00	 Freezing Fog	-11 (-10.6)	SW 4
10:00	 Freezing Fog	-12 (-12.1)	WSW 5
09:00	 Freezing Fog	-13 (-13.1) ↓	W 4

Anthony Henday Drive closed due to crashes as dense fog rolls over Edmonton

Morgan Smith
January 21, 2017
10:27 am

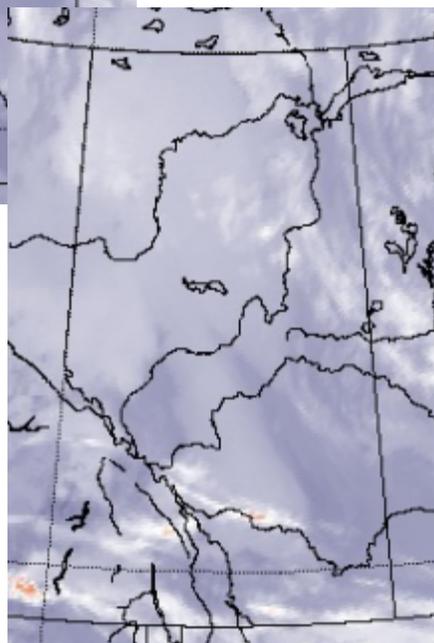
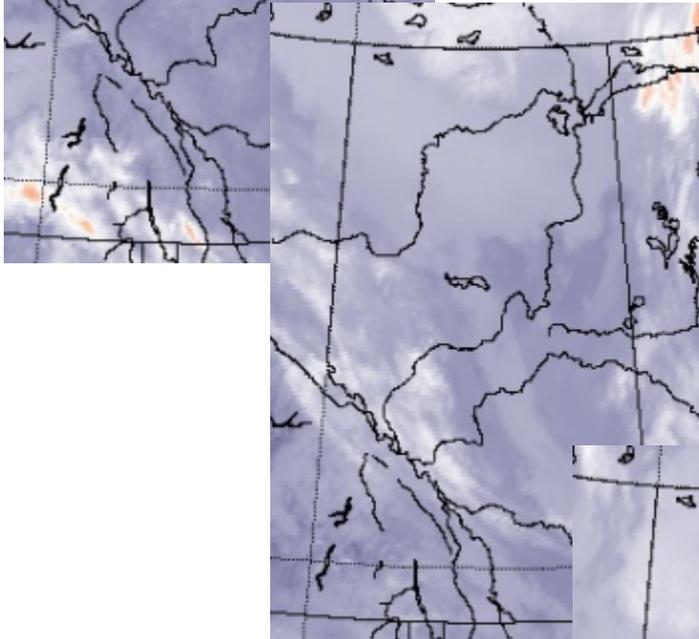
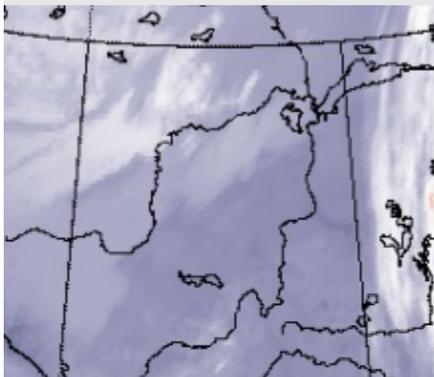


700 hPa analyses 00Z Sunday 22 Jan and 00Z Monday 23 January 2017

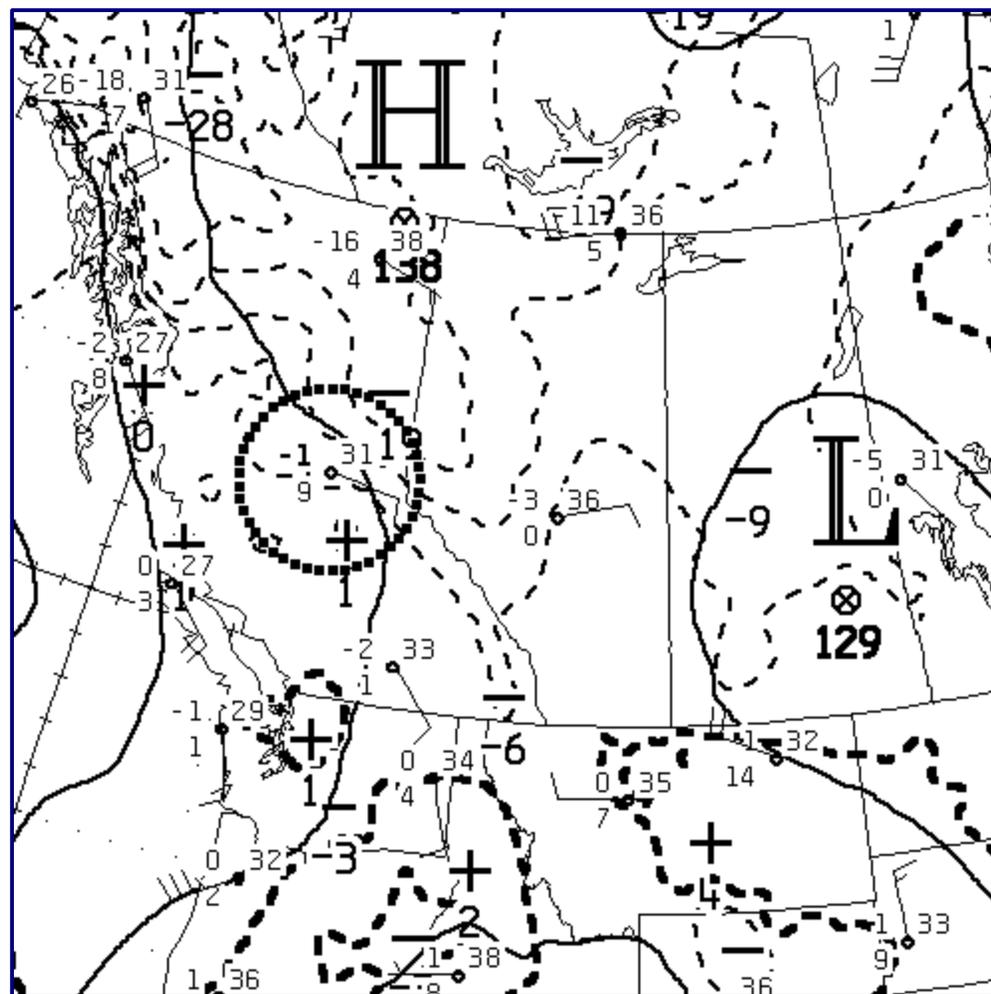


- light upslope flow
- somewhat humid

GOES ir 1230Z Sat 21/Sun 22/Mon 23 Jan. 2017 + 850 hPa analyses 00Z Sun 22 Jan.

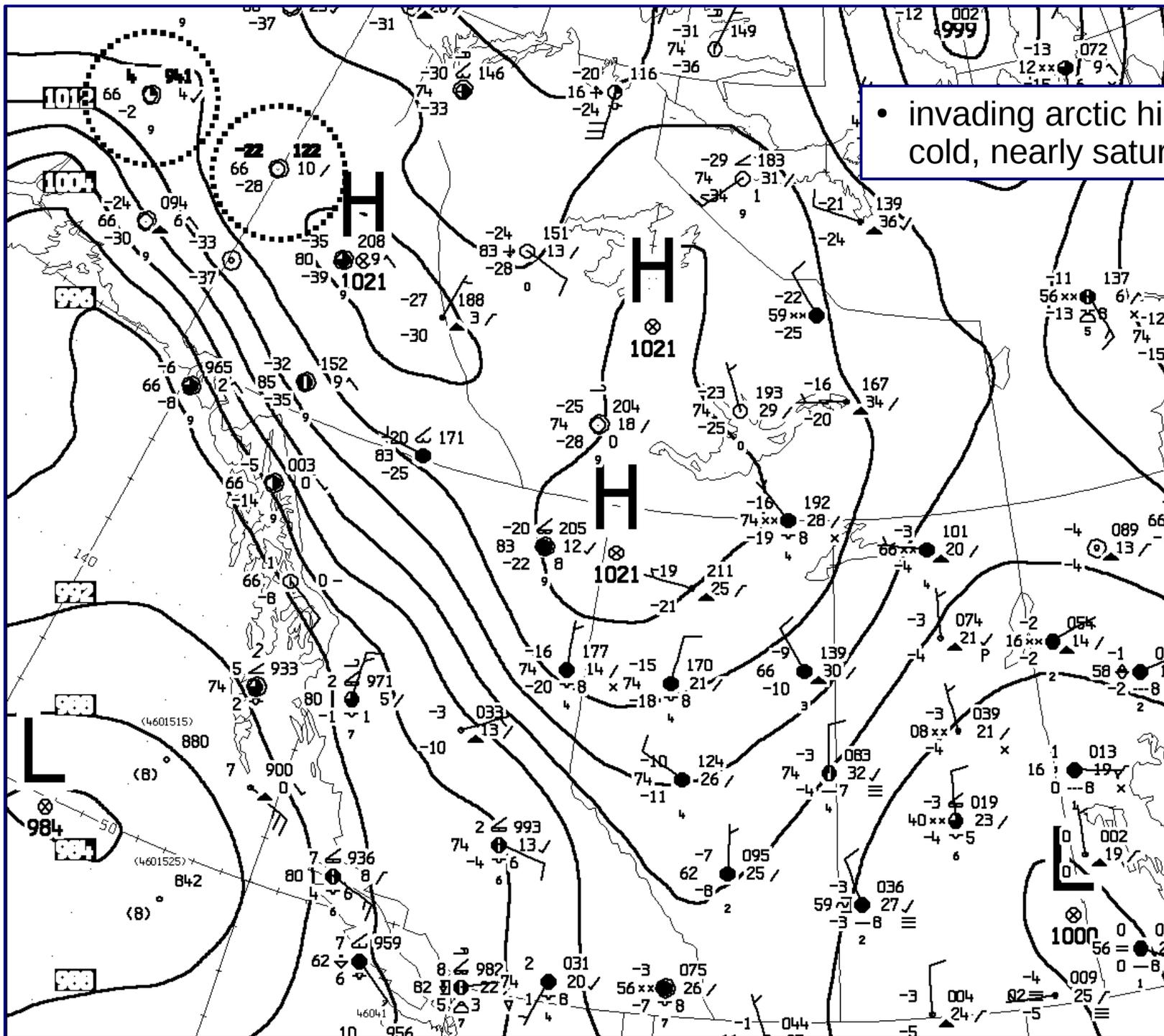


- the fog/cloud is low-topped
- weak upslope wind
- saturated at 850 hPa



SURFACE

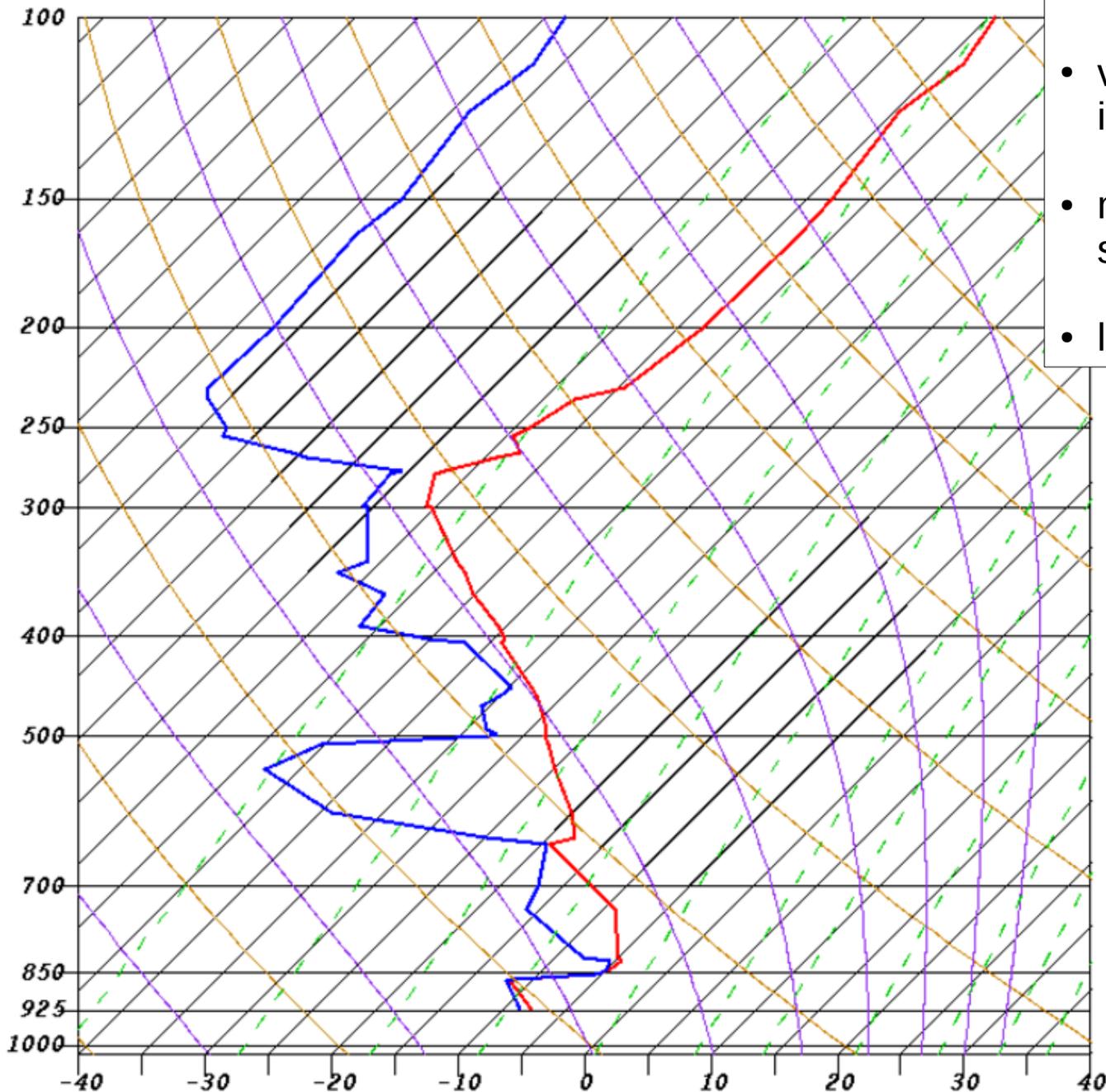
analyses 00Z Sunday 22 January 2017



- invading arctic high supplying cold, nearly saturated surface air

Stony Plain sounding 12Z Sunday 22 Jan

170122/1200 71119 WSE SHOW: 8 LIFT: 14 SHET: 23 VT
CAPE: 0 EQLV: -9999 SELV: 766 CL
LCLT: 264 LCLP: 908

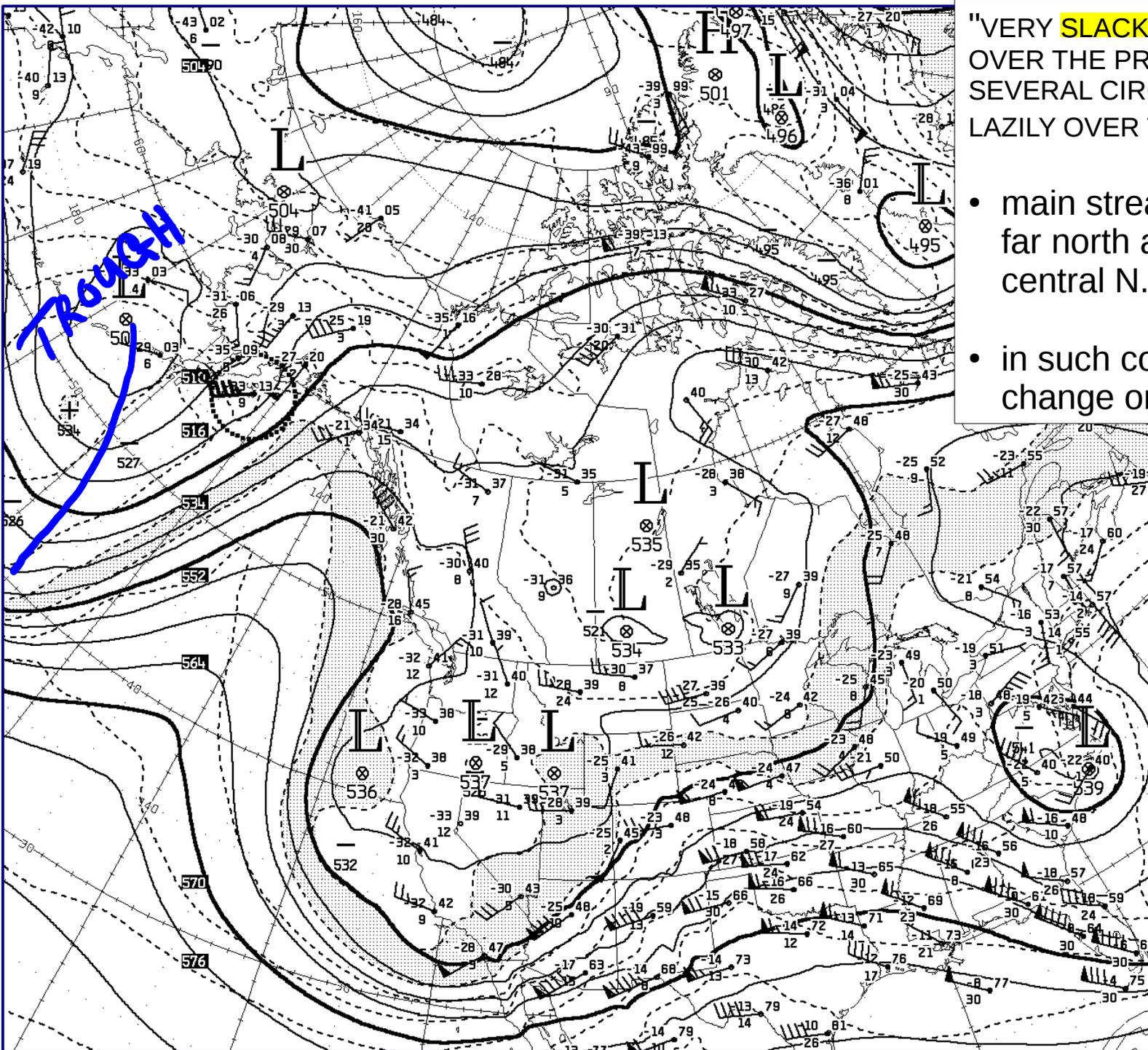


- saturated (or nearly so) to 850 hPa
- very sharp elevated inversion
- milder air over cold saturated surface air
- light winds



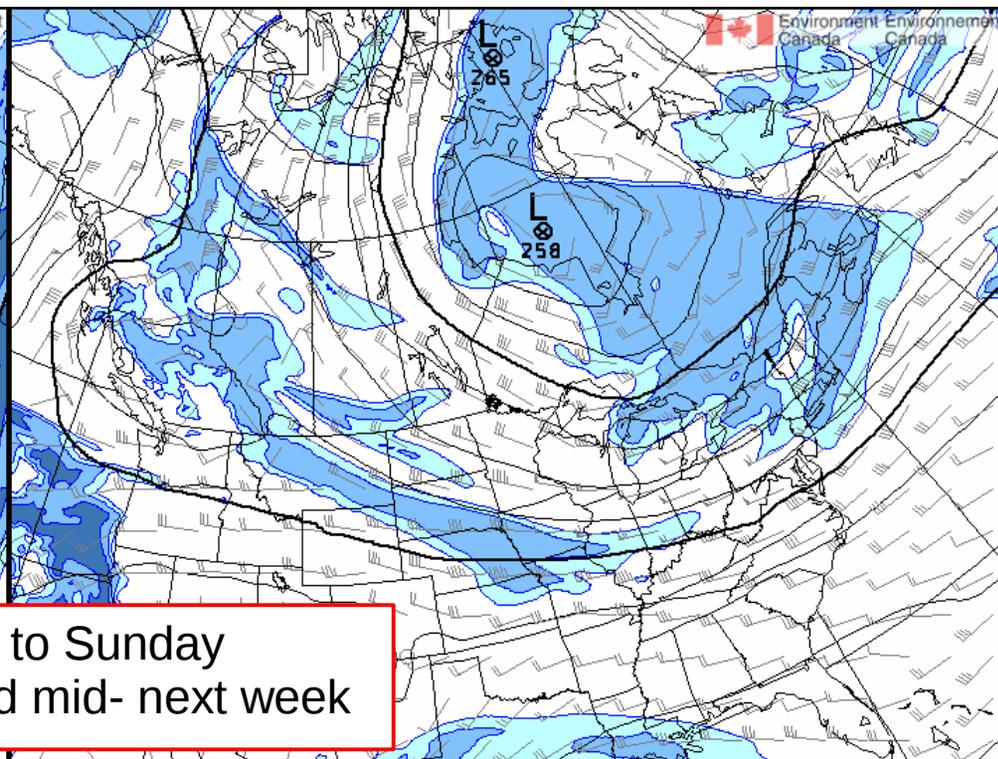
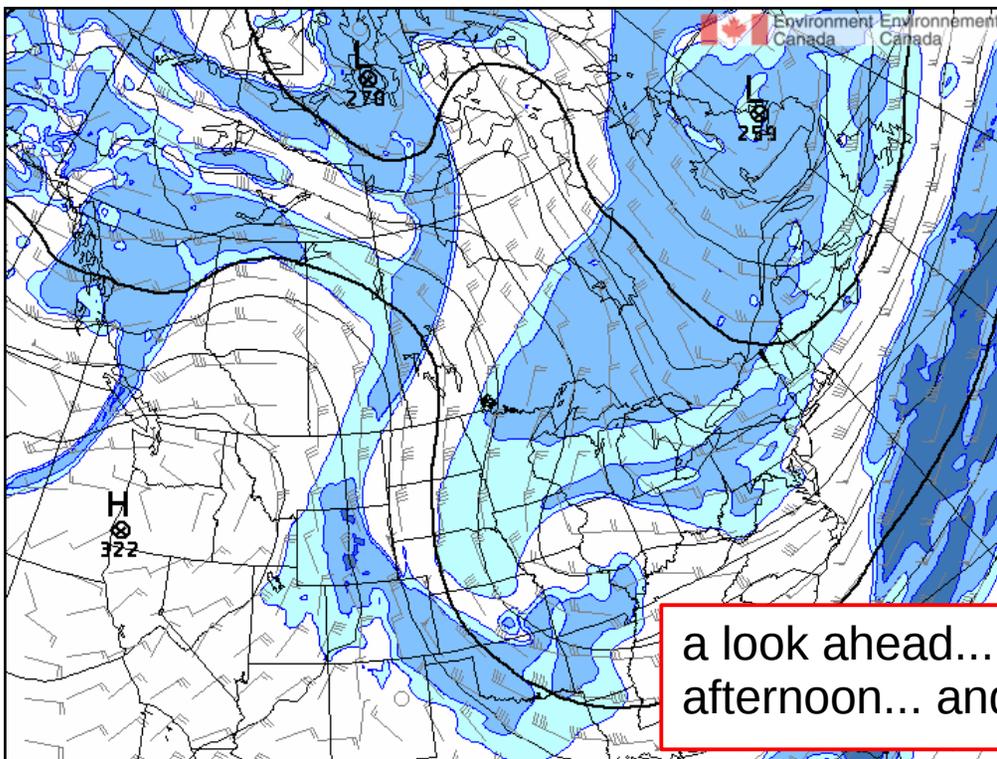
The radiosonde may not reliably measure very small $T - T_d$

CMC 500 hPa analysis, 00Z Tuesday 24 January 2017



"VERY **SLACK FLOW** AT 500 MB OVER THE PRAIRIES, WITH SEVERAL CIRCULATIONS DRIFTING LAZILY OVER THE AREA."

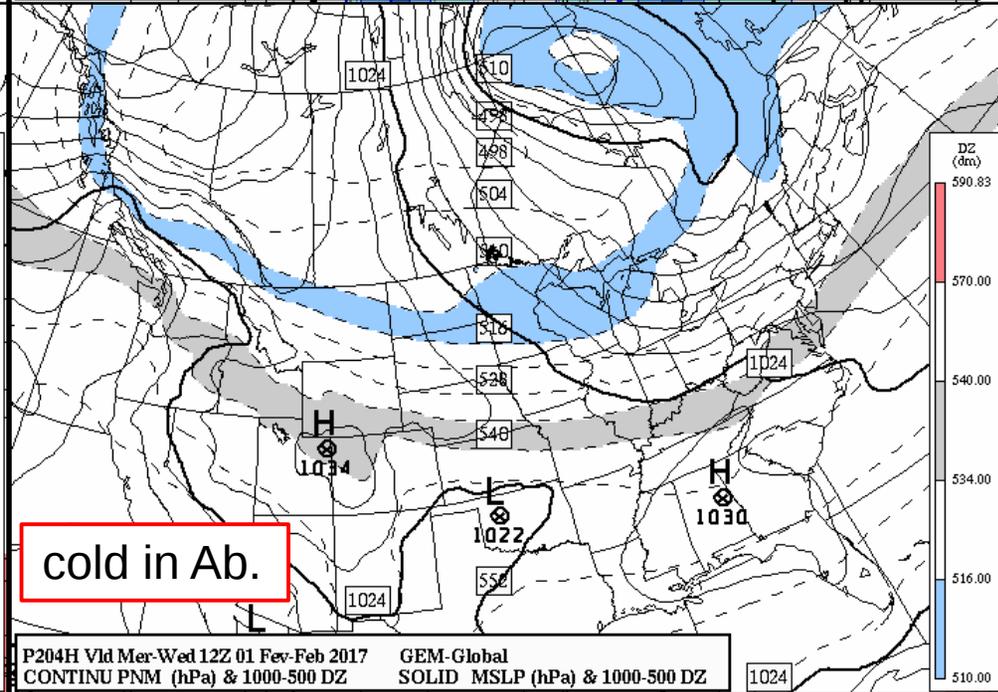
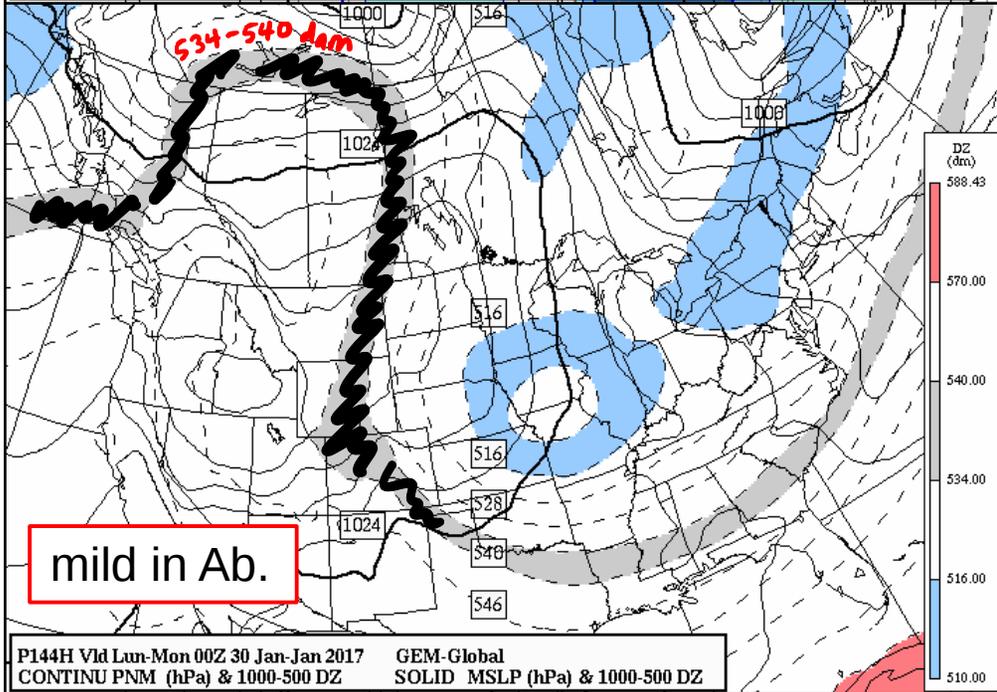
- main streams aloft passing far north and far south of central N. America
- in such conditions, patterns change only slowly



a look ahead... to Sunday
afternoon... and mid- next week

P144H Vld Lun-Mon 00Z 30 Jan-Jan 2017
Arrière plan: Humidité relative à 700 hPa (50,70,90%)
Hauteur géopotentielle à 700 hPa (dam) GEM-Global
Background: Relative humidity at 700 hPa (50,70,90%)
Geopotential height at 700 hPa (dam)

P204H Vld Mer-Wed 12Z 01 Feb-Feb 2017
Arrière plan: Humidité relative à 700 hPa (50,70,90%)
Hauteur géopotentielle à 700 hPa (dam) GEM-Global
Background: Relative humidity at 700 hPa (50,70,90%)
Geopotential height at 700 hPa (dam)



mild in Ab.

cold in Ab.

P144H Vld Lun-Mon 00Z 30 Jan-Jan 2017
CONTINU PNM (hPa) & 1000-500 DZ GEM-Global
SOLID MSLP (hPa) & 1000-500 DZ

P204H Vld Mer-Wed 12Z 01 Feb-Feb 2017
CONTINU PNM (hPa) & 1000-500 DZ GEM-Global
SOLID MSLP (hPa) & 1000-500 DZ