



CHARA Operations

(and CMAP Sites)

Chris Farrington

03/13/2023



2021-2022 Operations

2021:

- 296n for 2021A & B
- 221n data collected
- 75n Closed

Beam Combiner breakdown

- Classic: 16n
- Pavo: 18n
- MIRCX/MYSTIC: 176n
- ALOHA: 1n
- SPICA: 2n
- Classic+Pavo: 7n

2022:

- 293n for 2022A & B
- 234n data collected
- 62n Closed

Beam Combiner Breakdown

- Classic: 12n
- Pavo: 21n
- MIRCX/MYSTIC: 161n
- ALOHA: 6n
- SPICA: 25n
- Classic+Pavo: 6n



Storm Context

- Feb 23 7:00am – 1.5” snow
- Feb 23 12:00pm – 6.5”
- Feb 24 7:00am – 15”
- Feb 24 4:00pm – 26” snow
 - Rain started at dusk
- Feb 24 10pm – Phone call from Matt
 - Flooding in OPLE outer and inner buildings
 - Emergency shut down of MIRCX/MYSTIC
 - Power to entire Array shut down
- Feb 25 9:30am – 35” snow
- Feb 26 7:00am – 40”
- Mar 1 7:00am – second storm
 - 10-12 additional inches





RedBox Rd Mar 1



E2 – Mar 1





North OPLE Mar 1





2023 Operations

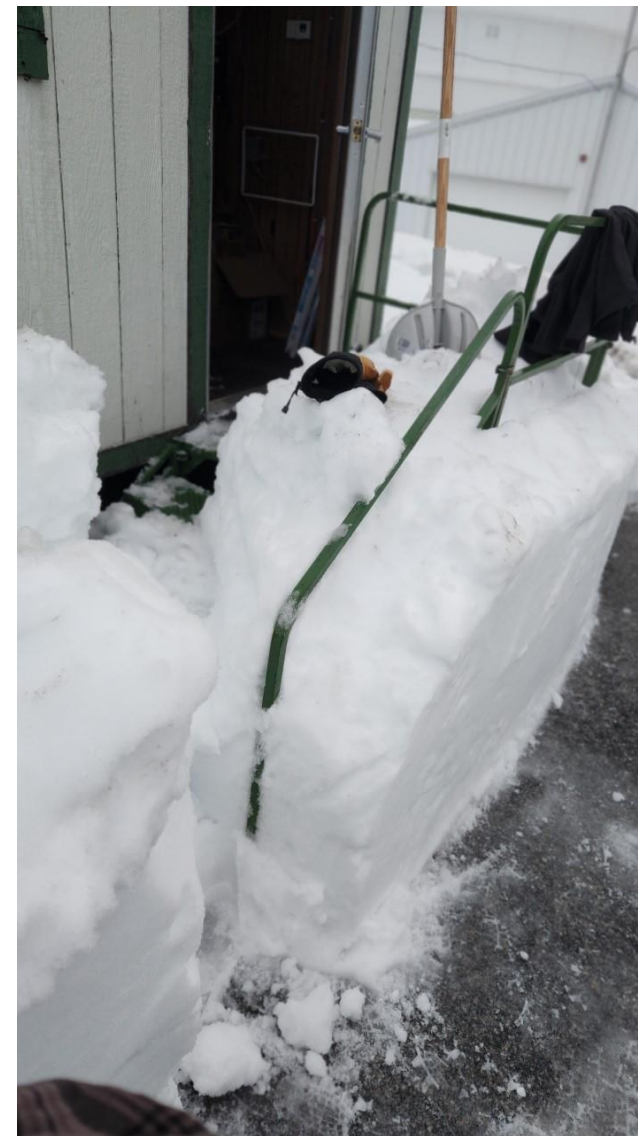
Cleanup has begun!

Priorities:

- Plowing continues for road access
- Digging out bunkers, M7 vaults, vacuum pump house
- Check domes and bunkers for leaks
- Restore power to scopes/bunkers
- Dehumidify domes and ope
- Check vacuum pipes/seals
- Cool and pump MIRCX/MYSTIC

Mar 1, 2023

















As of yesterday....







Mountain Cat – Blinky

Has survived the storm





2023 Operations

Mar 12, 2023

Cleanup progress!

Priorities:

- Roads
 - Ongoing widening of access roads
- Digging out bunkers
 - All Bunkers doors have been cleared
- Check domes and bunkers for leaks
 - Some water inside each bunker, and scope hammer heads
- Restore power to scopes/bunkers
 - Only heat/dehumidifiers have been repowered
- Check vacuum pipes/seals
 - Will be started today
- Ople needs dehumidifying
- Cool and pump MIRCX/MYSTIC, OPLE alignment, etc
 - Requires more onsite personnel.





2023 Operations

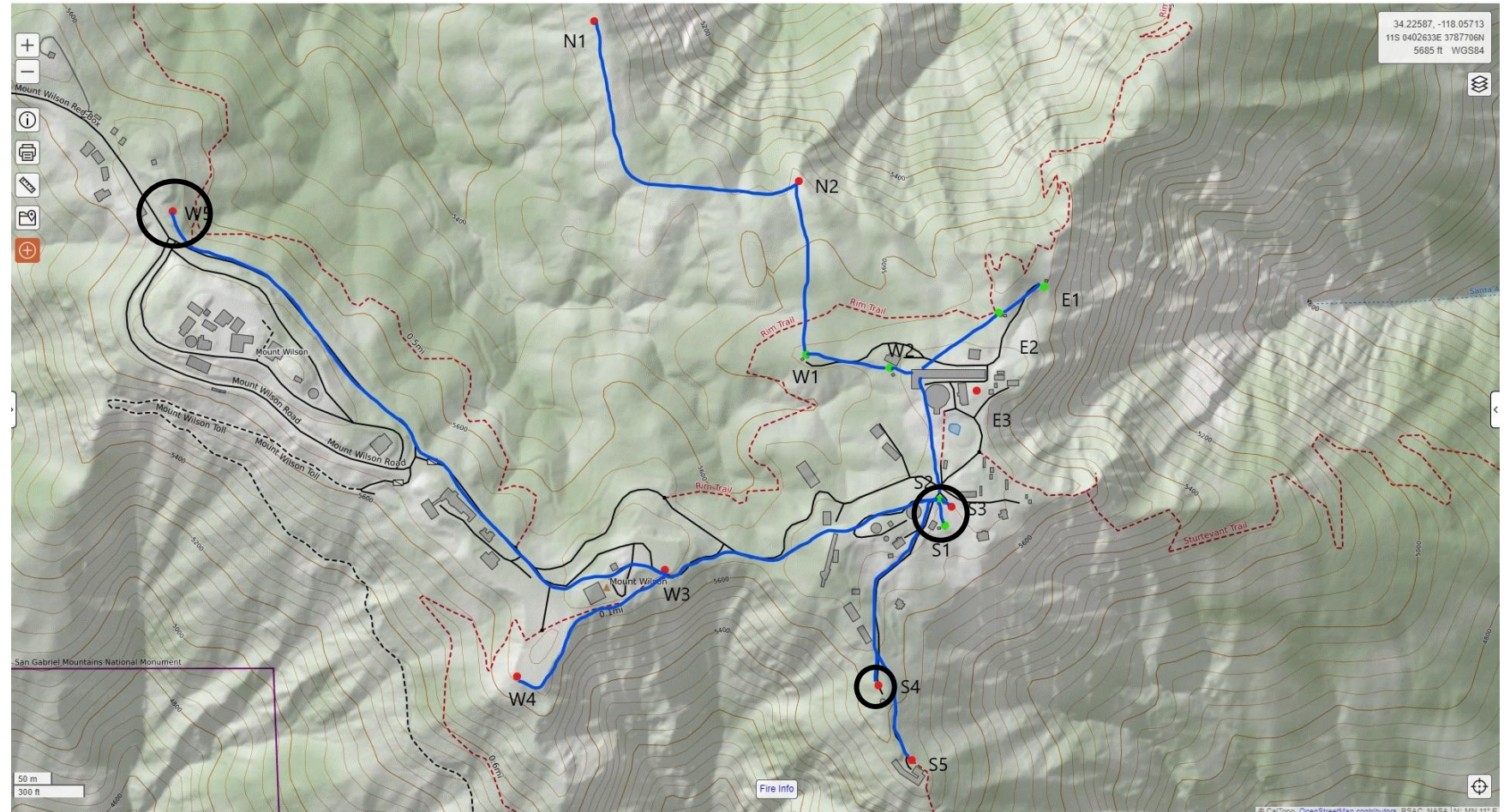
What does this all mean for On-sky operations for 2023A?

- Need personnel on site for next steps
- I return tonight to coordinate further cleanup and repair assessments
- Observations still suspended (Nights already lost Mar 1-13), Currently Mar 13-19 Pis have been notified, PIs from Mar 20-26 will be notified today.
- Best case: Return to operations at the end of next week (Mar 23-24)
- Realistic case: Operations likely wont start until April 1

CMAP Site Locations

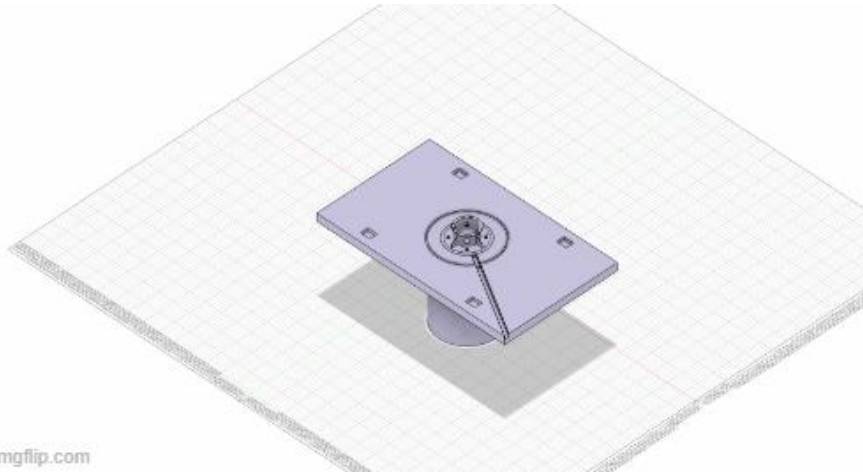
Three easily accessible sites for the mobile telescope:

- Next to S2 – S3
- Next to Cooke Dome – S4
- *Channel 13 (W5)





CMAP Site Locations- S3



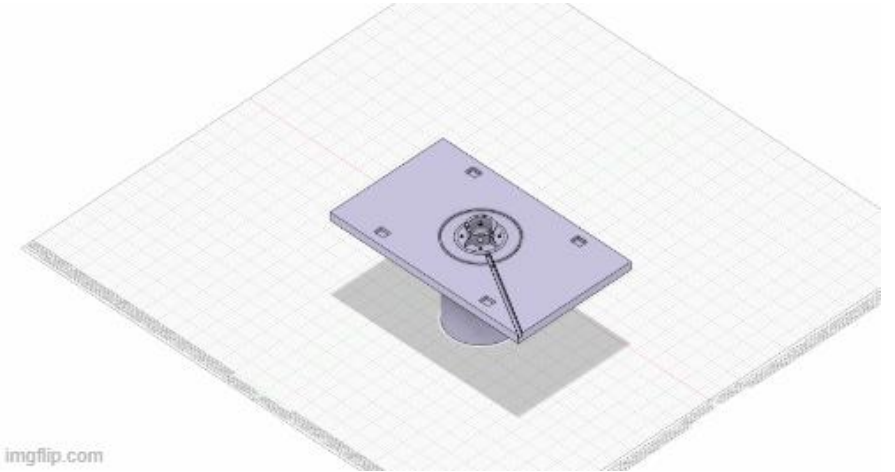
imgflip.com

Telescope Pair	Baseline	Position Angle
E1-S3	304.2m	22.4°
E2-S3	252.4m	13.9°
W1-S3	266.4m	136.1°
W2-S3	191.5m	155.7°
S1-S3	26.5m	21.2m
S2-S3	17.7m	119.9°



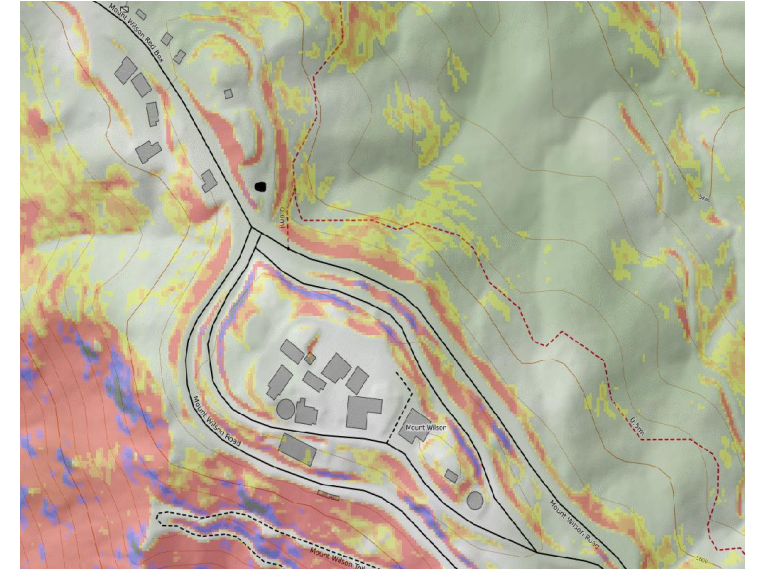


CMAP Site Locations – S4



Telescope Pair	Baseline	Position Angle
E1-S4	554.8m	22.0°
E2-S4	502.1m	17.8°
W1-S4	434.5m	167.8°
W2-S4	408.1m	1.94°
S1-S4	224.5m	21.7°
S2-S4	254.2m	17.7°

CMAP Site Locations – W5



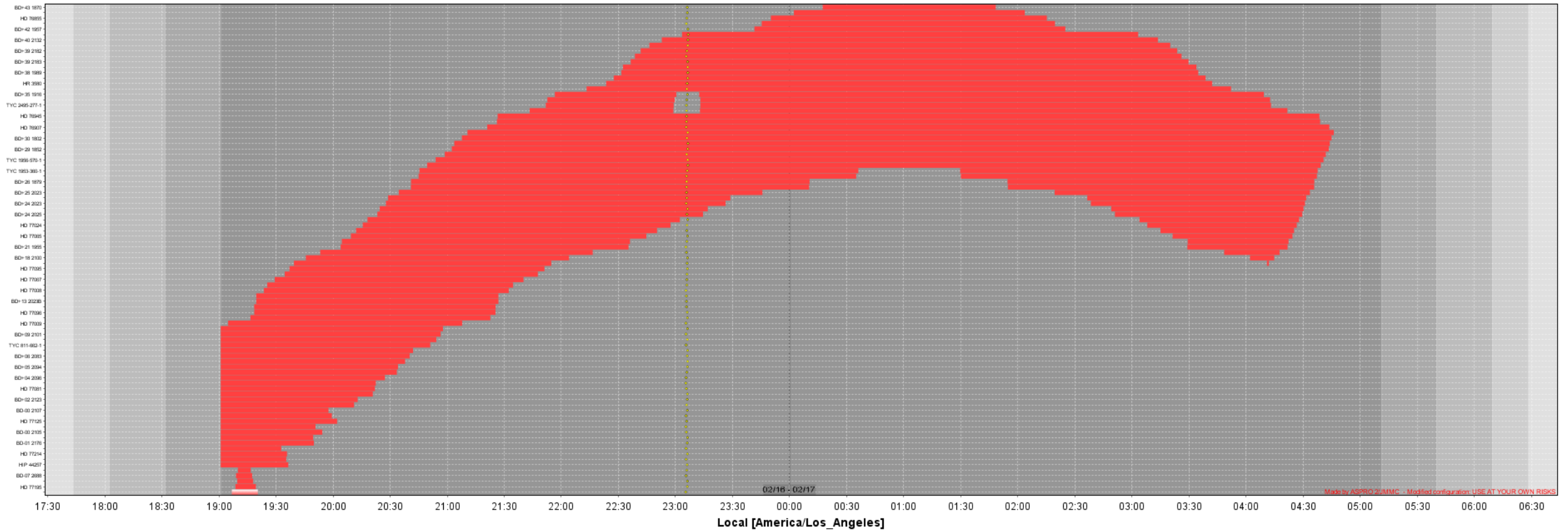
Telescope Pair	Baseline	Position Angle
E1-W5	1119.5m	96.4°
E2-W5	1069.7m	98.7°
W1-W5	840.1m	104.8°
W2-W5	946.8m	104.1°
S1-W5	1077.1m	113.6°
S2-W5	1058.8m	112.0°



E1-S4 Sky Coverage

CHARA_7T Mobile - CLASSIC - F3 S5

Day: 2023-02-16 - Moon = 11.0%



Rising

Setting

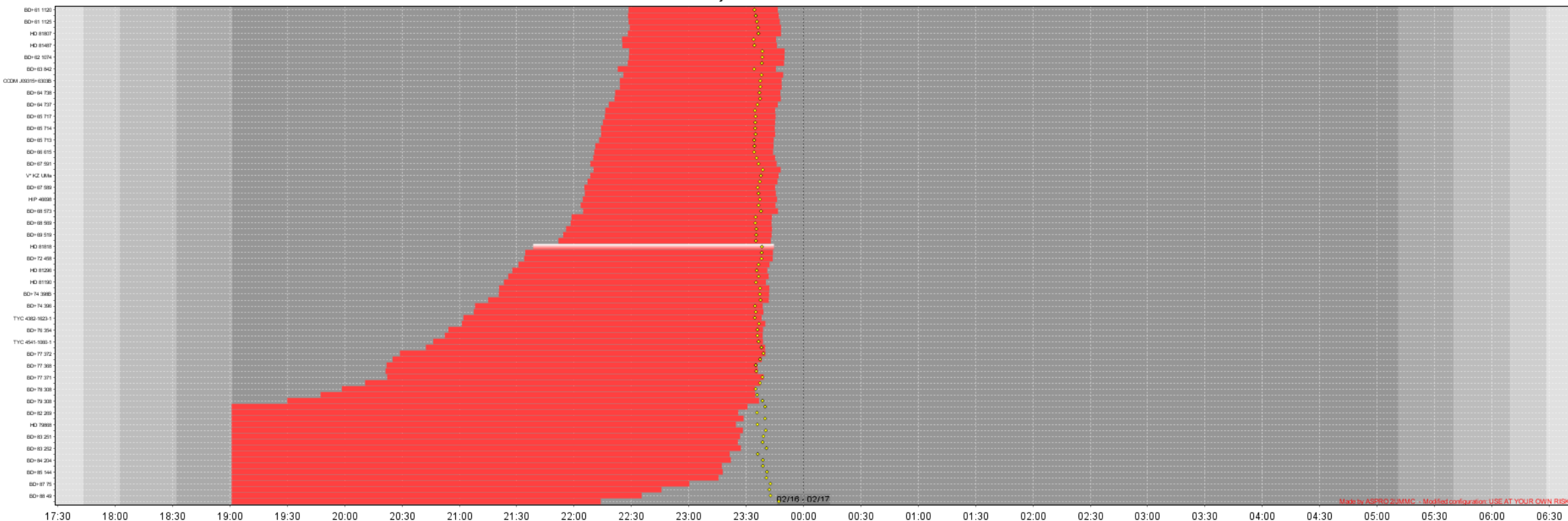
Hour Angle vs Dec (+8 -> +39)

E1W5 Sky Coverage



CHARA_7T Mobile - CLASSIC - F3 W5

Day: 2023-02-16 - Moon = 11.0%



Rising

Setting

Hour Angle vs Dec (+60 -> +90)

Your Talk Title Here

