

December 18, 2024

Lorna Morishita

Executive Director of Palliser Airshed Society
PO Box 23121 Medicine Hat Mall
Medicine Hat AB T1B 4C7

RE: Palliser Airshed Society (PAS) Ambient Air Monitoring Report – November 2024

Enclosed is the PAS Dashboard Report for the month of **November 2024**.

Continuous Monitoring – Crescent Heights, Brooks, Brooks – Meadow Place, Taber and Hanna Airpointer Monitoring Stations

Included in this report are: Monthly Air Monitoring Summary Table, Station Issue Summary, Station Summary Graphs and Station Wind Roses.

Continuous Monitoring Instrumentation Uptime Summary:

There were no uptimes less than 90% in November.

AAAQO/G Exceedance Summary:

There were no exceedances of the AAAQO/G in November.

If you have any questions, please contact the WSP office at 780.401.1356.

X *Patrick Andersen*

Patrick Andersen, B.Sc.
WSP AQM Data Specialist

X 

Lenin Flores
Project Manager

November 2024 Monthly Ambient Air Quality Summary

Nov-24		Palliser Airshed Society			Maximum Recorded Values										
Pollutant (units)	Objectives			Station	Monthly Average	1-Hour Minimum	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day				1-hr	24-hr	30-day	Conc	Day	Conc	Day		
SO ₂ (ppb)	172	48	8	Crescent Heights	0.1	0.0	0	0	0	1.4	Nov-24 20:00	0.6	Nov-24	99.7	Nov-08
NO (ppb)					1.7	0.0				26.8	Nov-25 00:00	4.2	Nov-03	99.9	Nov-07
NO ₂ (ppb)	159				5.7	0.2	0			27.2	Nov-28 05:00	17.4	Nov-27	99.9	Nov-07
NO _x (ppb)					7.3	0.4				51.2	Nov-25 00:00	20.7	Nov-27	99.9	Nov-07
O ₃ (ppb)	76				21.1	0.3	0			37.5	Nov-13 13:00	32.2	Nov-17	99.9	Nov-07
CO (ppm)					0.1	0.1				0.3	Nov-27 14:00	0.2	Nov-27	99.9	Nov-07
CO 8-Hour (ppm)	5				-	0.1	0			0.2	Nov-27 15:00	-	-	100.0	-
THC (ppm)					2.3	2.0				3.0	Nov-03 23:00	2.6	Nov-27	99.9	Nov-07
PM _{2.5} (µg/m ³)	80	29			6.4	0.5	0	0		45.9	Nov-27 14:00	23.5	Nov-27	99.9	Nov-08
ET (°C)					-1.8	-19.9				18.7	Nov-08 16:00	11.1	Nov-08	99.9	-
RH (%)					78.2	25.7				100.0	Nov-01 02:00	99.0	Nov-23	99.9	-
GSR (W/m ²)					51.6	0.0				421.3	Nov-01 13:00	94.0	Nov-01	99.9	-
WSPD (km/h)					3.8	0.0				34.9	Nov-17 03:00	23.4	Nov-17	99.9	08/11/24
WDIR					WSW									99.9	

Pollutant (units)	Analyzer			Notes
	Make	Model		
SO ₂	TEI	43i-TLE		Data logger failed to capture 1 hour of data November 26.
NO/NO ₂ /NO _x	TEI	42i		Manual span check November 7.
O ₃	TECO	49i		
CO	TEI	48i-TLE		Manual span check November 8.
THC	TECO	51C-LT		
PM _{2.5}	API	T640		
ET/RH	RMyoung	41382VC		
GSR	EPPLEY			
WS/WD	RMyoung	5305-10		

Nov-24		Palliser Airshed Society			Maximum Recorded Values										
Pollutant (units)	Objectives			Station	Monthly Average	1-Hour Minimum	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day				1-hr	24-hr	30-day	Conc	Day	Conc	Day		
NO (ppb)				Brooks Meadow Place	0.5	0.0				19.5	Nov-27 11:00	2.9	Nov-24	99.9	Nov-27
NO ₂ (ppb)	159				4.1	0.1	0			25.0	Nov-26 08:00	10.9	Nov-26	99.9	Nov-27
NO _x (ppb)					4.6	0.0				40.4	Nov-24 22:00	12.9	Nov-26	99.9	Nov-27
O ₃ (ppb)	76				20.0	0.0	0			38.0	Nov-12 15:00	31.4	Nov-17	99.9	Nov-27
PM _{2.5} (µg/m ³)	80	29			6.9	0.5	0	0		26.4	Nov-28 05:00	15.9	Nov-27	99.9	Nov-27
ET (°C)					-3.3	-23.5				20.1	Nov-08 14:00	8.6	Nov-08	99.9	-
RH (%)					53.4	46.3				60.7	Nov-08 13:00	57.0	Nov-07	99.9	-
WSPD (km/h)					2.1	0.4				37.8	Nov-17 11:00	20.2	Nov-17	99.9	27/11/24
WDIR					WNW									99.9	

Pollutant (units)	Analyzer			Notes
	Make	Model		
NO/NO ₂ /NO _x	TEI	42iQ		Data logger failed to capture 1 hour of data November 26.
O ₃	TEI	49iQ		
PM _{2.5}	API	T640		
ET/RH				
WS/WD				

Nov-24				Palliser Airshed Society				Maximum Recorded Values							
Pollutant (units)	Objectives			Station	Monthly Average	1-Hour Minimum	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day				1-hr	24-hr	30-day	Conc	Day	Conc	Day		
NO (ppb)				Hanna Airpointer	3.6	0.0				18.8	Nov-26 15:00	8.9	Nov-22	100.0	Nov-27
NO ₂ (ppb)	159				5.2	0.0	0			24.9	Nov-28 01:00	11.7	Nov-28	100.0	Nov-27
NO _x (ppb)					8.8	0.0				35.1	Nov-27 10:00	20.4	Nov-22	100.0	Nov-27
O ₃ (ppb)	76				19.9	0.5	0			38.0	Nov-17 16:00	28.5	Nov-17	100.0	Nov-28
PM _{2.5} (µg/m ³)	80	29			5.0	0.0	0	0		37.6	Nov-04 05:00	16.2	Nov-22	99.7	Oct-15
ET (°C)					-4.9	-22.2				17.6	Nov-08 15:00	7.8	Nov-07	100.0	-
RH (%)					79.4	25.3				97.3	Nov-15 03:00	93.5	Nov-15	100.0	-
WSPD (km/h)					0.7	0.0				17.0	Nov-11 04:00	8.7	Nov-11	100.0	-
WDIR					ESE									100.0	-

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	
O ₃	Airpointer API		400e	Failing scrubber identified November 27; analyzer found to be 15% out and linear, data was adjusted back to October 15 installation calibration.
PM _{2.5}	Sharp		5030	2 hours of data not captured during November 27 calibrations.
ET/RH				
WS/WD				

Nov-24				Palliser Airshed Society				Maximum Recorded Values							
Pollutant (units)	Objectives			Station	Monthly Average	1-Hour Minimum	Exceedence			1-hr		24-hr / 8-hr		Operational Time (%)	Calibration Date
	1-hr	24-hr	30-day				1-hr	24-hr	30-day	Conc	Day	Conc	Day		
NO (ppb)				Raymond Airpointer	0.4	0.0				13.5	Nov-28 10:00	2.1	Nov-28	100.0	Nov-27
NO ₂ (ppb)	159				2.7	0.2	0			16.6	Nov-27 20:00	6.6	Nov-25	100.0	Nov-27
NO _x (ppb)					3.1	0.3				26.7	Nov-28 10:00	8.3	Nov-26	100.0	Nov-27
O ₃ (ppb)	76				25.3	3.7	0			44.3	Nov-02 14:00	36.8	Nov-17	100.0	Nov-27
PM _{2.5} (µg/m ³)	80	29			6.3	0.0	0	0		47.0	Nov-27 22:00	17.3	Nov-30	99.9	Oct-02
ET (°C)					-2.3	-21.8				18.5	Nov-08 13:00	11.9	Nov-08	100.0	-
RH (%)					74.4	28.2				100.0	Nov-05 06:00	95.0	Nov-20	100.0	-
WSPD (km/h)					1.4	0.0				7.9	Nov-17 02:00	4.7	Nov-12	100.0	-
WDIR					WSW									100.0	-

Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	Airpointer API		200e	
O ₃	Airpointer API		400e	
PM _{2.5}	Sharp		5030	1 hour of data not captured during November 27 calibrations.
ET/RH				
WS/WD				

November 2024 NO₂

NO₂ AAAQO = 172 ppb

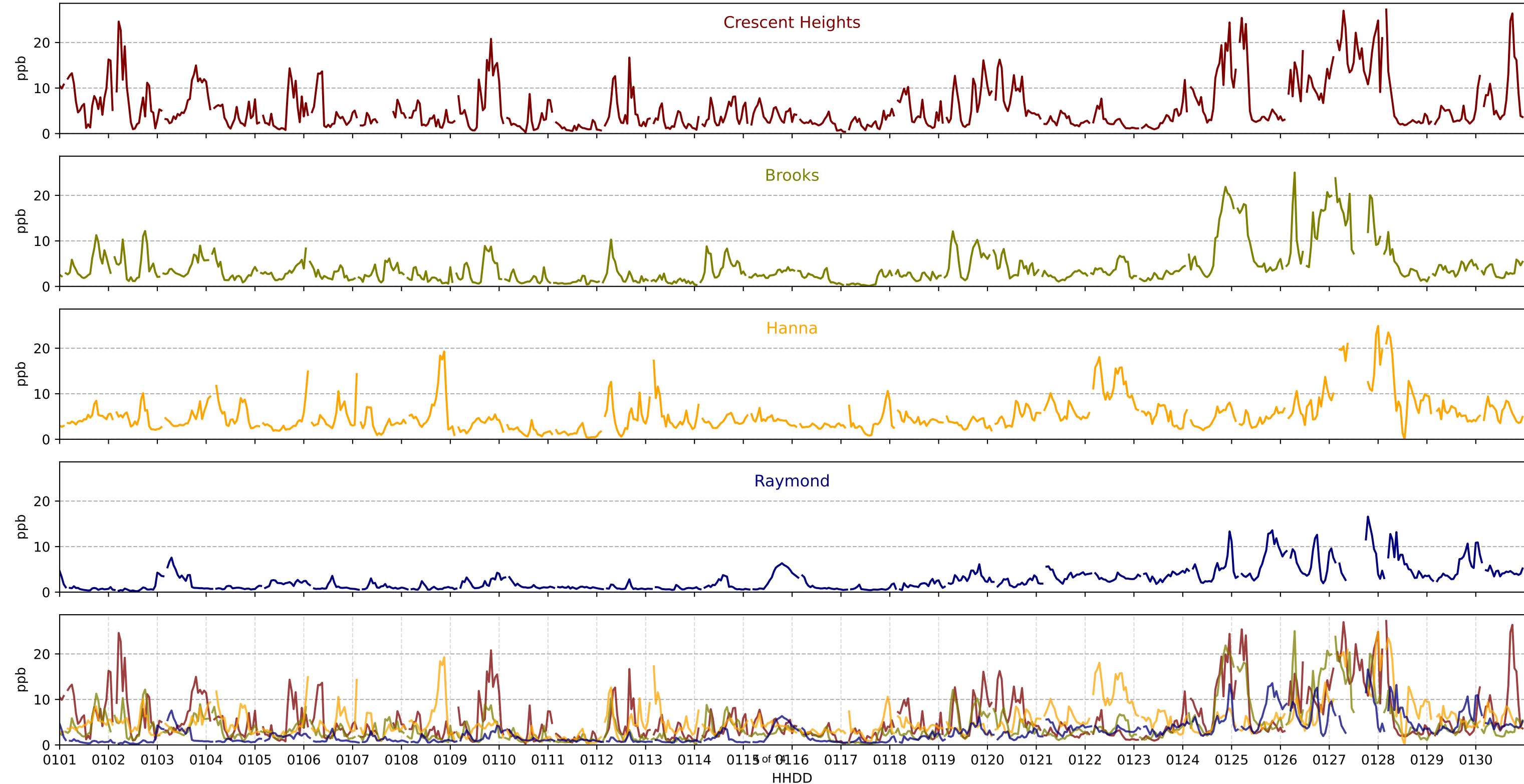
Crescent Heights

Brooks

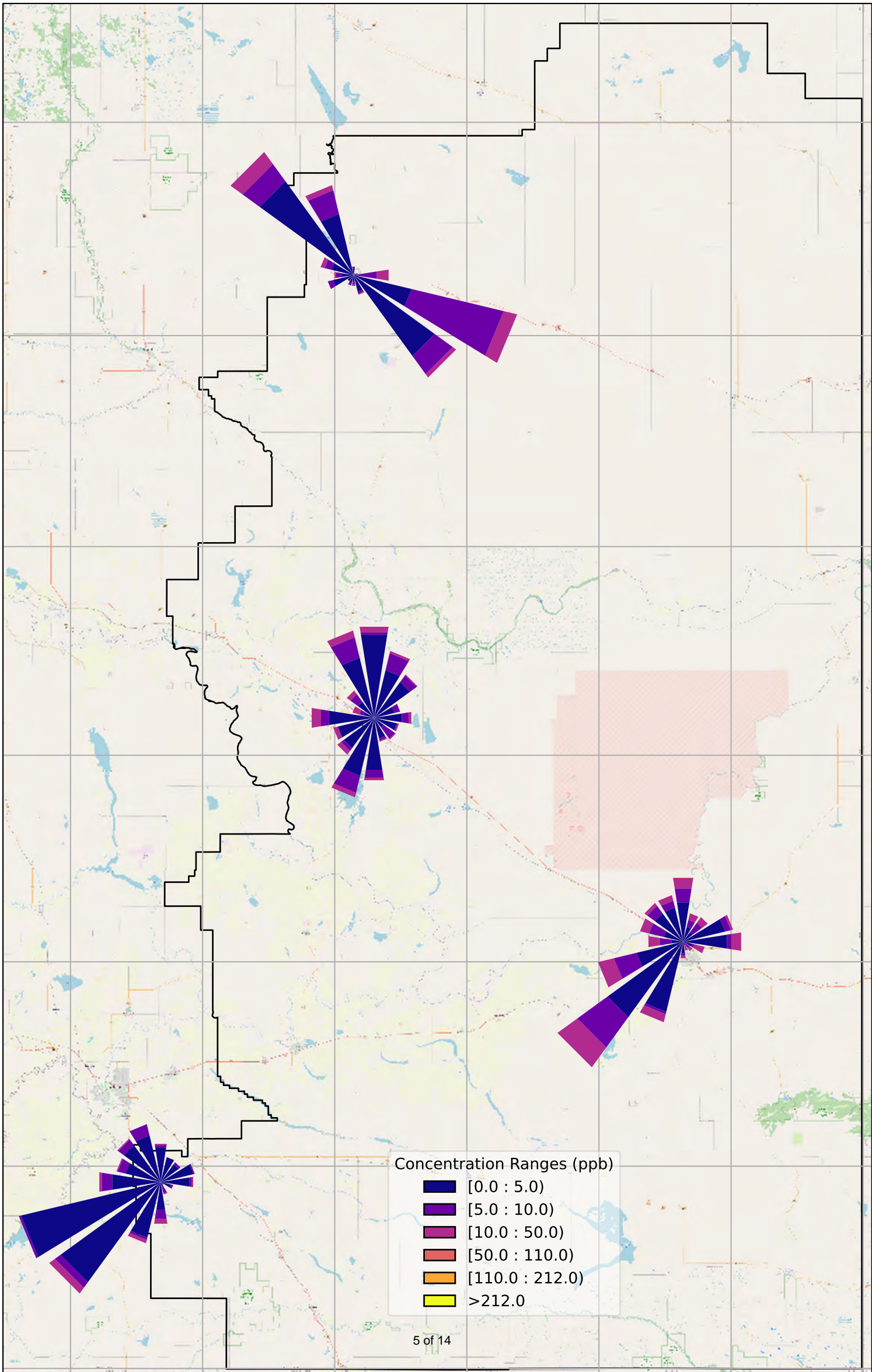
Hanna

Raymond

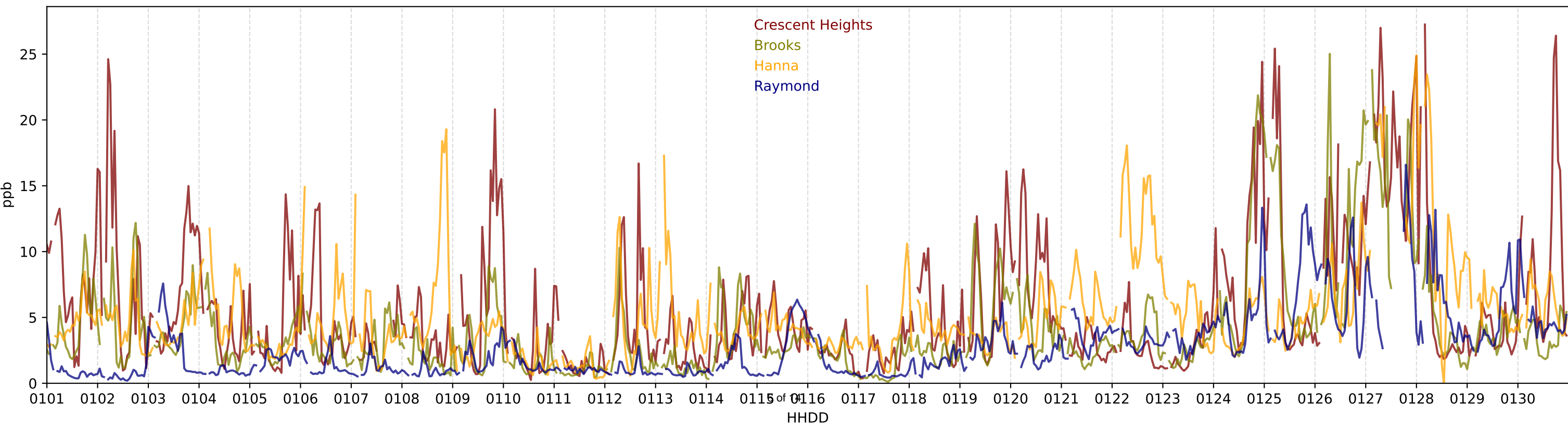
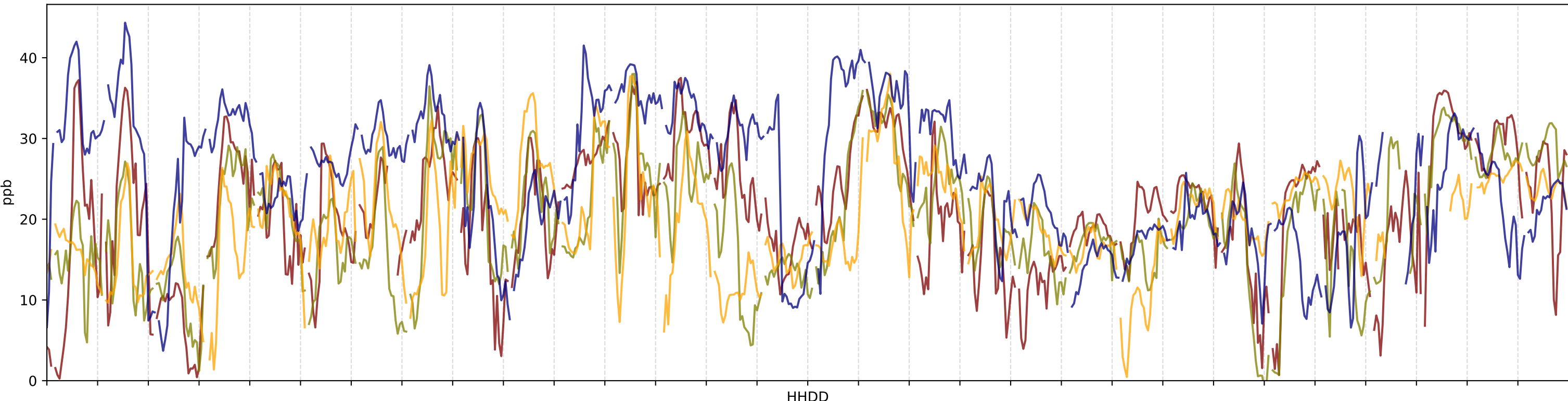
HHDD



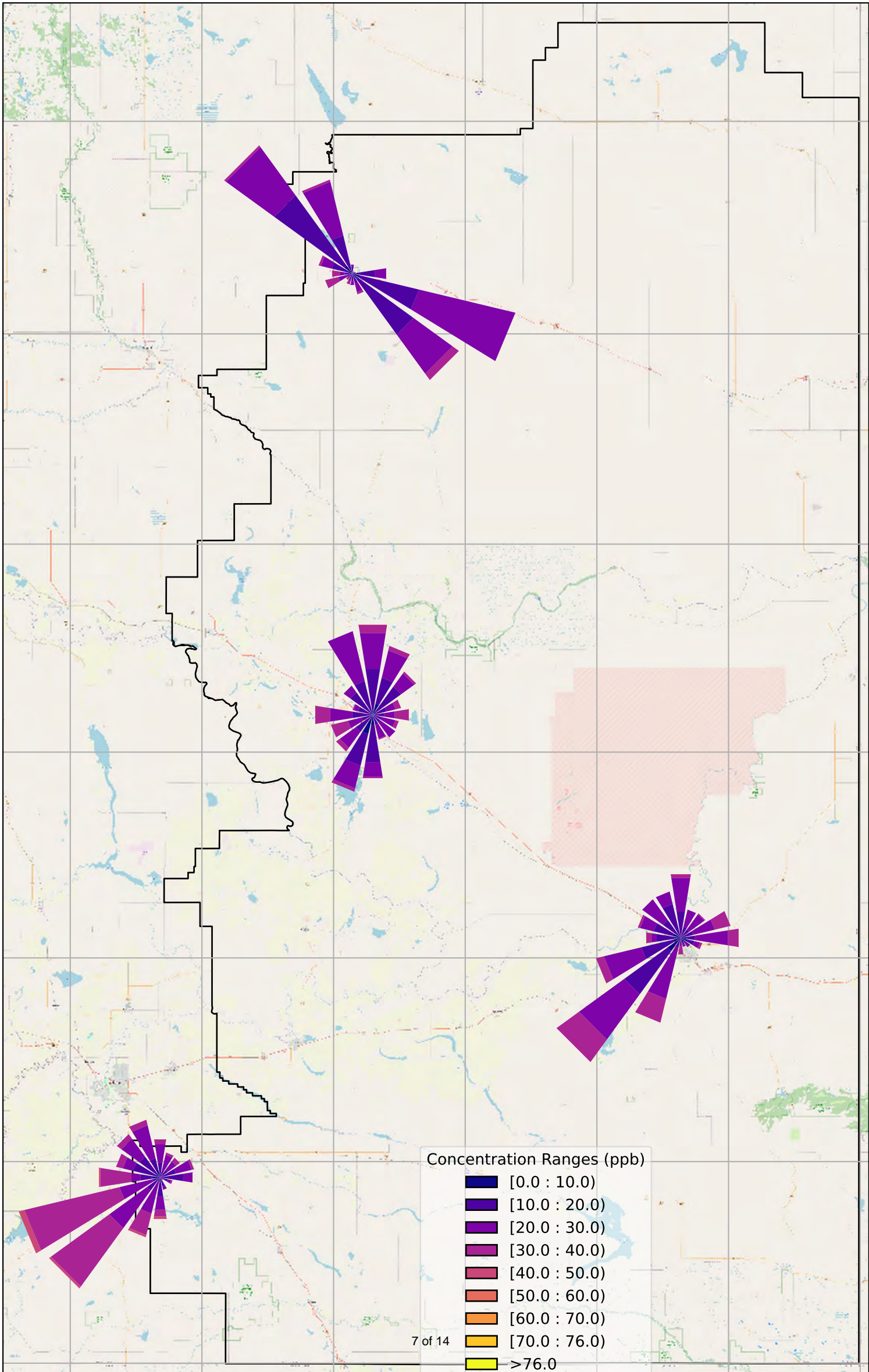
November 2024 NO₂ Roses



November 2024 O₃ vs NO₂



November 2024 O₃ Roses



November 2024 PM_{2.5}

PM_{2.5} AAAQG = 80 $\mu\text{g}/\text{m}^3$

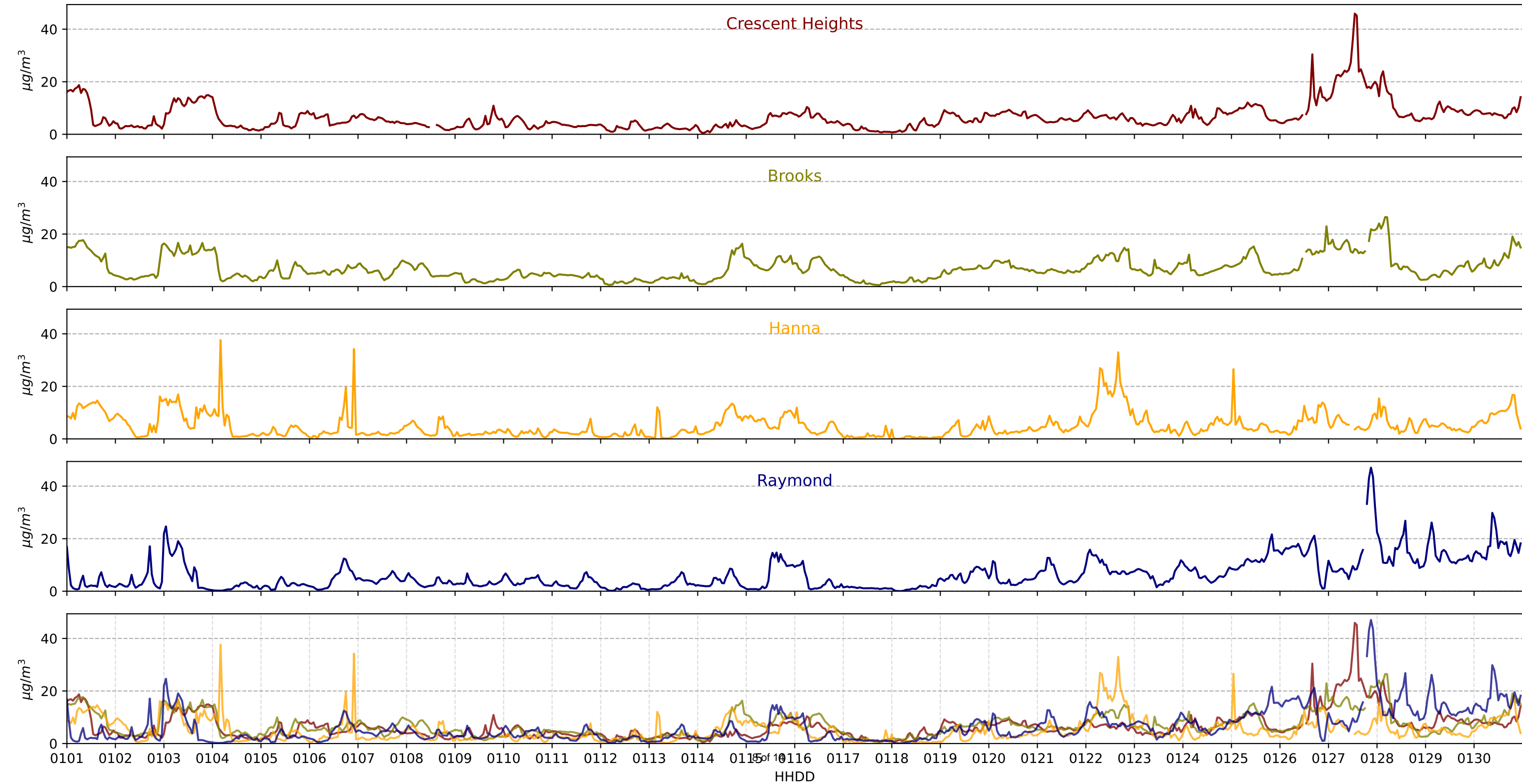
Crescent Heights

Brooks

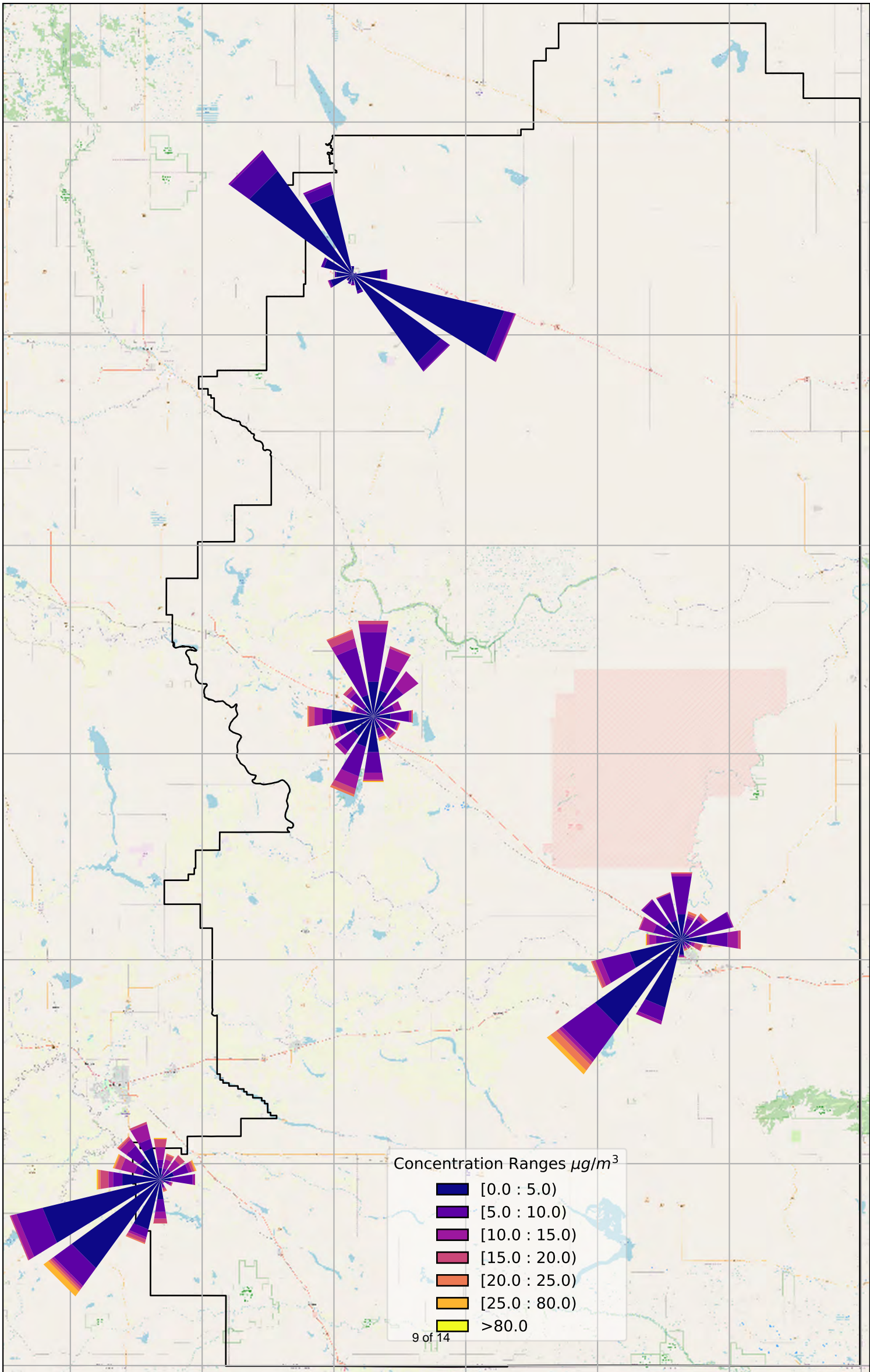
Hanna

Raymond

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HHDD



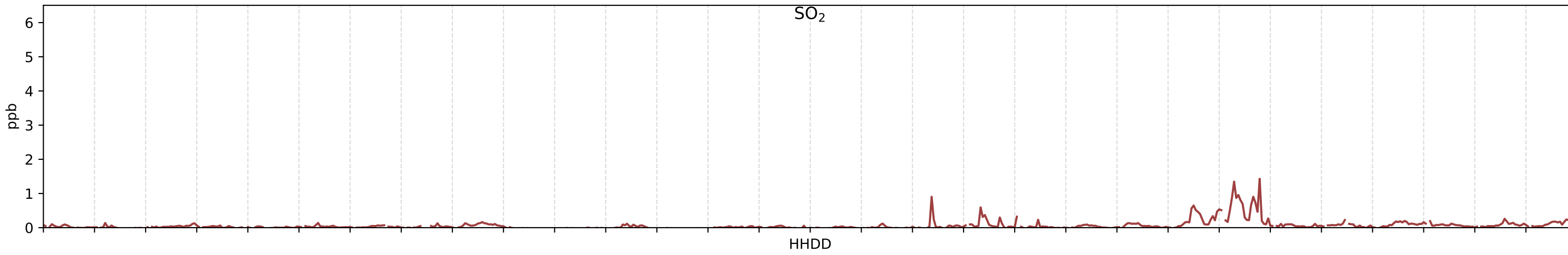
November 2024 PM_{2.5} Roses



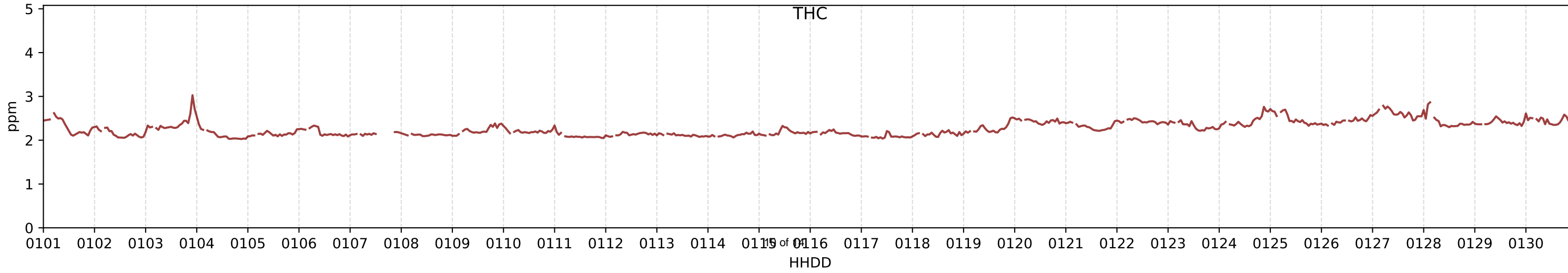
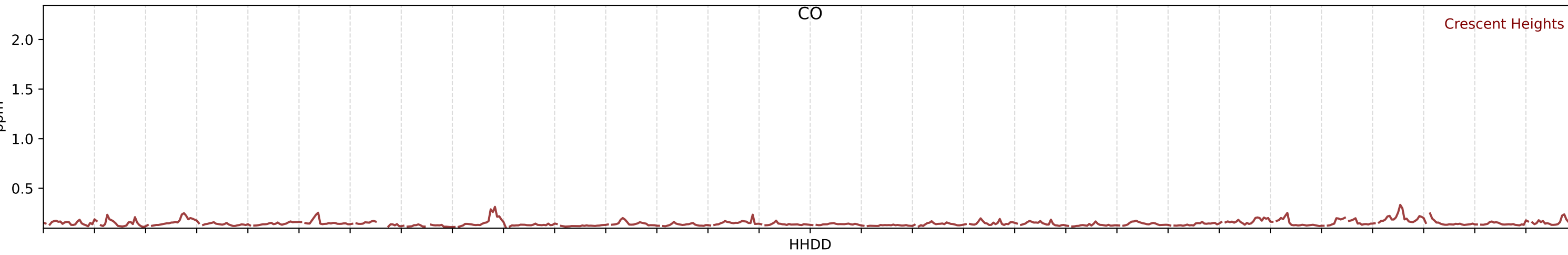
Concentration Ranges $\mu\text{g}/\text{m}^3$

- [0.0 : 5.0)
- [5.0 : 10.0)
- [10.0 : 15.0)
- [15.0 : 20.0)
- [20.0 : 25.0)
- [25.0 : 80.0)
- >80.0

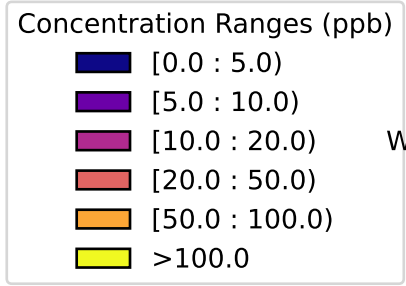
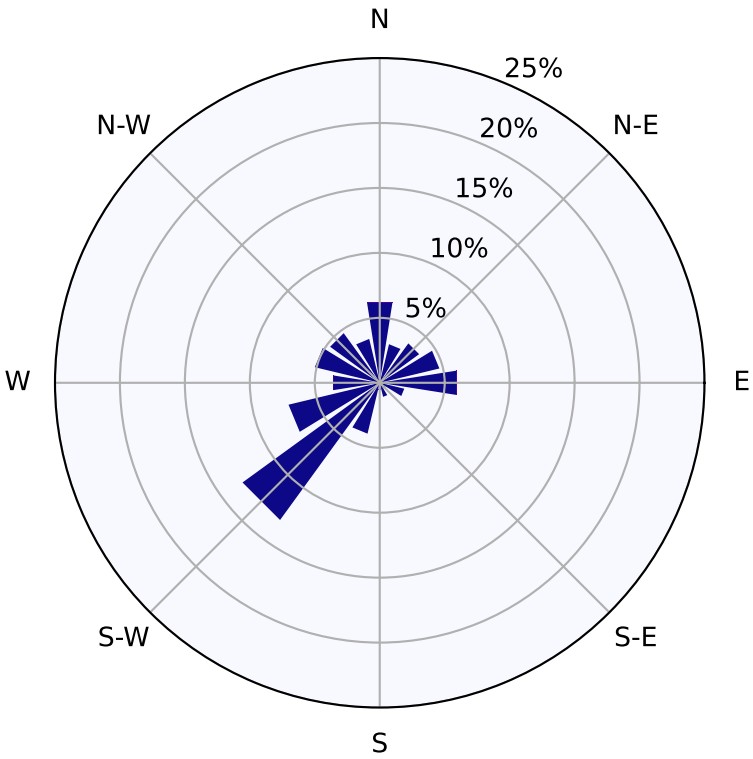
SO₂ AAAQO = 172 ppb



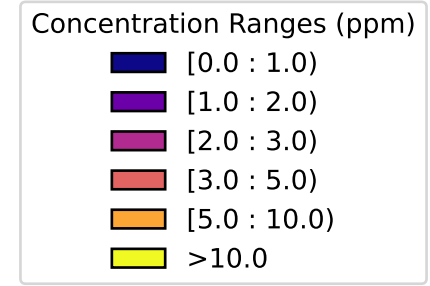
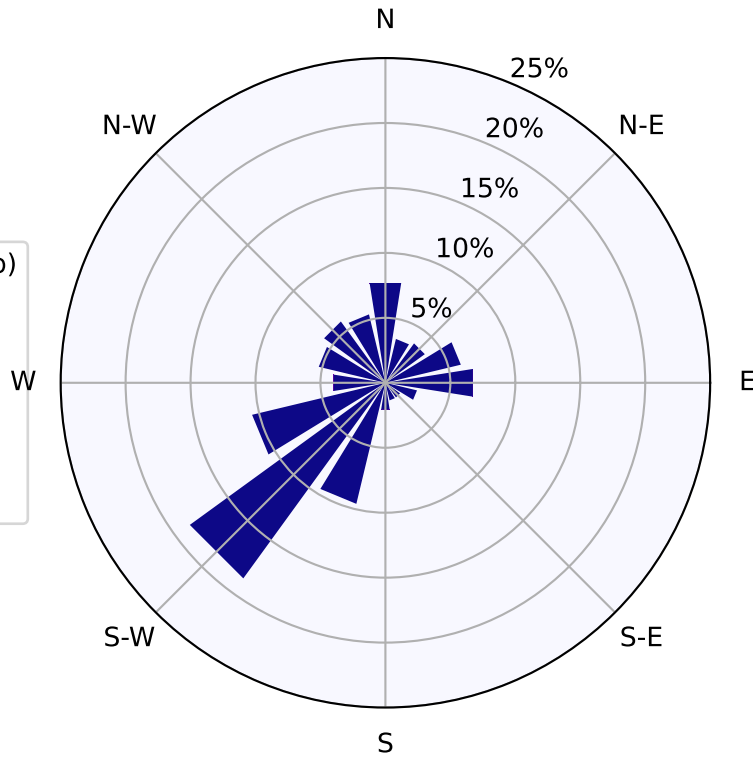
CO AAAQO = 13 ppm



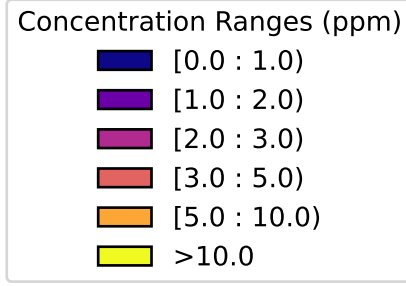
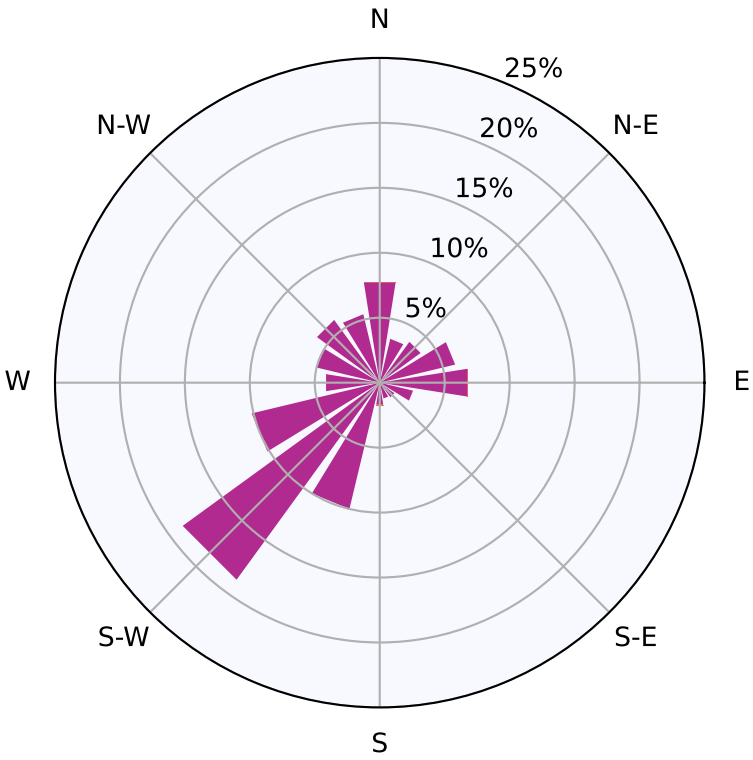
Crescent Heights SO₂

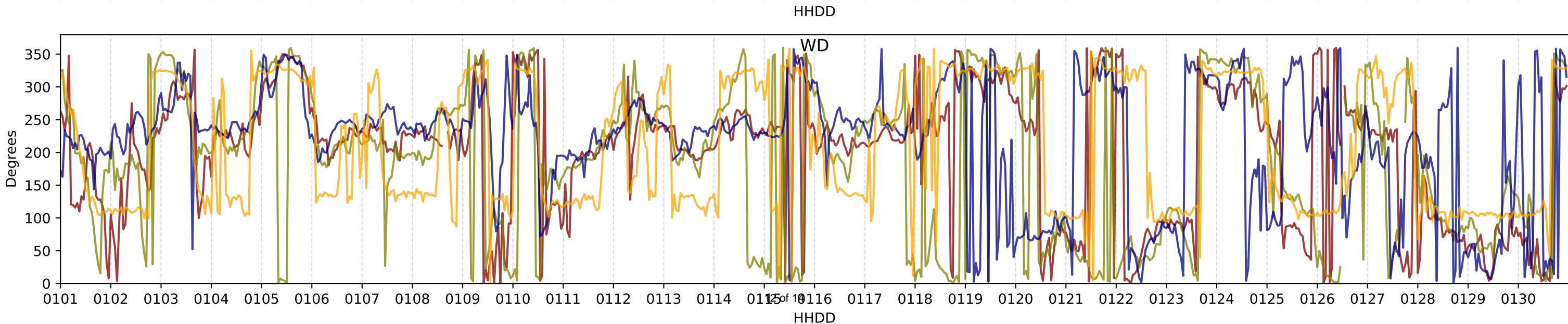
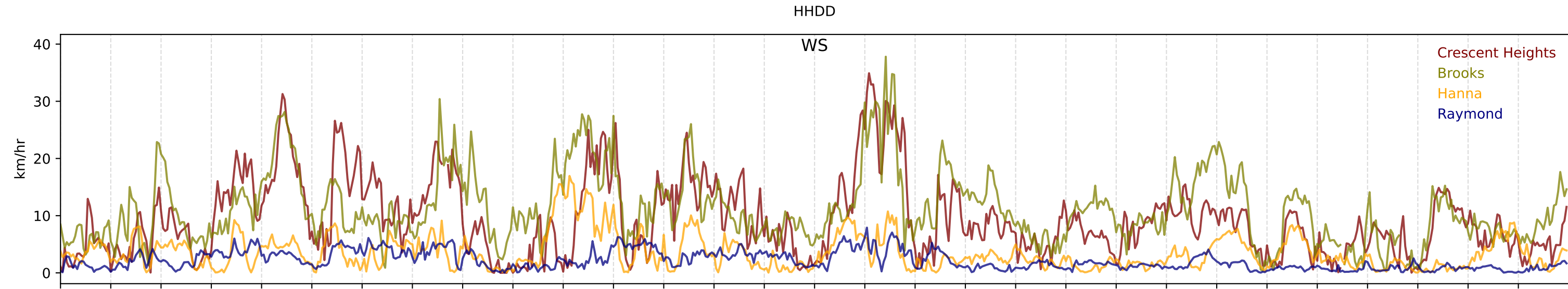
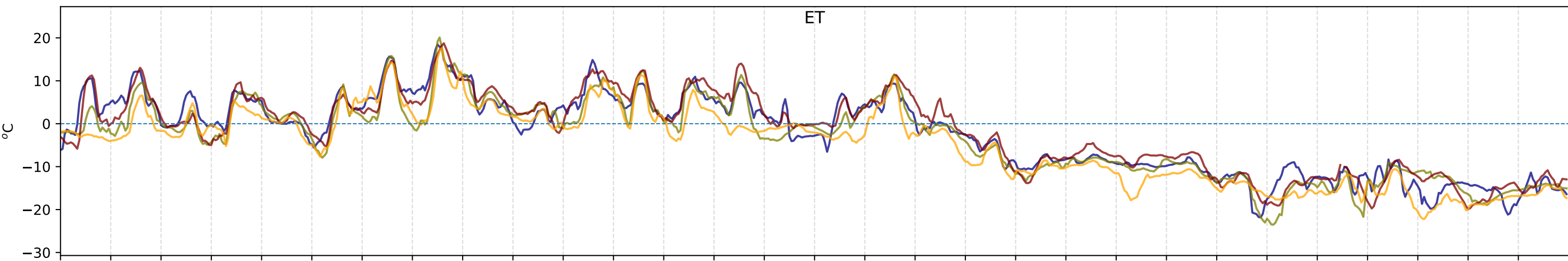


Crescent Heights CO



Crescent Heights THC





Crescent Heights
Brooks
Hanna
Raymond

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HHDD

November 2024 WS Roses

