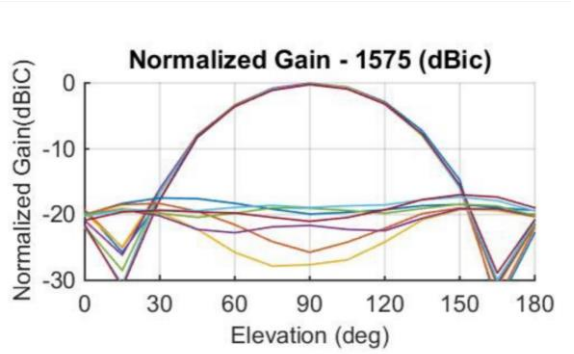
Using a Passive Anti-Jam Antenna to Combat GNNS Interference

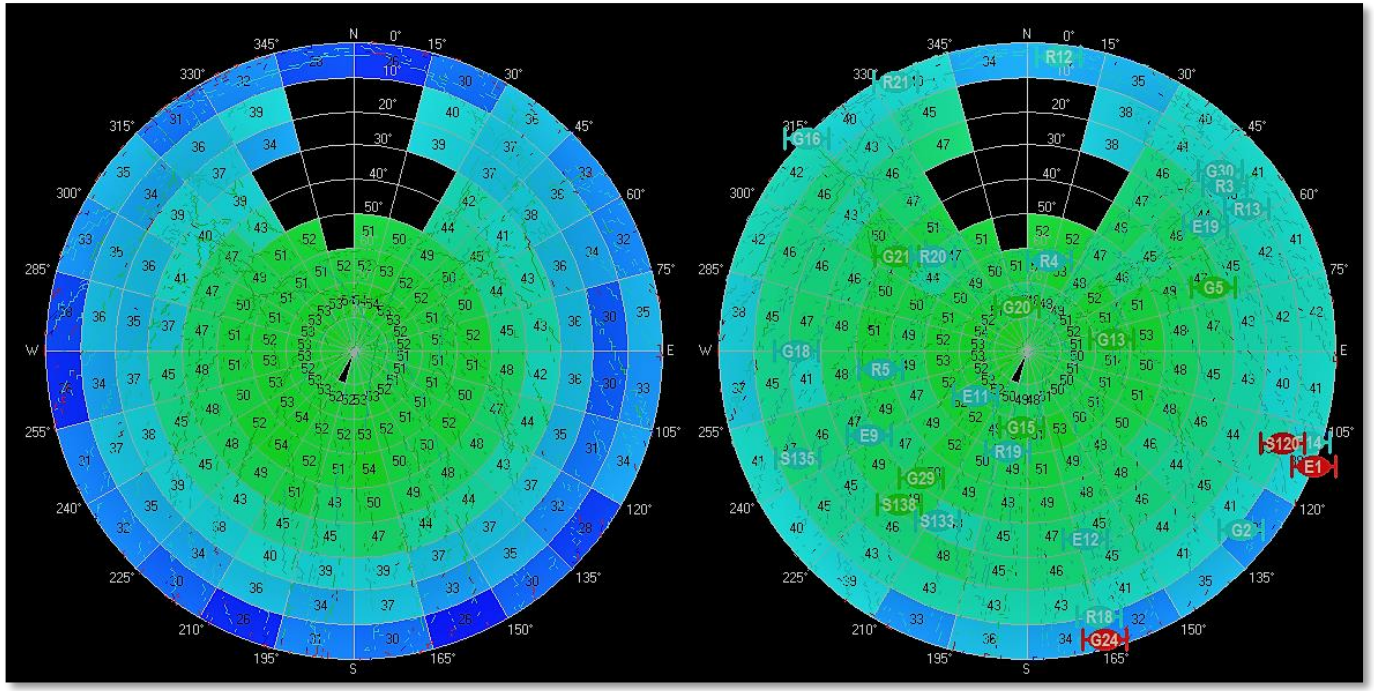
June 2018

CHALLENGE

- ✓ GNSS Signal is very weak (-161.5 dBW)
- ✓ More and more GPS jamming events (Intentional and unintentional)
- ✓ Very inexpensive and easy option for Jammers
- ✓ 80 plus events a day for an antenna in urban environment [4]
- ✓ Essentially interference coming from low elevation
- ✓ When you are victim of jamming, all you know is GPS is gone (not why)

8230AJ – GPS/GNSS PASSIVE ANTI-JAM OUTDOOR ANTENNA





Horizon Blocking

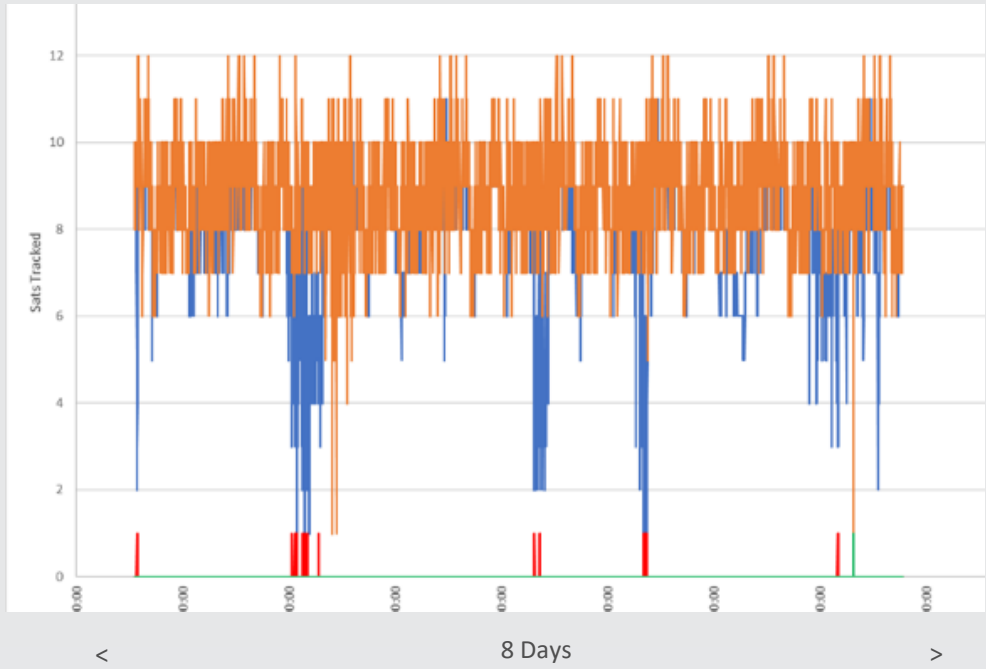
Typical Antenna

- ✓ Horizon blocking antenna technology
- ✓ GNSS L1
- ✓ High output: 40 dB gain
- ✓ Effective: High out of band rejection
- ✓ Low cost
- ✓ Suitable for timing and stationary application
- ✓ Drop in replacement for standard antenna (same cable, mount, etc.)

CASE STUDY

- ✓ Major telecommunication service provider using our time server in their large datacenter
- ✓ Intermittent loss of GNSS reception for unknown reasons
- ✓ Testing showed the issue was not coming from system components
- ✓ Test period with a standard Antenna and 8230AJ Antenna on 2 separate time servers

	Standard Antenna	AJ Conical Antenna
Holdover events	40	4
Total time in Holdover	1 hour 32 minutes	41 seconds
Longest holdover event	14 minutes 26 seconds	17 seconds
Average holdover event	2 minutes 18 seconds	10 seconds
Satellite alarms	31	2



OROLIA – TIME AND LOCATION YOU CAN TRUST

8230AJ Antenna

BroadShield

Satellite **T**ime and **L**ocation

PROTECTION **DETECTION** **RESILIENCE**

THANK YOU !


orolia
kannad
netwave
sarbe
spectracom
spectratime
mcmurdo

REFERENCE

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