



July 25, 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 – June 2024

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

Continuous Monitoring – Crescent Heights, Brooks, Taber 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:

All analyzers and instruments were greater than 90% operational for the month of June.

AAAQO/G Exceedance Summary:

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

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

X

Patrick Andersen, B.Sc.
WSP AQM Data Specialist

June 2024 Monthly Ambient Air Quality Summary

Jun-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	0.0	0.0	0	0	0	0.4	Jun-10 09:00	0.1	Jun-10	100.0	Jun-12	
NO (ppb)					0.6	0.0					17.1	Jun-06 02:00	1.6	Jun-06	95.1	Jun-11
NO ₂ (ppb)	159				3.5	0.2	0				24.0	Jun-20 22:00	5.8	Jun-21	95.1	Jun-11
NO _x (ppb)					4.3	0.7					34.7	Jun-20 22:00	7.2	Jun-17	95.1	Jun-11
O ₃ (ppb)	76				34.2	5.5	0				68.6	Jun-12 03:00	45.9	Jun-14	94.9	Jun-11
CO (ppm)					0.1	0.0					0.3	Jun-01 09:00	0.2	Jun-16	100.0	Jun-11
CO 8-Hour (ppm)	5				-	0.0	0				0.2	Jun-01 12:00	-	-	100.0	-
THC (ppm)					2.1	2.0					2.5	Jun-10 08:00	2.2	Jun-08	100.0	Jun-11
PM _{2.5} (µg/m ³)	80	29			3.6	0.7	0	0			43.7	Jun-11 01:00	6.2	Jun-10	96.9	Jun-12
ET (°C)					16.4	5.5					32.1	Jun-23 15:00	24.6	Jun-23	96.7	-
RH (%)					54.5	13.6					100.0	Jun-04 01:00	88.3	Jun-17	96.7	-
GSR (W/m ²)					278.1	0.0					1032.8	Jun-13 14:00	373.2	Jun-22	96.7	-
WSPD (km/h)					3.7	0.1					34.4	Jun-04 17:00	23.3	Jun-04	96.7	-
WDIR					W										96.7	-

Pollutant (units)	Analyzer			Notes
	Make		Model	
SO ₂	TEI		43i	Data logger failed June 11. Replacement logger installed June 12
NO/NO ₂ /NO _x	TEI		42i	No valid data captured for 10 hours June 13 and June 16 due to issues configuring logger.
O ₃	TECO		49i	No valid data captured for 10 hours June 13 and June 16 due to issues configuring logger.
CO	TEI		48i-TLE	
THC	TECO		51C-LT	
PM _{2.5}	SHARP		5030	No valid data captured June 11-12 during logger outage.
ET/RH	RMYoung		41382VC	Data capture offline during logger failure June 11-12 and reconfiguration June 17.
GSR	EPPLEY			Data capture offline during logger failure June 11-12 and reconfiguration June 17.
WS/WD	RMYoung		5305-10	Data capture offline during logger failure June 11-12 and reconfiguration June 17.

Jun-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)				Taber	0.7	0.0				16.8	Jun-13 06:00	1.6	Jun-13	99.9	Jun-20	
NO ₂ (ppb)	159				2.9	0.4	0				19.4	Jun-12 06:00	5.0	Jun-10	99.9	Jun-20
NO _x (ppb)					3.6	0.4					34.5	Jun-12 06:00	6.3	Jun-10	99.9	Jun-20
O ₃ (ppb)	76				31.5	4.6	0				55.9	Jun-14 17:00	40.1	Jun-15	99.9	Jun-20
PM _{2.5} (µg/m ³)	80	29			4.1	0.0	0	0			45.7	Jun-08 15:00	9.5	Jun-08	99.6	Apr-24
ET (°C)					15.6	4.9					29.7	Jun-23 16:00	22.4	Jun-23	99.9	-
RH (%)					55.7	16.2					96.8	Jun-28 04:00	82.2	Jun-16	99.9	-
WSPD (km/h)					3.5	0.1					33.1	Jun-04 14:00	23.6	Jun-04	99.9	-
WDIR					WSW										99.9	-

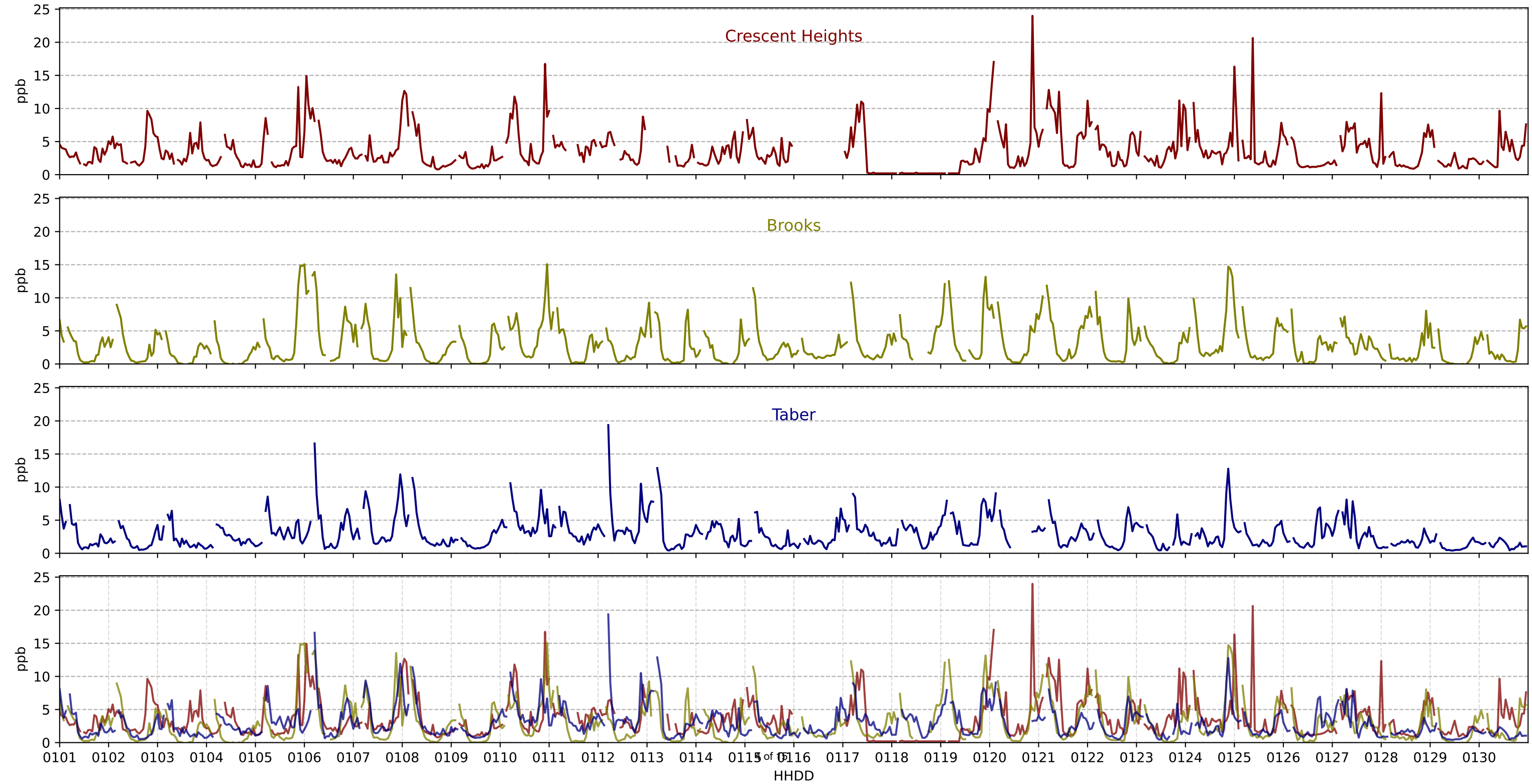
Pollutant (units)	Analyzer			Notes
	Make		Model	
NO/NO ₂ /NO _x	API		42i	Data logger did not capture 1 hour of data June 23.
O ₃	API		T400	
PM _{2.5}	SHARP		5030	Analyzer returned invalid readings for 2 hours on June 23.
ET/RH	Vaisala		WXT520	
WS/WD	Vaisala		WXT520	

Jun-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	0.7	0.0				6.5	Jun-06 07:00	1.3	Jun-06	99.6	Jun-18
NO ₂ (ppb)	159				3.0	0.0	0			15.1	Jun-11 00:00	6.0	Jun-06	99.6	Jun-18
NO _x (ppb)					3.7	0.3				18.5	Jun-06 06:00	7.3	Jun-06	99.6	Jun-18
O ₃ (ppb)	76				32.6	1.8	0			62.7	Jun-14 15:00	43.0	Jun-12	98.8	Jun-19
PM _{2.5} (µg/m ³)	80	29			5.4	0.9	0	0		71.3	Jun-11 21:00	16.8	Jun-14	99.7	Apr-25
ET (°C)					15.0	2.0				30.4	Jun-23 16:00	22.1	Jun-23	99.7	-
RH (%)					53.3	11.9				88.1	Jun-22 05:00	77.5	Jun-27	99.7	-
WSPD (km/h)					2.9	0.1				36.0	Jun-04 17:00	23.2	Jun-04	99.7	-
WDIR					W									99.7	-

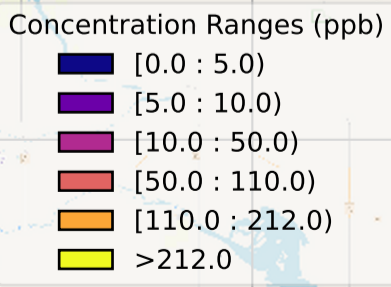
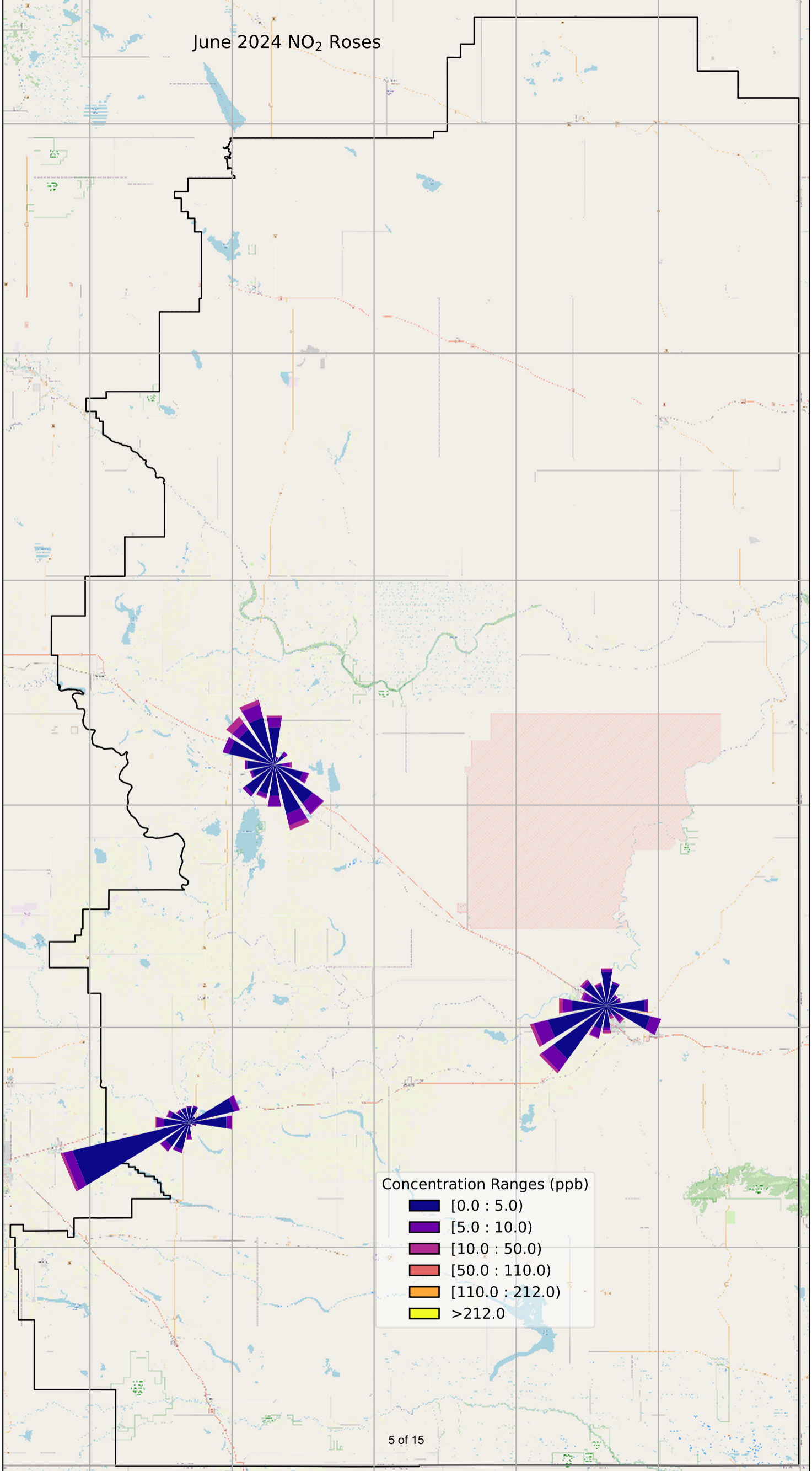
Pollutant (units)	Analyzer		Notes
	Make	Model	
NO/NO ₂ /NO _x	API	42i	Analyzer offline during June 19 ozone calibration.
O ₃	API	T400	Analyzer offline during June 18 NO _x calibration.
PM _{2.5}	SHARP	5030	
ET/RH	Vaisala	WXT520	
WSWD	Vaisala	WXT520	

June 2024 NO₂

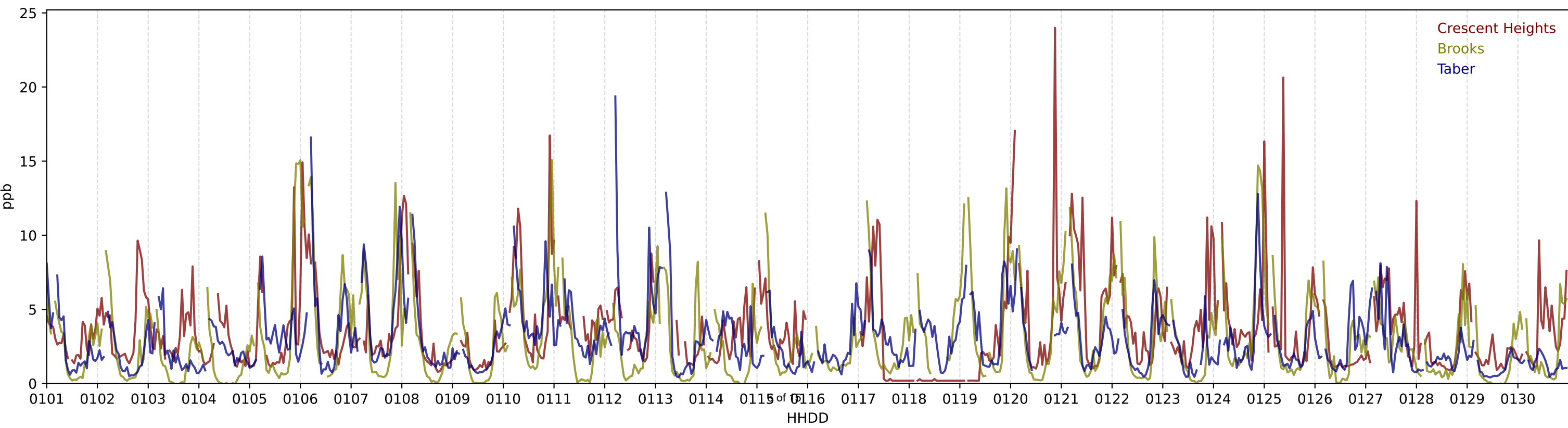
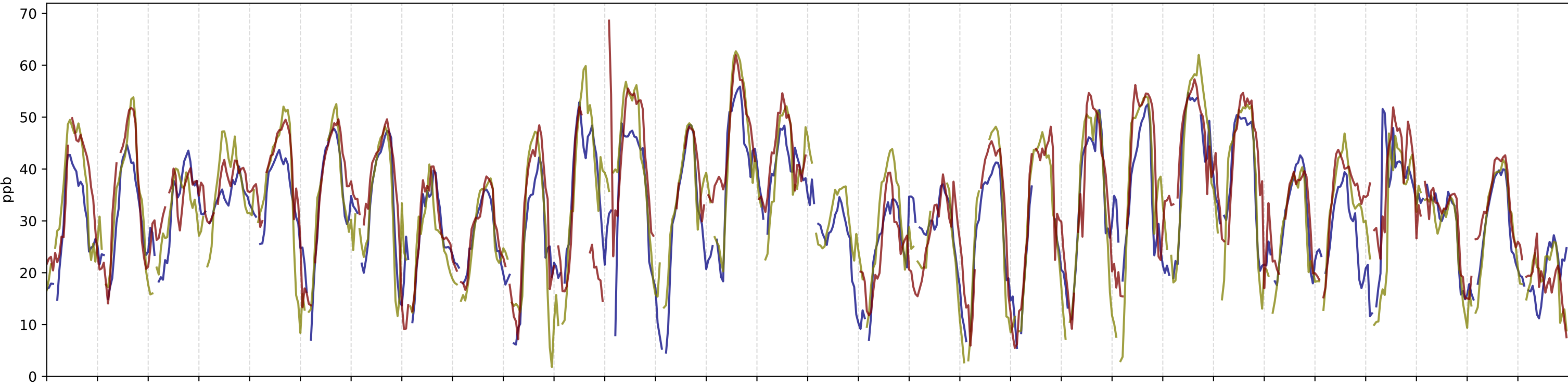
NO₂ AAAQO = 172 ppb



June 2024 NO₂ Roses

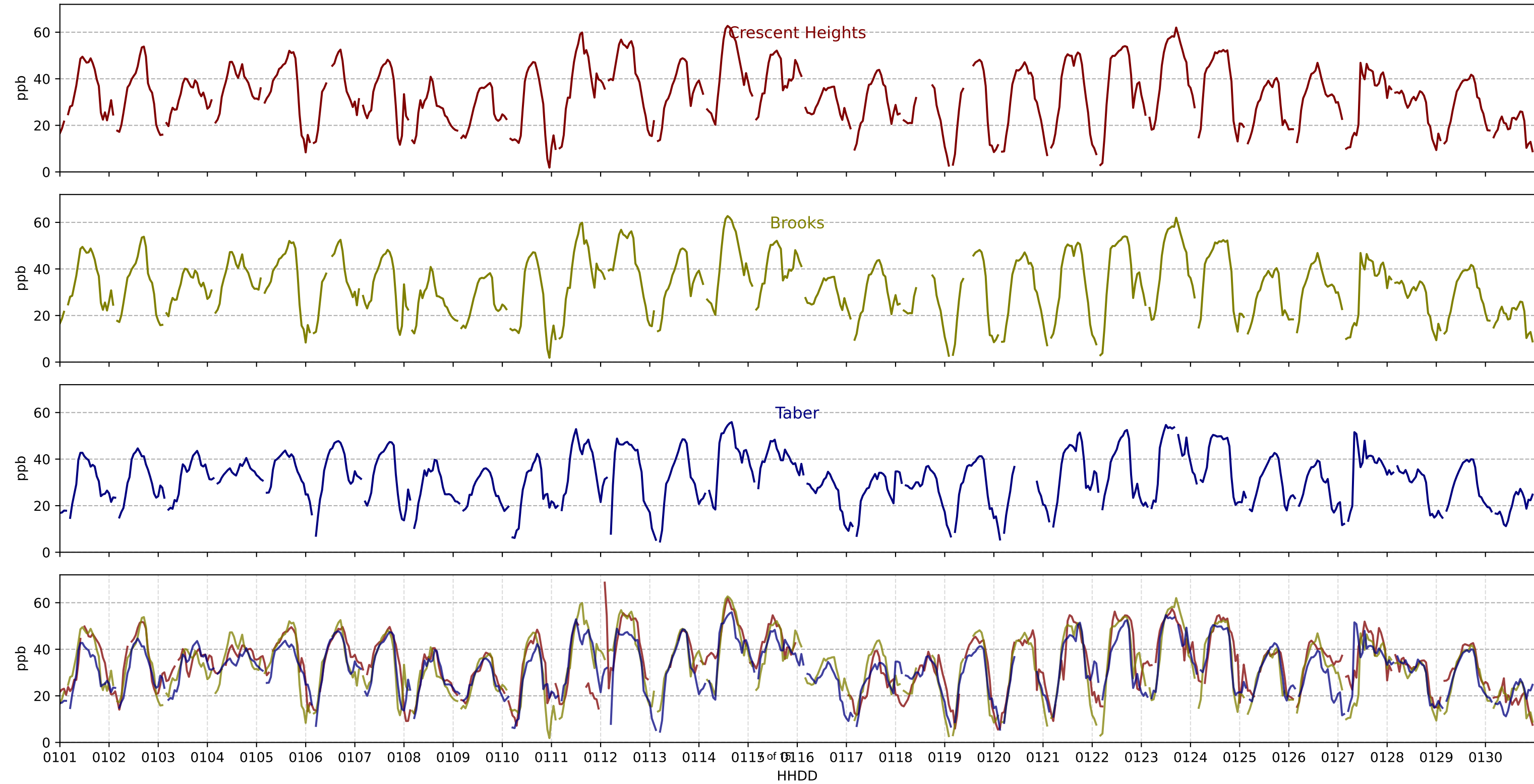


June 2024 O₃ vs NO₂

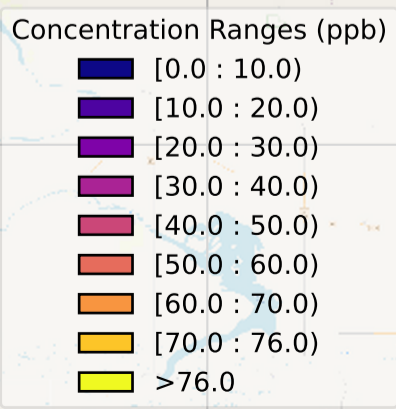
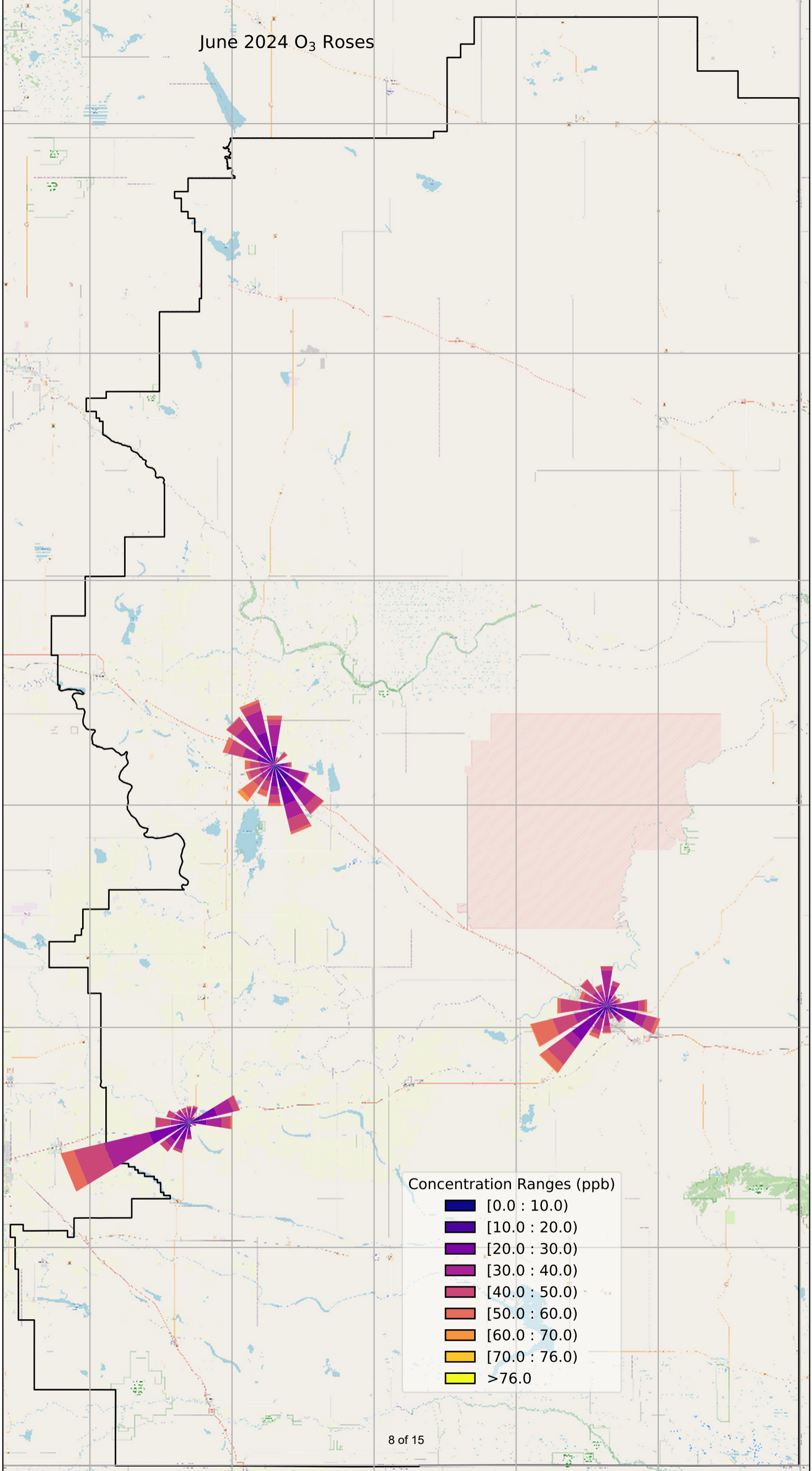


June 2024 O₃

O₃ AAAQO = 76 ppb

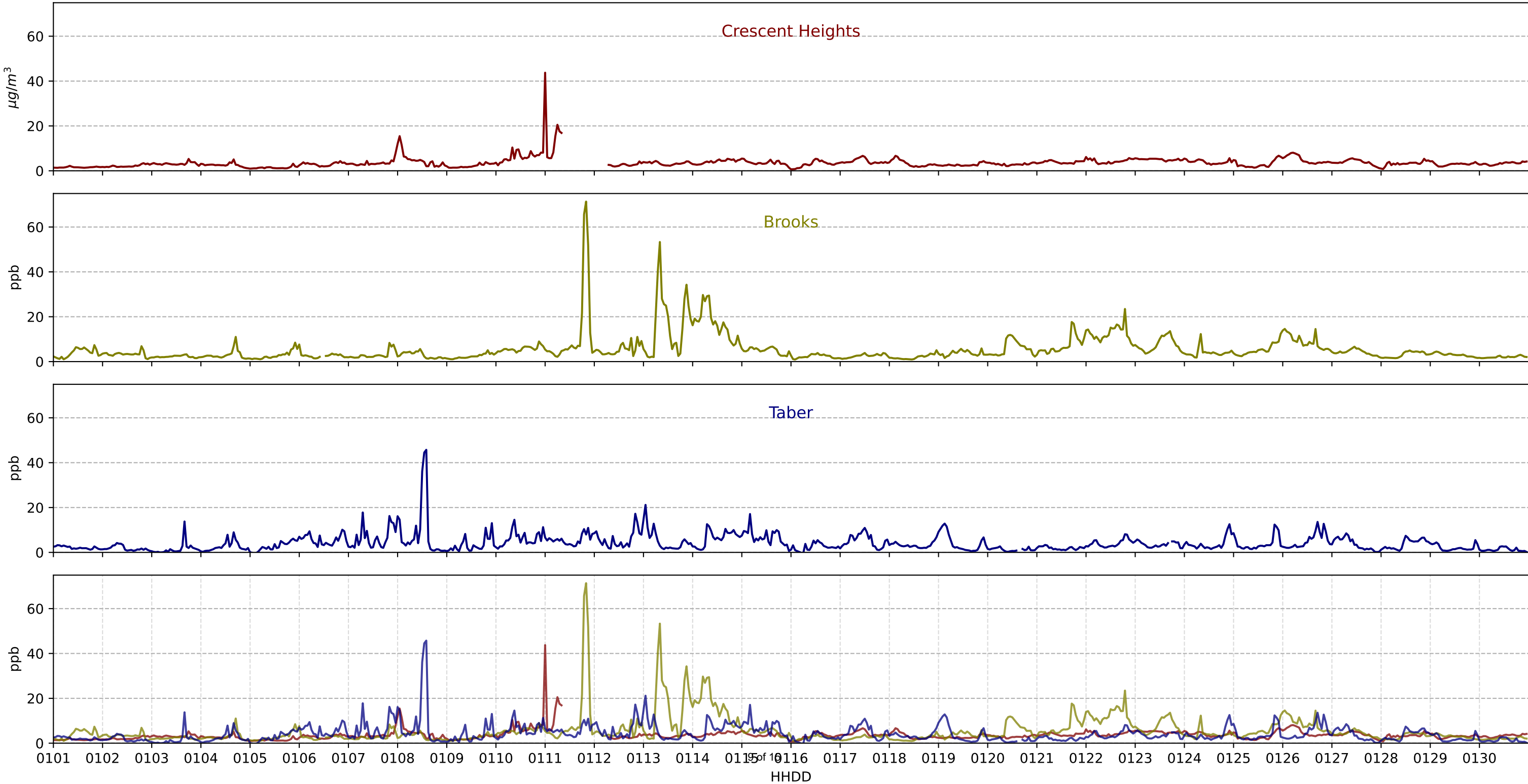


June 2024 O₃ Roses

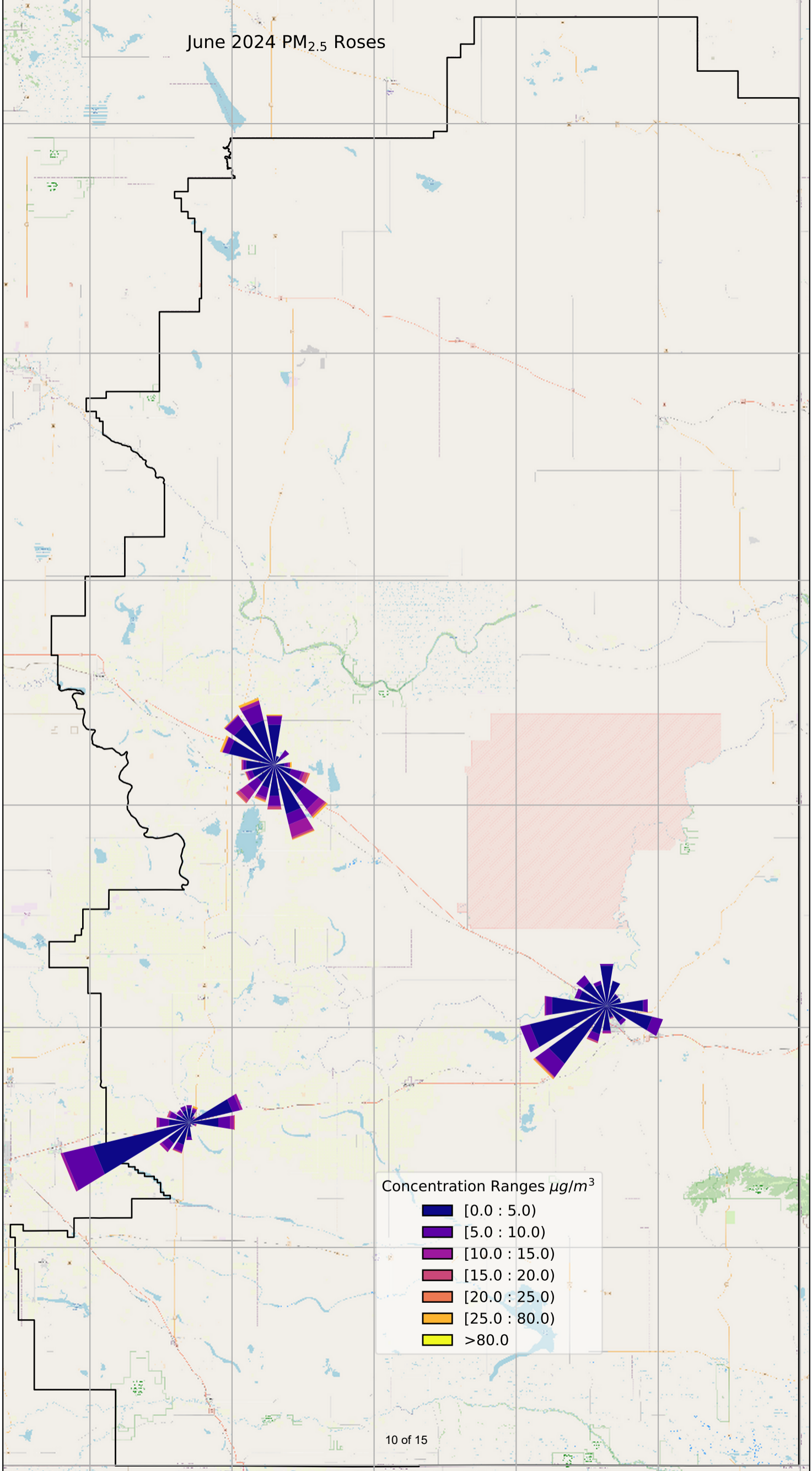


June 2024 PM_{2.5}

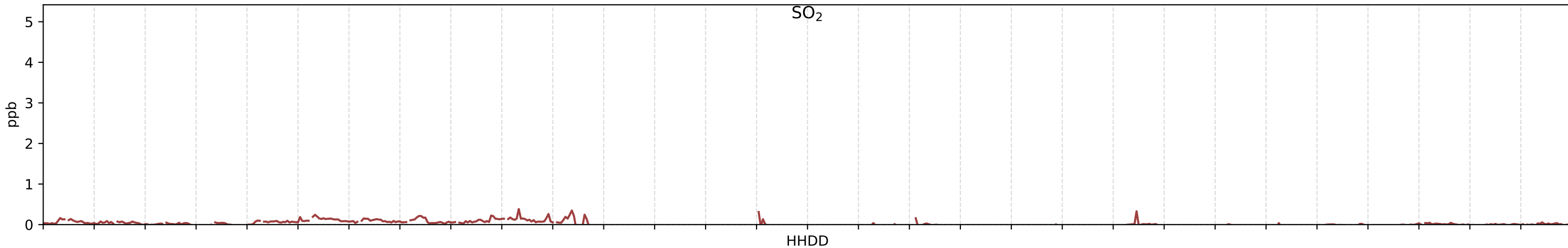
PM_{2.5} AAAQG = 80 $\mu\text{g}/\text{m}^3$



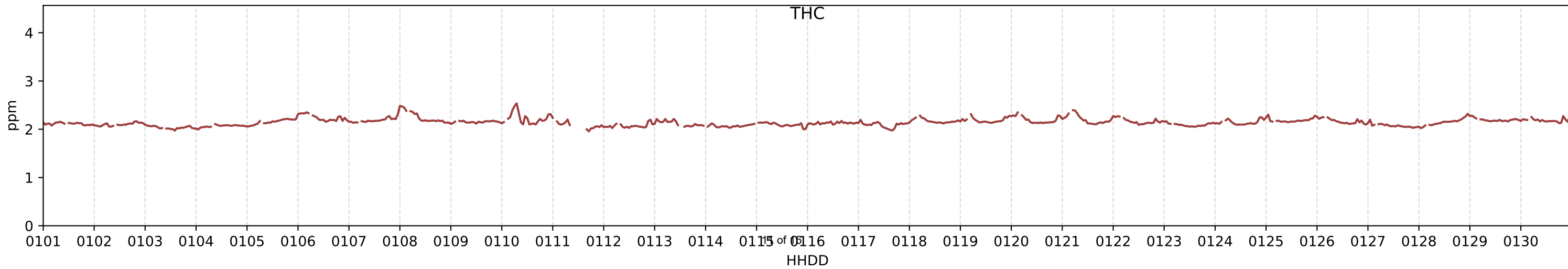
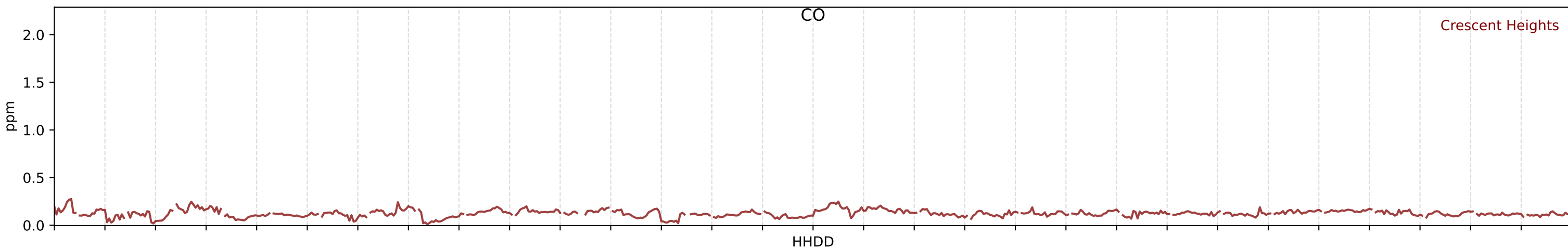
June 2024 PM_{2.5} Roses



SO₂ AAAQO = 172 ppb

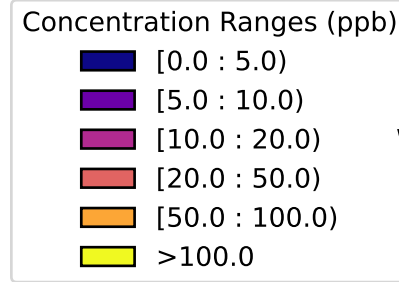
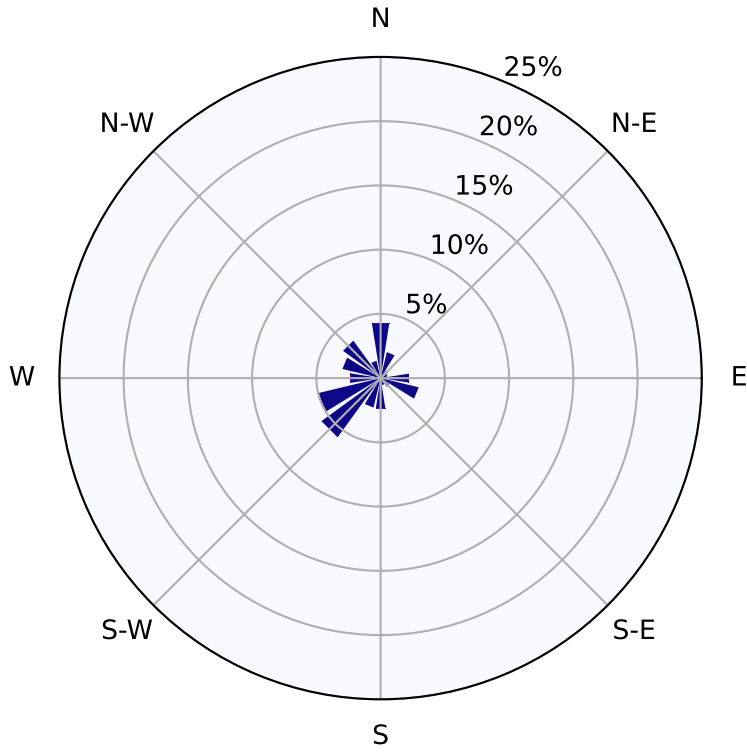


CO AAAQO = 13 ppm

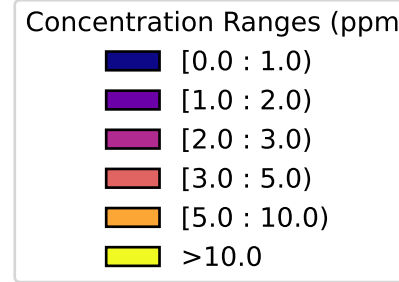
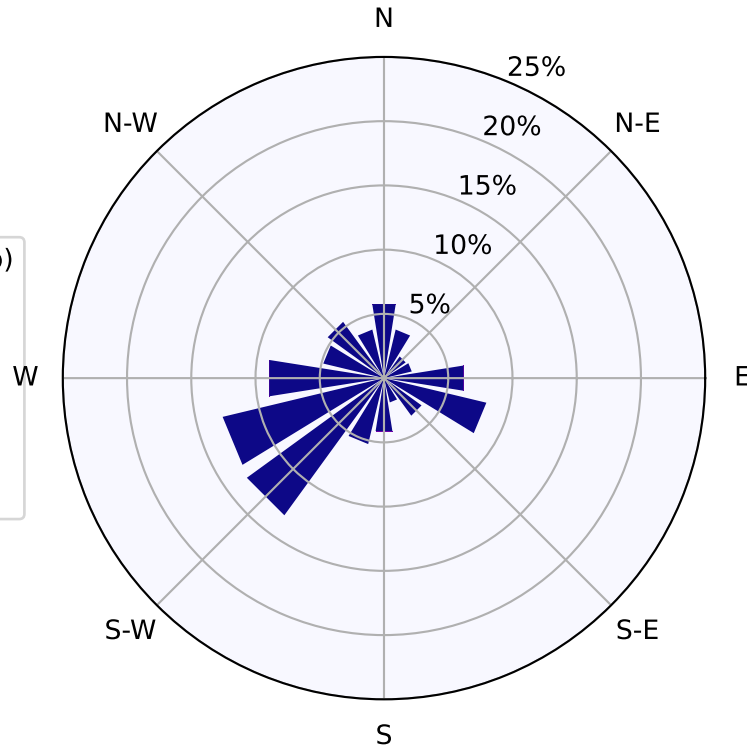


June 2024

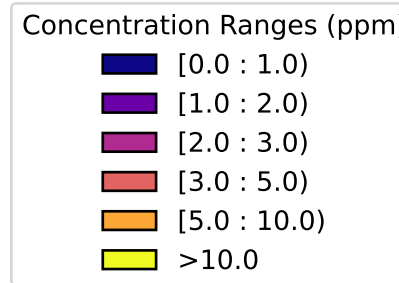
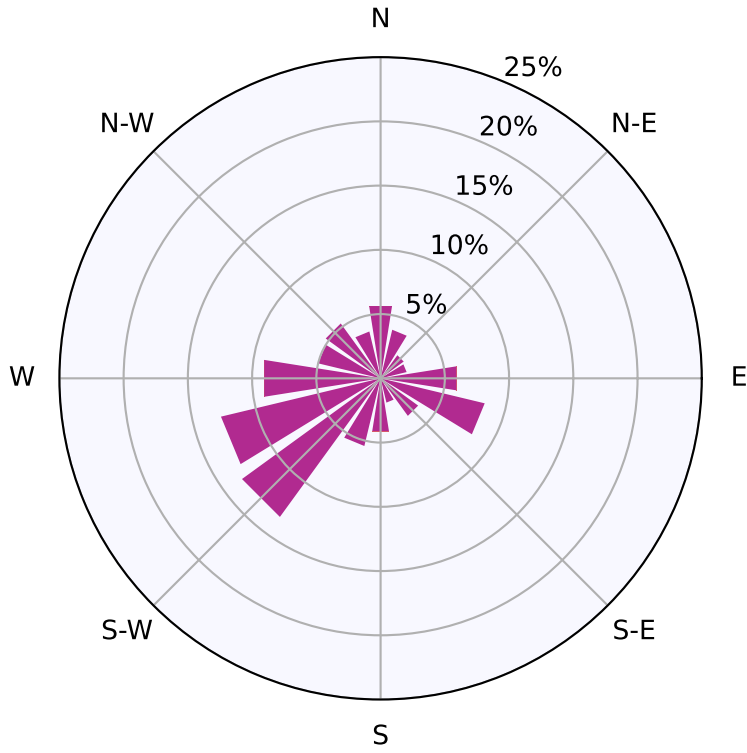
Crescent Heights SO₂

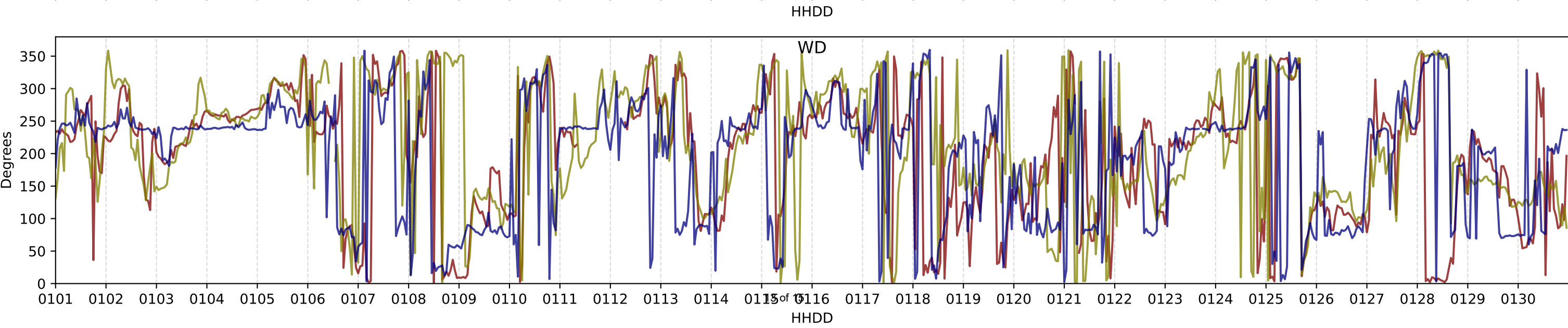
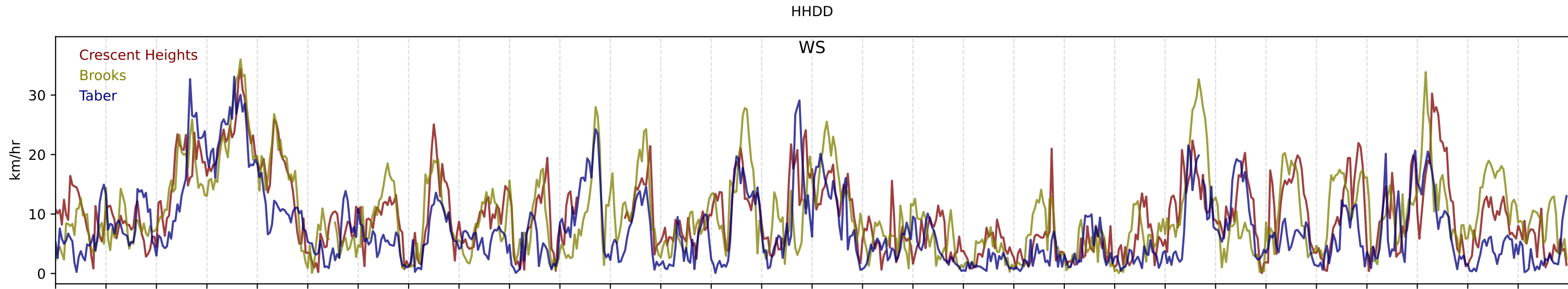
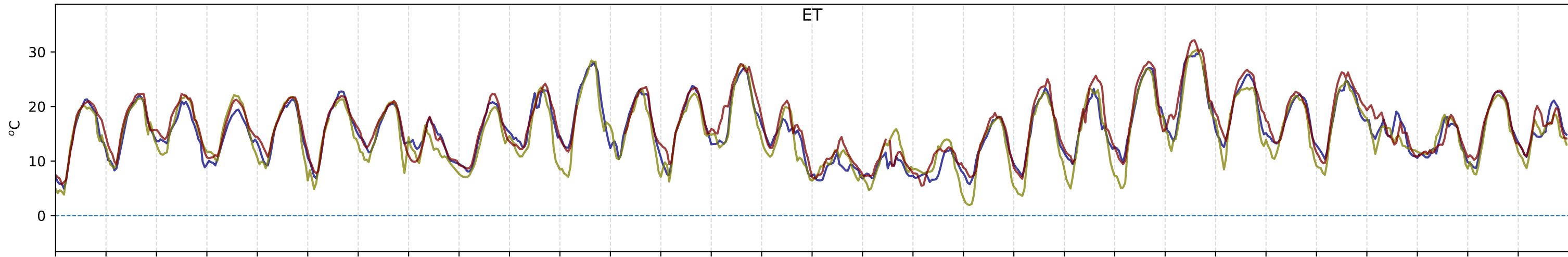


Crescent Heights CO



Crescent Heights THC





June 2024 WS Roses

