

MAX Logbook

IOP #	2
Crew Members	Adam Weiner and Melissa Gonzalez
Arrival Time/Date (UTC)	1437 UTC 3/30/2022
Latitude	33.8400270°
Longitude	-88.640854°
Heading	94°
Cab Blanking	N/A
Elevation (m)	98m
Fully Operational Time/Date (UTC) *List any non-operational equipment below*	1515 UTC 3/30/2022
Departure Time/Date (UTC)	0205 UTC 3/31/2022

Scan Strategies, Observations, Equipment Issues, Notes, etc.

Time (UTC)	Observations/Notes
1437	MAX arrived on site; one large tower is adjacent to the site at 165 m range, at 260°azimuth that should assist with any azimuth correction; another tower is located at 4.5 km range at 166° azimuth
1515	MAX fully operational and scanning in shallow, deep, shallow, shallow, deep sequence Shallow sequence: 0.5°, 1.2°, 1.9°, 2.6°, 3.4°, 4.2°, 5.1°, 6.0°, 7.0° Deep sequence: 0.5°, 1.2°, 1.9°, 2.6°, 3.4°, 4.2°, 8.0°, 11.0°, 14.0°
1602	Scanning stopped to change number of samples
1603	Reduced number of samples from 64 to 32 and resumed shallow scanning
1609	T: 73F, Td: 60F, wind speed: ~12m/s, recent gust: 16 m/s
1612	Scanning stopped to change samples back to 64
1614	Resumed shallow scanning with 64 samples

1622	Stopped scanning to set scan schedule
1630	Started full scan strategy with 10 min sync attempted (shallow, deep, shallow, shallow, deep); shallow scan 1 time: 2:23, deep scan 1 time: 2:10, shallow scan 2 time: 2:12, shallow scan 3 time: 2:08, deep 2 scan time: Not finished, cut off at 4 deg; 10 min sync is successful
1636	Wind gust to 17.5 m/s
1644	Scanning stopped to change sample number
1646	Started shallow scanning with 50 samples
1650	Stopped shallow scanning to change settings: For QLCS > 50 km, N=64 samples, PRF = 1200 Hz (pulse width=0.4 microsec), scan rate = 20 deg/sec
1653	Resumed shallow scanning with new settings; shallow scan took 3:19 to complete
1657	Stopped scanning
1700	Resumed shallow scanning
1700	T: 74F, Td: 61F, wind speed: 11 m/s, wind direction: ~160°, p: 994.7 hPa; sky: partly sunny
1703	Stopped scanning
1708	Resumed scanning shallow with changed settings for QLCS > 50 km away with no specific schedule
1750	Wind gust: 17 m/s
1755	Stopped scanning to add 9 deg and 12 deg to the shallow scan sequence
1756	MAX resumed scanning in shallow sequence with changed settings and addition of 9 and 12 deg elevation angles. Full sequence: 0.5°, 1.2°, 1.9°, 2.6°, 3.4°, 4.2°, 5.1°, 6.0°, 7.0°, 9.0°, 12.0°
1800	T: 76F, Td: 61F, wind speed: ~11 m/s, wind direction: 160°, wind gust at 1801: ~20 m/s, p: 992.3 hPa, sky: partly sunny
1808	Stopped scanning to change elevation sequence
1816	Resumed scanning in shallow sequence with new elevation angles: 0.8°, 1.5°, 2.3°, 3.1°, 4°, 5°, 6°, 7°, 8°

1827	Scanning stopped
1829	21.3 m/s wind gust recorded
1829	Shallow scanning resumed
1831	23.6 m/s wind gust recorded
1900	T: 78F, Td: 60F, wind speed: ~12 m/s, wind direction: 155°, p: 990.4 hPa, wind gust: 17-18 m/s at 1905 UTC; sky: mostly cloudy
1906	Wind gust: 21 m/s
1911	Scanning stopped to update sample numbers
1914	Shallow scanning resumed
1919	Light rain; cloudy
1927	Light rain stopped; cloudy
1933	Light rain; cloudy
2000	T: 78F, Td: 60F, wind speed: ~10 m/s, wind direction: ~150°, p: 988.2 hPa, sky: cloudy
2032	Stopped scanning to change to dual-PRF mode 5:4 PRF ratio, 38 m/s unambiguous velocity; started scanning at 2034 UTC
2040	Stopped scanning after 2 full volumes; changed dual-PRF mode to 4:3, 28.5 m/s unambiguous velocity; started scanning at 2041 UTC
2048	Stopped scanning after 2 full volumes; changed dual-PRF mode to 3:2, 19 m/s unambiguous velocity; started scanning 2049 UTC
2055	Stopped scanning to return to single PRF mode; started scanning at 2056 UTC
2100	T: 78F, Td: 60F, wind speed: ~10-12 m/s, wind direction: ~150°, recent wind gust: ~18.4 m/s around 2030 UTC, p: 986.4 hPa
2108	Rain starting; notable increase in gusty winds; 20 m/s gust measured
2132	T: 75F, 62F, wind speed: ~10 m/s, wind direction: ~160°, p: 986.4 hPa, sky: cloudy, rain ended about 3 mins ago
2153	Stopped scanning to prepare for 10 min synced scans at 0.4 microsec pulse width, 1500 Hz PRF, N=50 samples
2159	Started shallow scan to test timing; shallow elevation sequence: 0.8,

	1.5, 2.3, 3.1, 4, 5, 6, 7, 8; time: ~2:10
2200	T: 75F, Td: 62F, wind speed: ~11 m/s, wind direction: ~145°, p: 985.6 hPa, sky: cloudy, light rain
2204	Started deep scan to test scan time; deep elevation sequence: 0.8, 1.5, 2.3, 3.1, 4, 5, 7, 10, 14; time: ~2:10
2208	Rain starting; large drops
2211	Stopped scanning; shaving off top elevation angle to fit within 2 min window; started scanning at 2213 UTC
2230	MAX began 10 min sync with full sequence: shallow, deep, shallow, shallow, deep, RHI at 260° and 270° azimuth
2233	Shallow scan ran, then RHIs, then the rest of the sequence continued; the last deep will be cut short to maintain 10 min sync; RHIs discontinued
2040	Radar had issue with interrupting last deep scan; IRIS INGEST restarted and it skipped the mandatory shallow scan that has 10 min repeat
2254	Stopped deep scan prematurely to schedule all scans into 10 min sync
2300	Scans stopped to lower 10m tower
2308	Deep scan conducted
2310	Regular 10 min sync schedule resumed
2343	Moved to Beast in case of need to bail; scans continued on schedule without stopping
0013	Returned to MAX cab
0020	TDS observed by KGWX radar; located at 93° azimuth, 22.7 km range relative to MAX; MAX radar signal was almost entirely attenuated before reaching the TDS
0100	T: 61.5F, Td: 59F, wind speed: ~4 m/s, wind direction: ~190°, p: 989.4 hPa
0144	Begin breakdown of MAX
0205	Leaving MAX site