

Contract No:

This document was prepared in conjunction with work accomplished under Contract No. DE-AC09-08SR22470 with the U.S. Department of Energy (DOE) Office of Environmental Management (EM).

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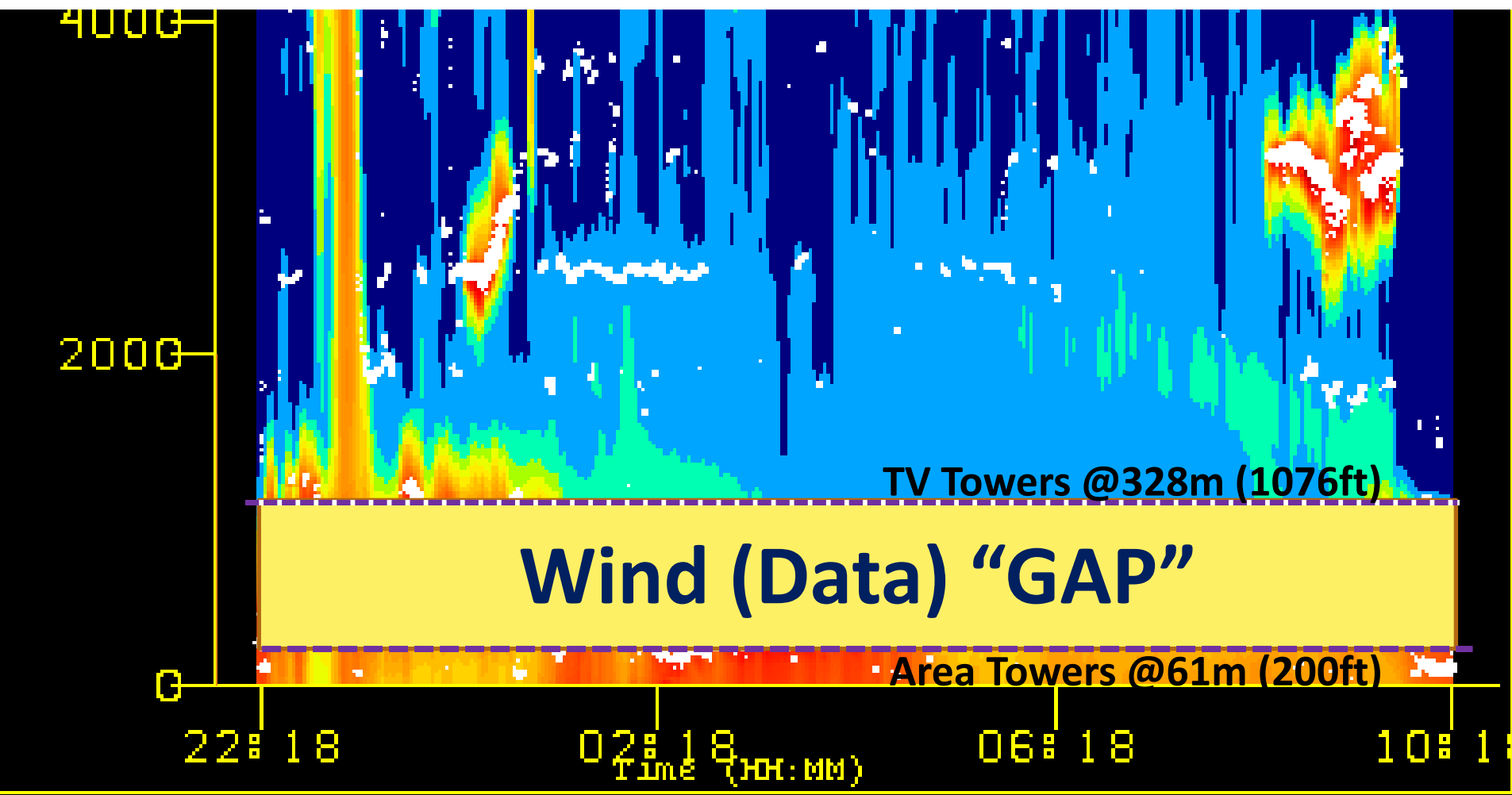
Inter-comparisons between Vaisala/Leosphere Windcube and a 200-ft tower at SRNL

Filling the vertical “gaps” in data

Steve Weinbeck
Operational Meteorologist

*DMSC Presentation EMI-SIG 2020
Tuesday August 25th, 2020*

Observational GAP – TV Tower and Area Towers



Background – ceilometer image



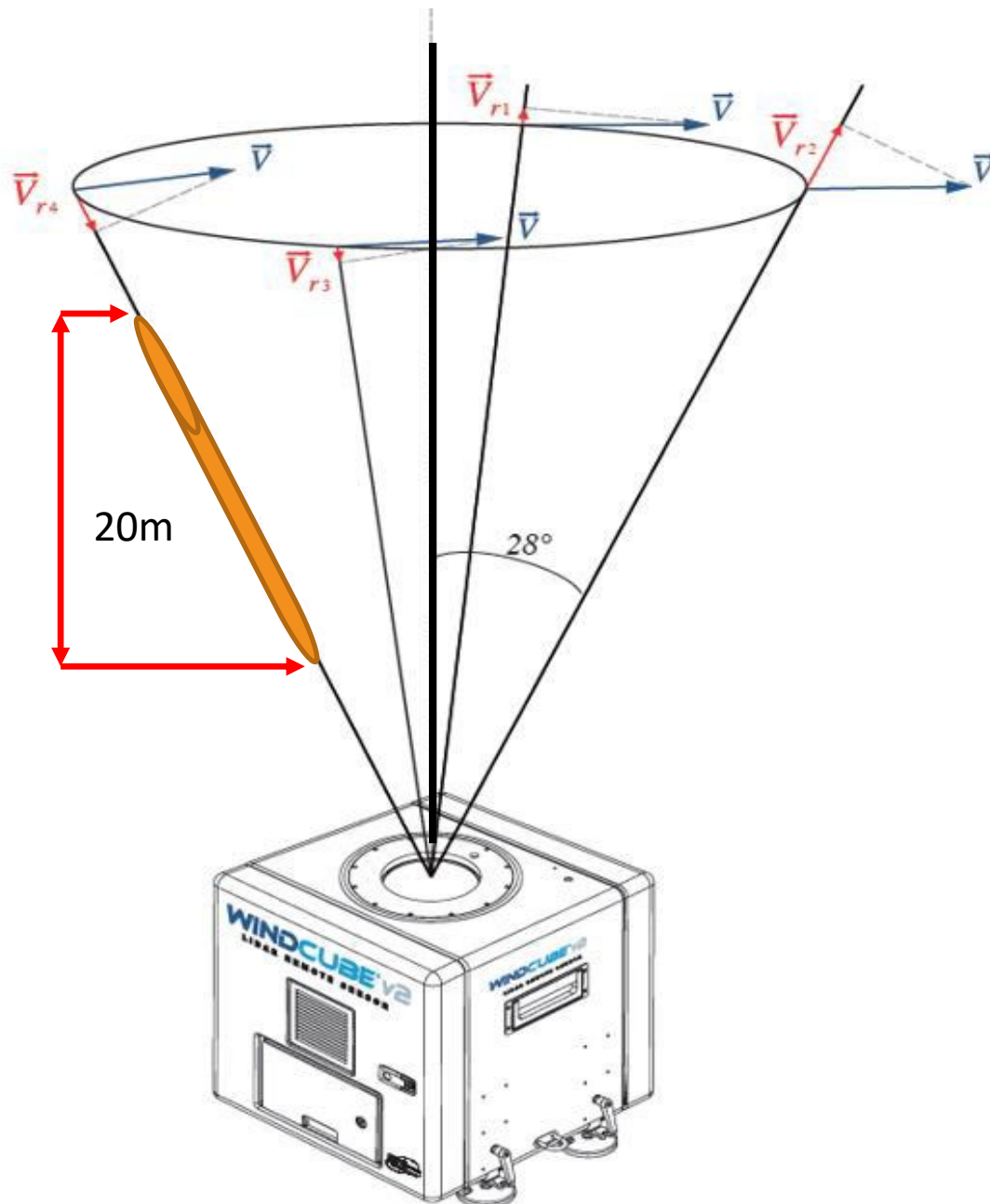
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Windcube Laser Orientation

Vertically pointing
Doppler Lidar

Bin geometry
~20 m by pencil width



Proposed Sampling Strategy

Min – 40m

Max – 290m

Levels - 12

CLM tower has approximate overlap
With sonic anemometers @36m, @61m

Level	Height (m)
1	40
2	60
3	80
4	100
5	120
6	140
7	160
8	180
9	200
10	230
11	260
12	290

20 m

20 m

20 m

20 m

20 m

20 m

20 m

20 m

30 m

30 m

30 m

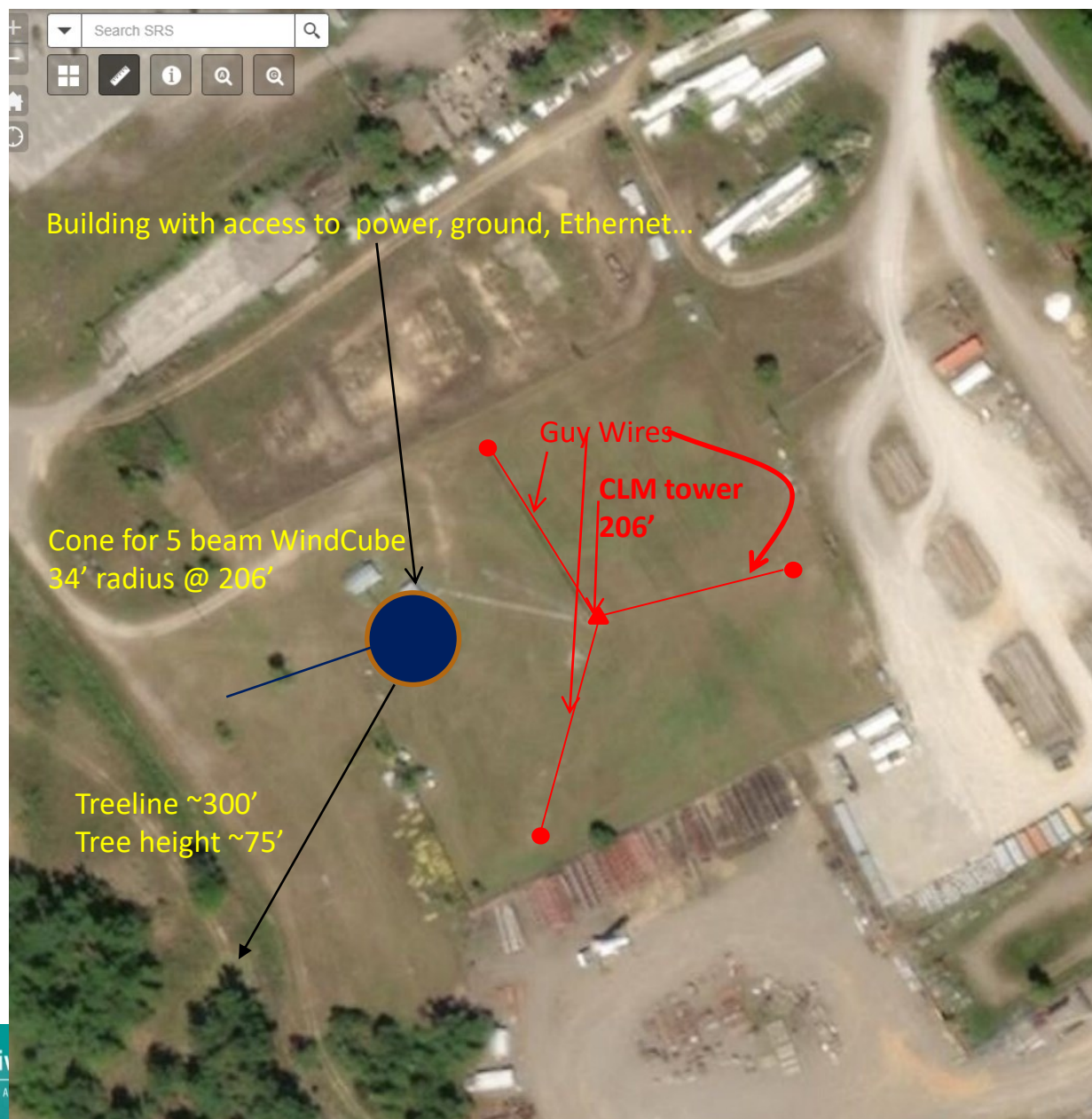
← Area Towers @61m

← TV Towers@329m

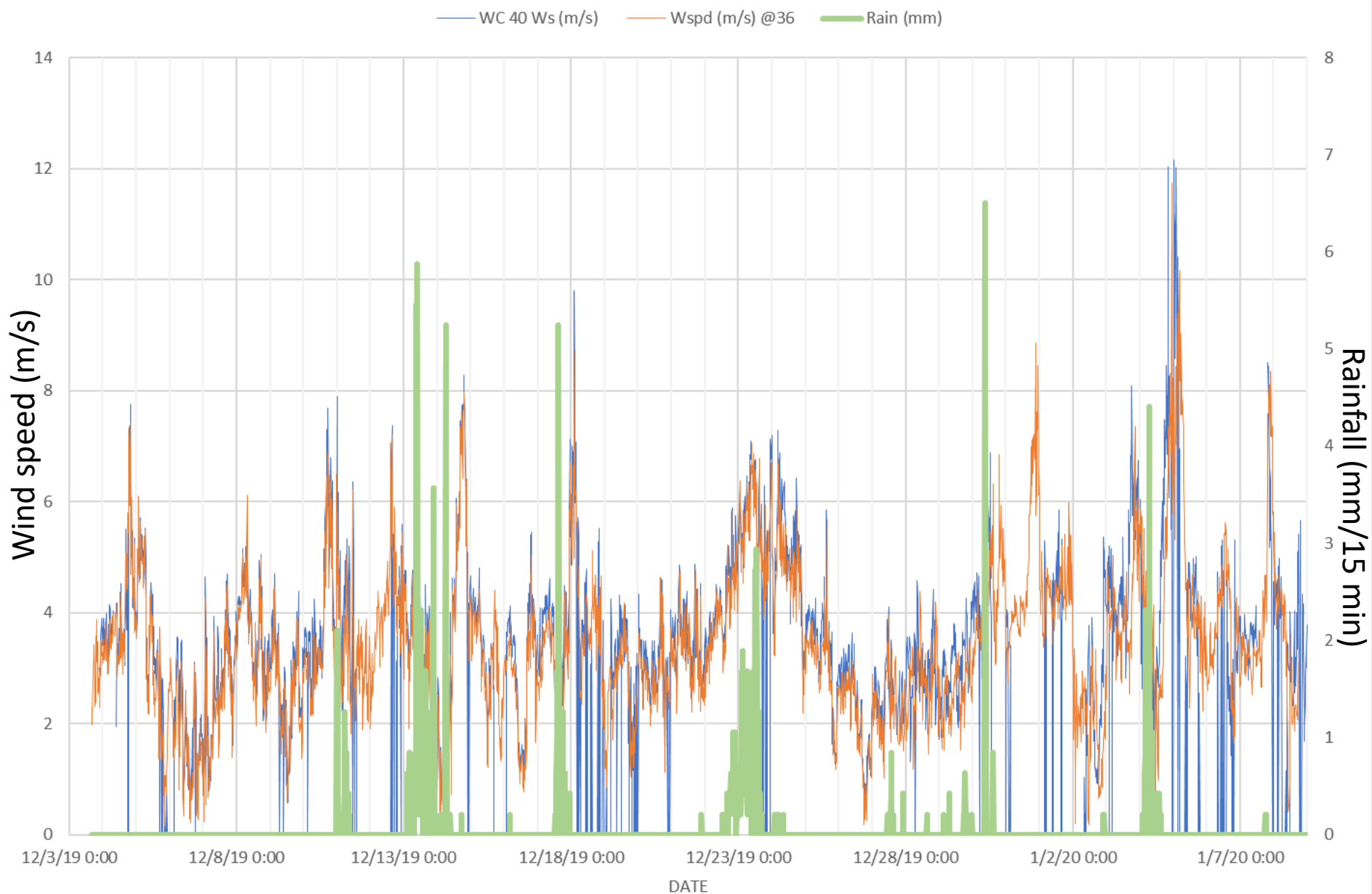


Siting of Windcube - CLM Tower – Center of SRS Site

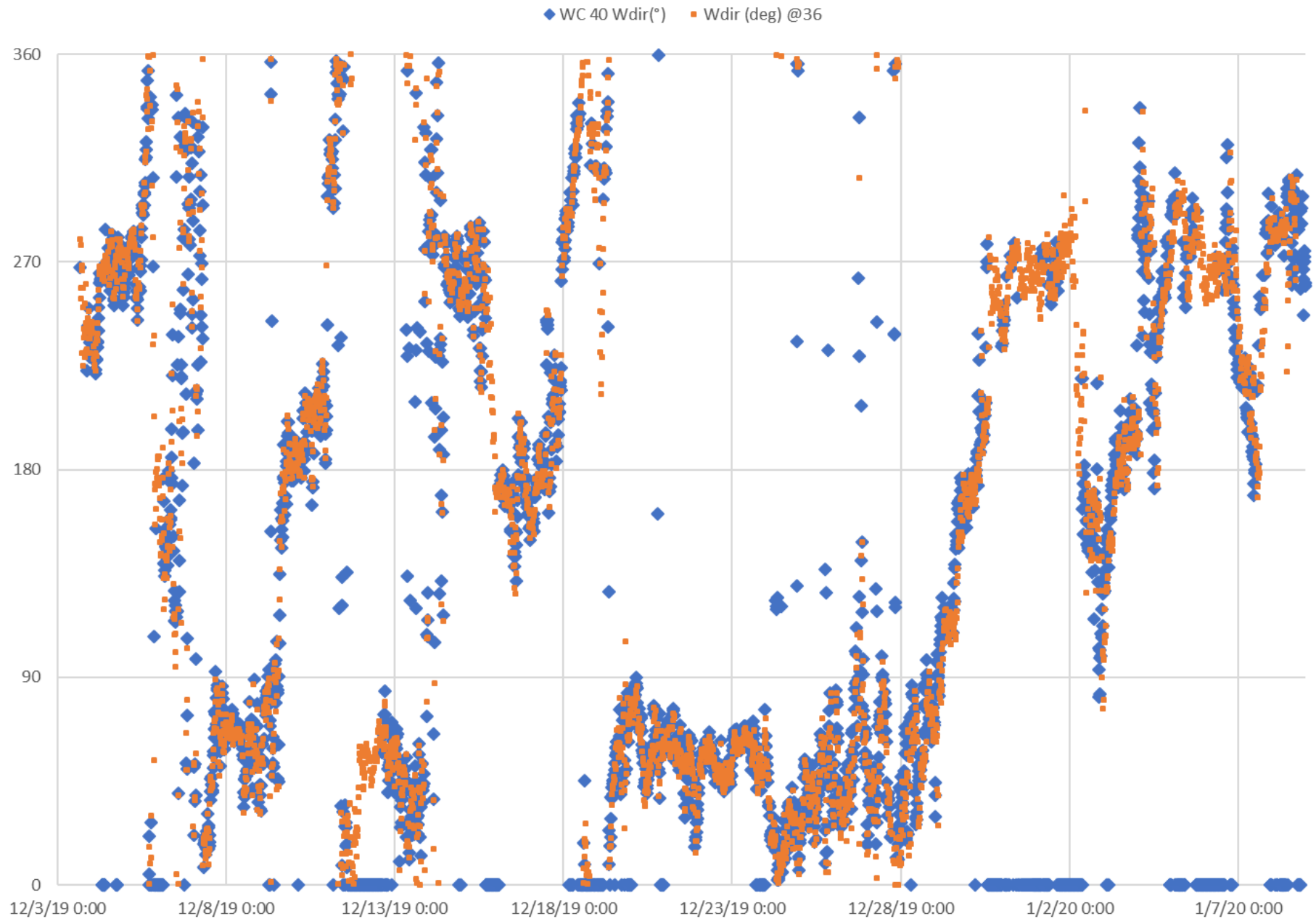
Blue Circle defines area associated with the beams at height of the tallest obstruction



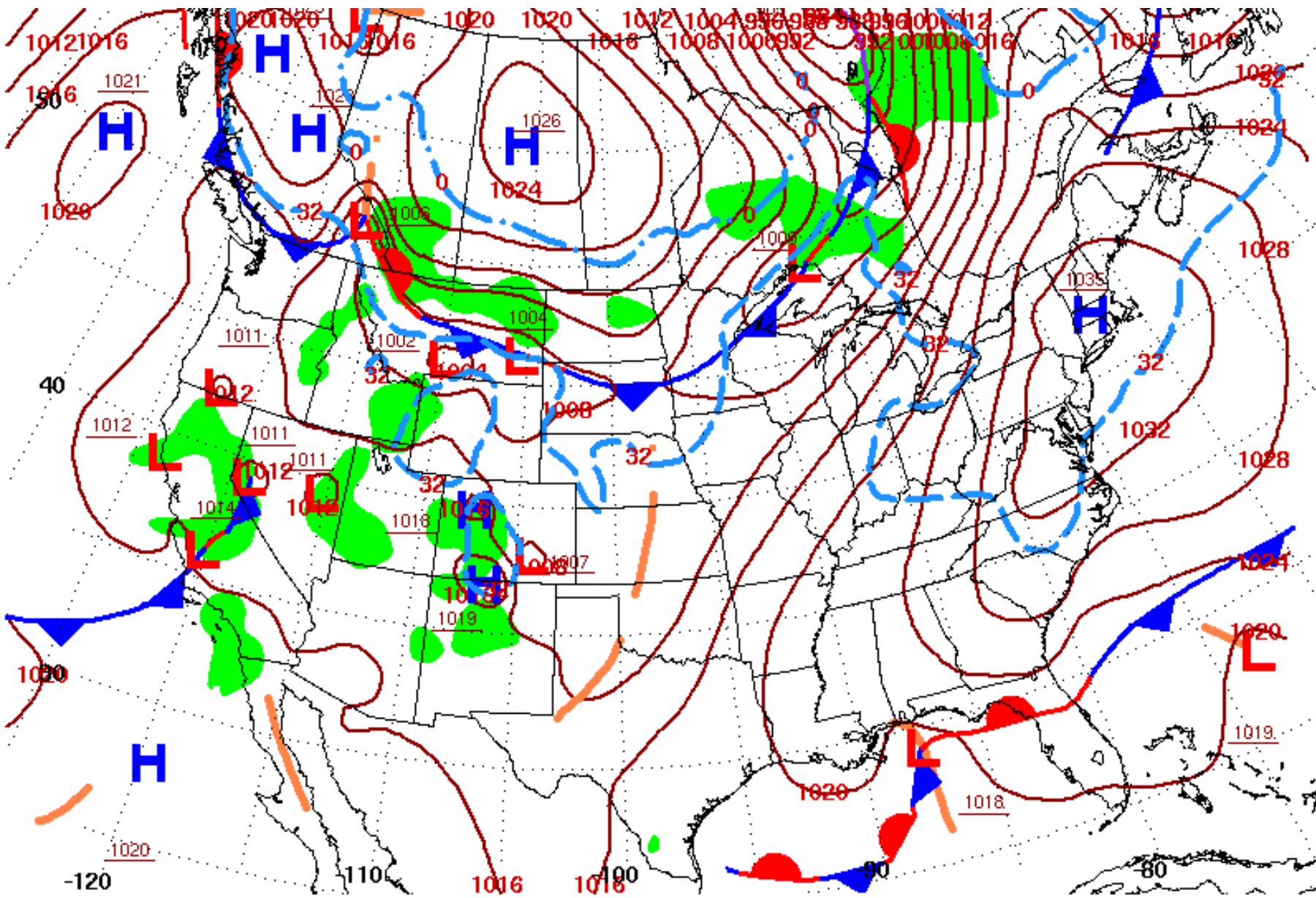
WC (40m) to CLM (36m) Tower Comparison- Wind Speed – December 2019 to January 2020



WC (40m) to CLM (36m) Tower Comparison- Wind Direction – December 2019 to January 2020

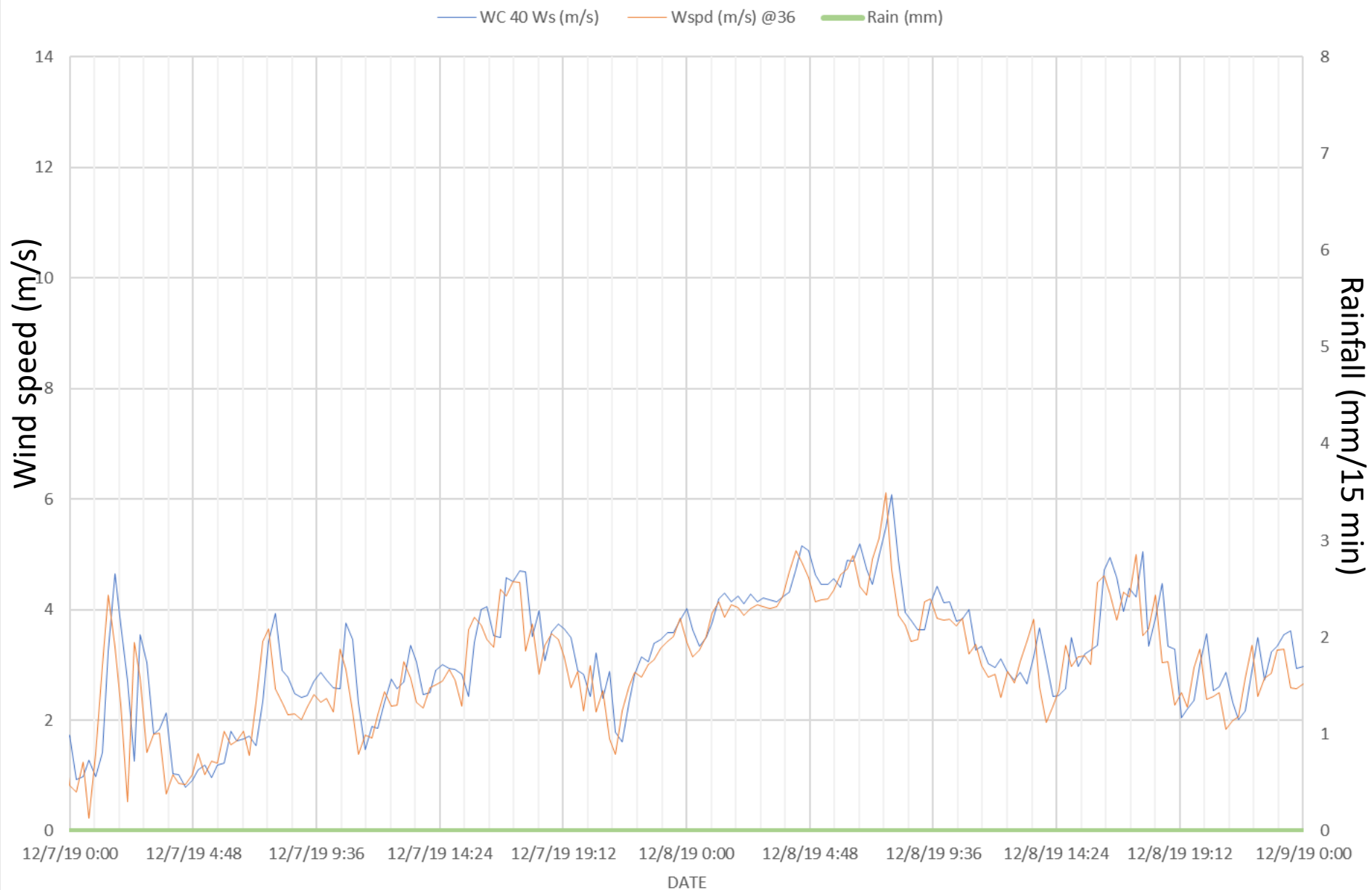


Sunday December 8th, 2019

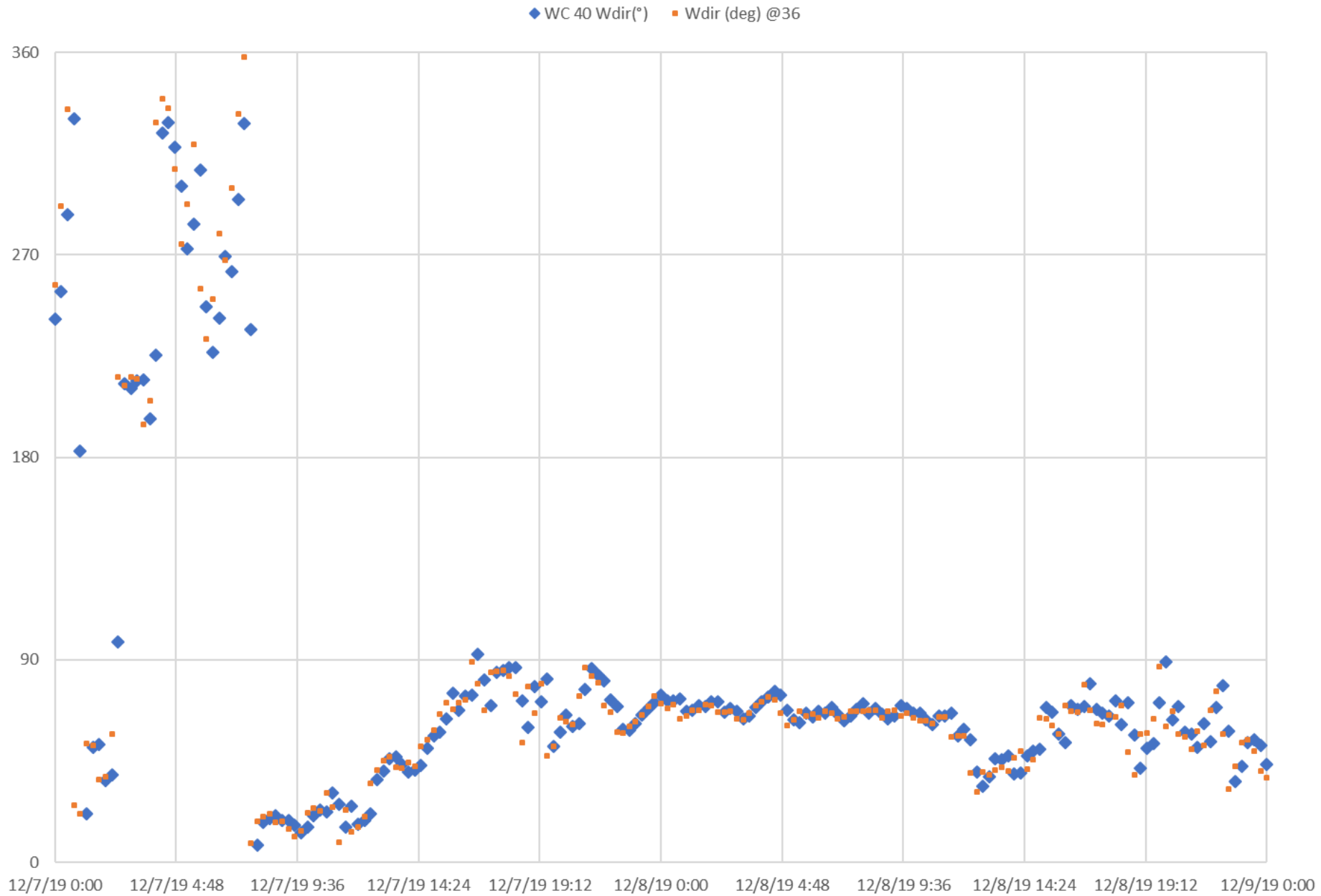


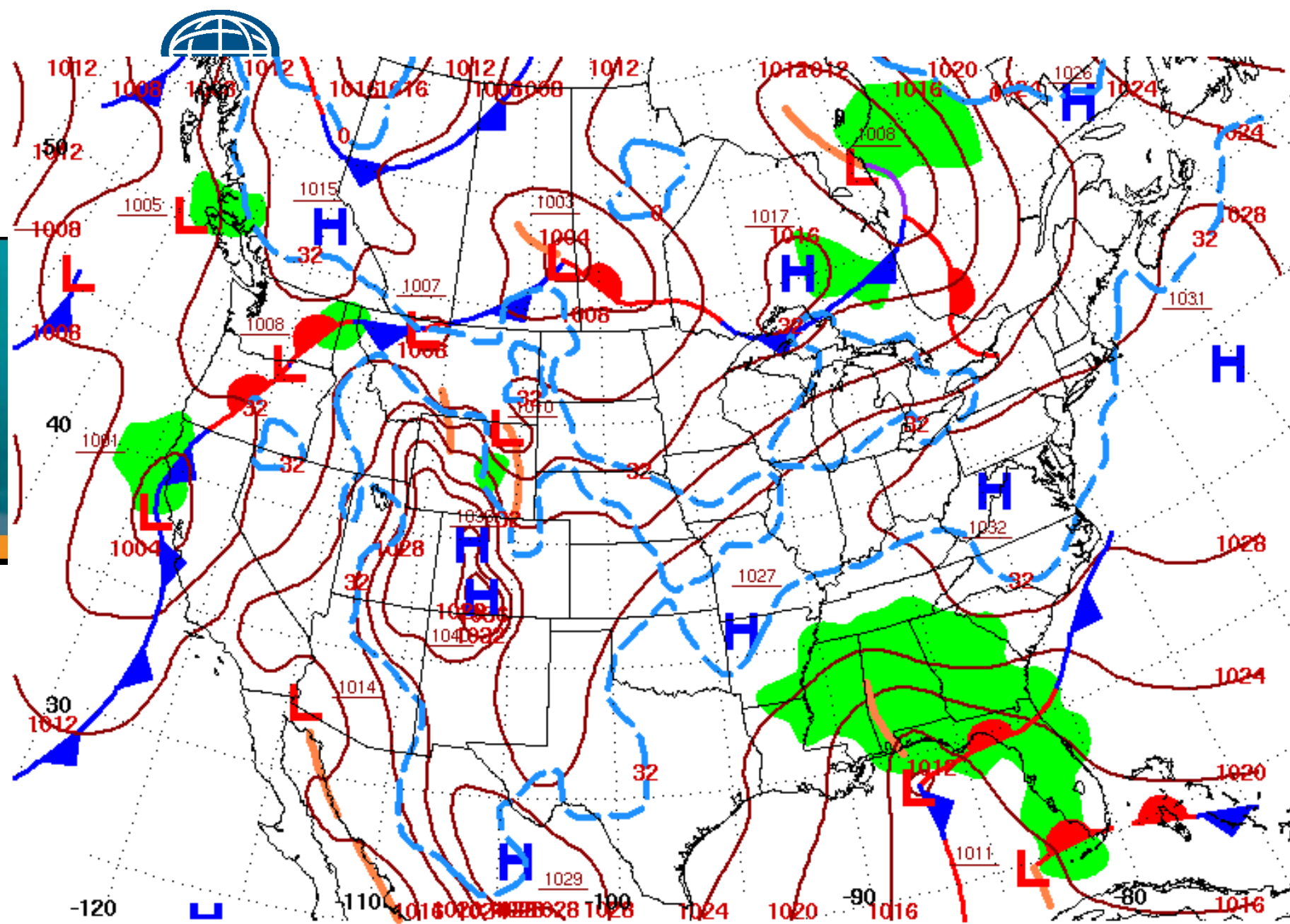
Surface Weather Map at 7:00 A.M. E.S.T.

WC (40m) to CLM (36m) Tower Comparison- Wind Speed – Dec 7th to 8th 2019



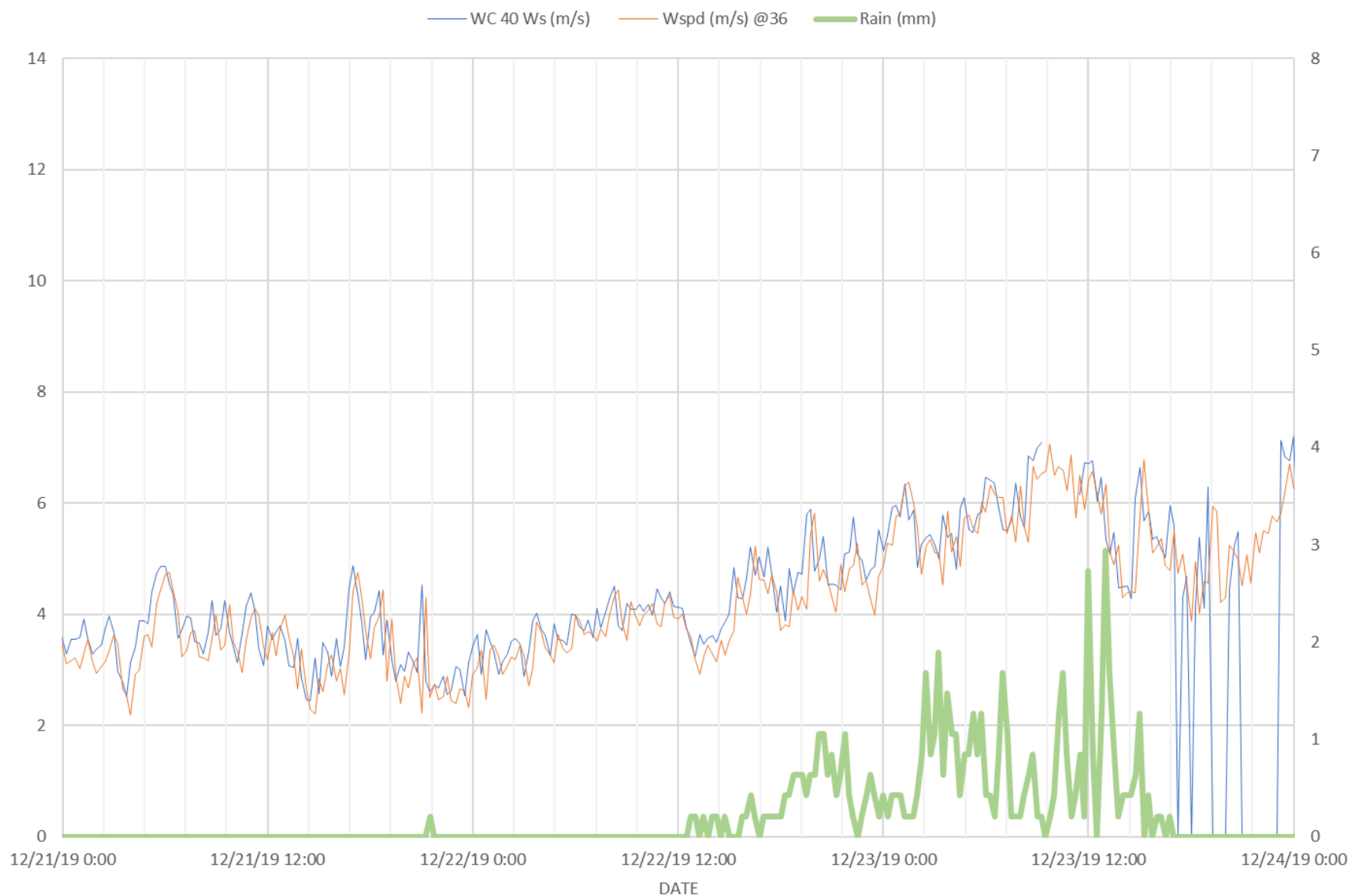
WC (40m) to CLM (36m) Tower Comparison- Wind Direction – Dec 7th to 8th 2019



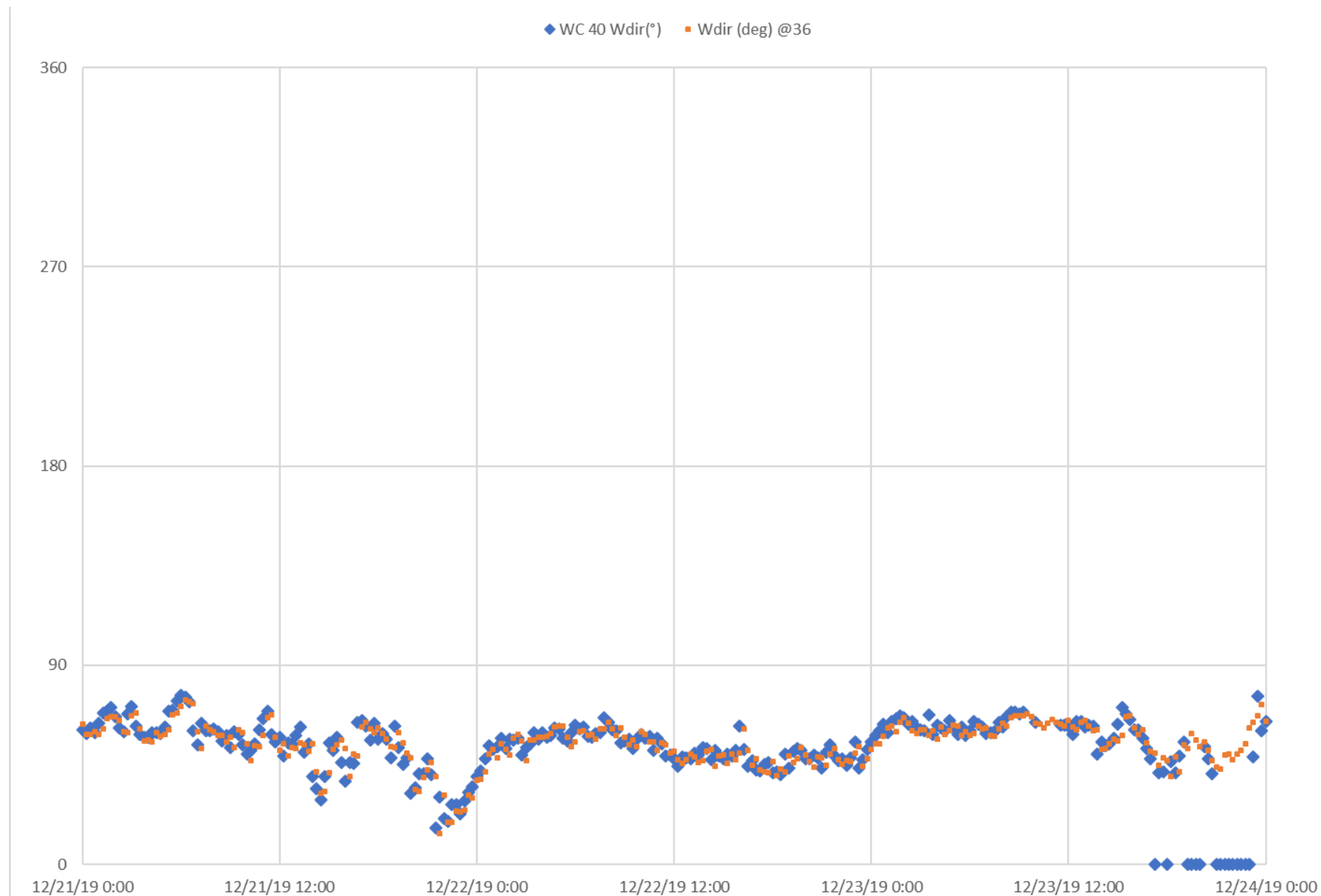


Surface Weather Map at 7:00 A.M. E.S.T.

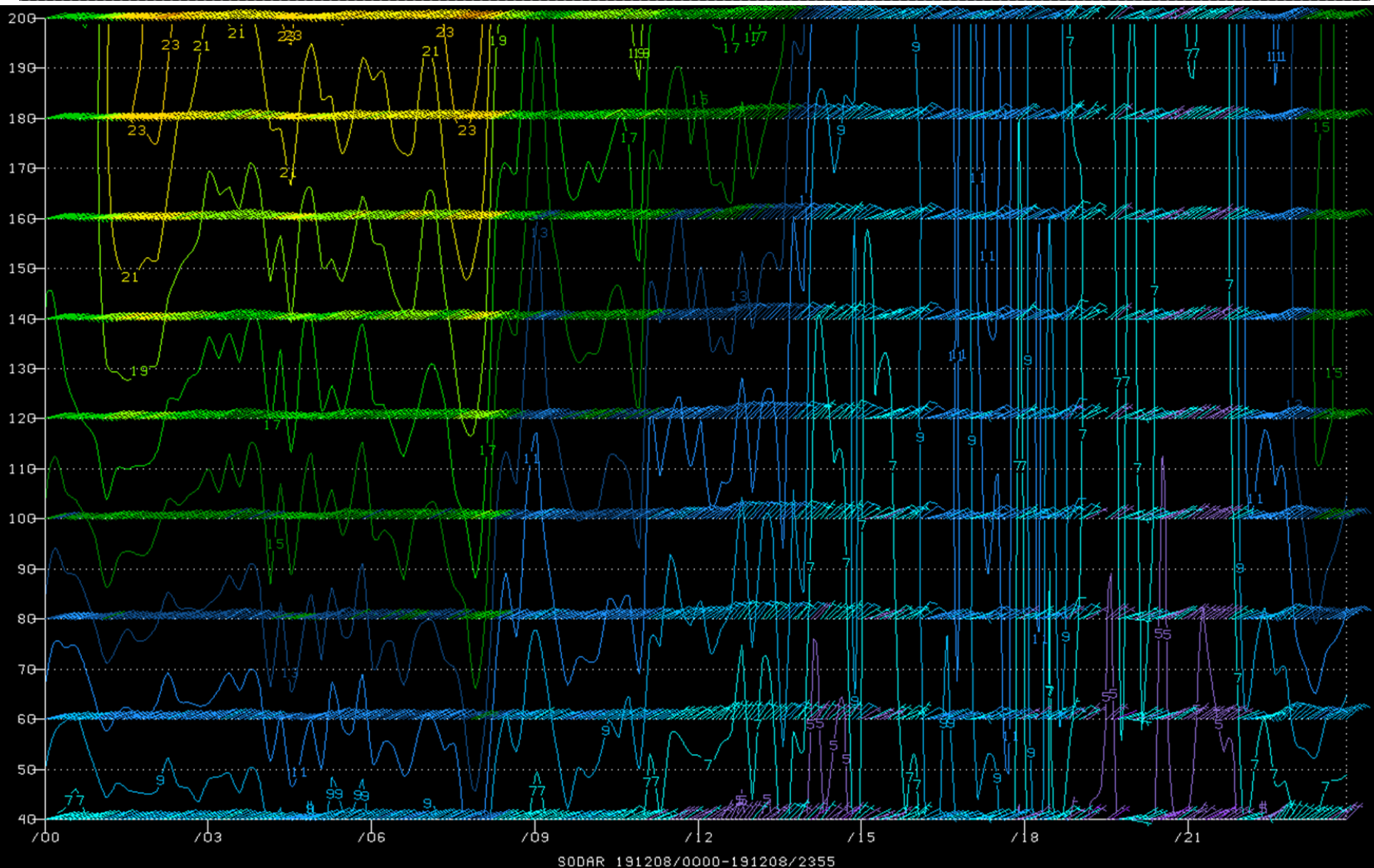
WC (40m) to CLM (36m) Tower Comparison- Wind Speed – Dec 22nd to 23rd 2019



WC (40m) to CLM (36m) Tower Comparison- Wind Direction – Dec 22nd to 23rd 2019



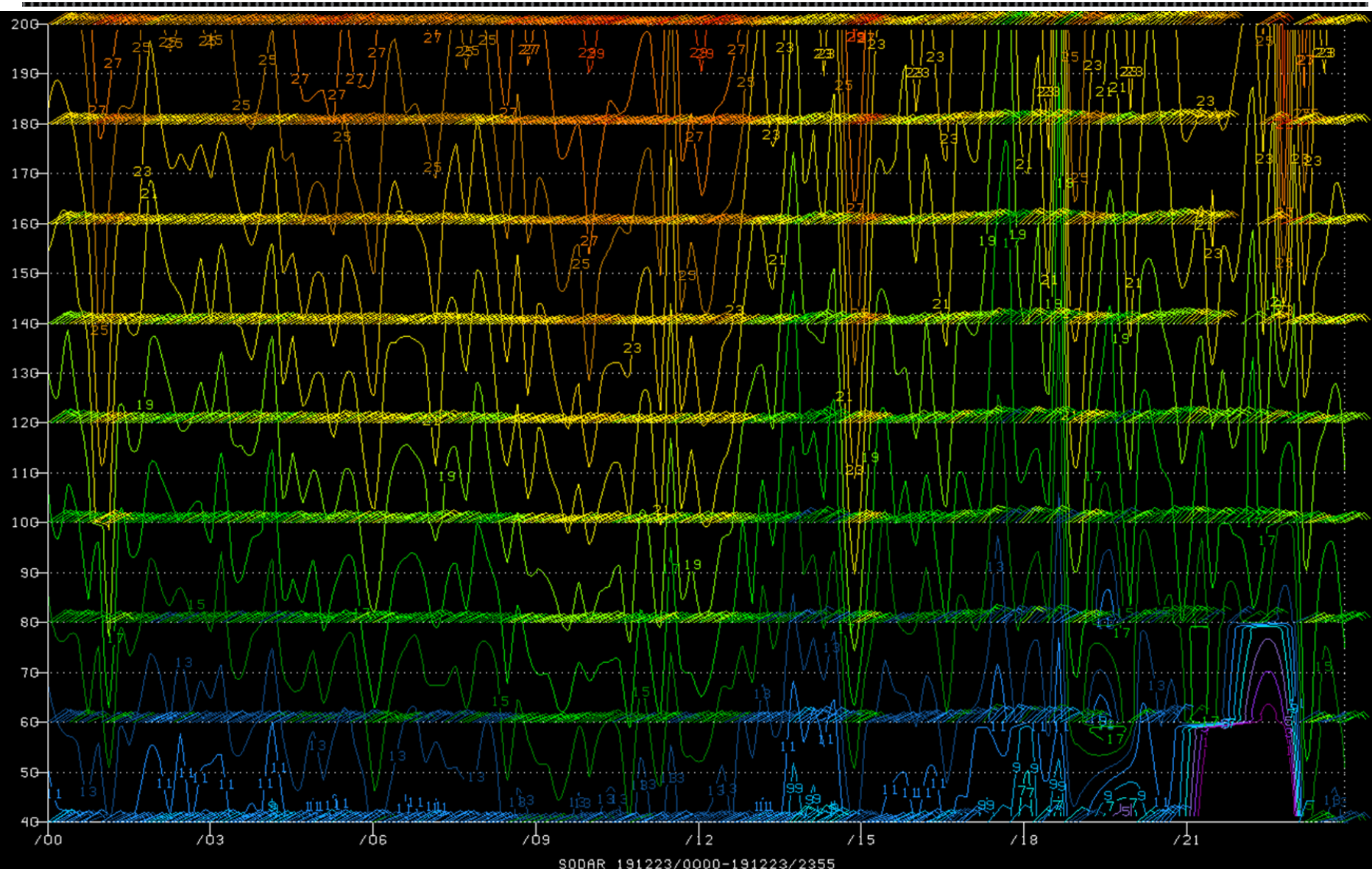
Windcube Profile – Dec 7th to 8th 2019



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Windcube Profile – Dec 22nd to 23rd 2019



Display – Ceilometer and Windcube

