

Civil Report Card On GPS Performance

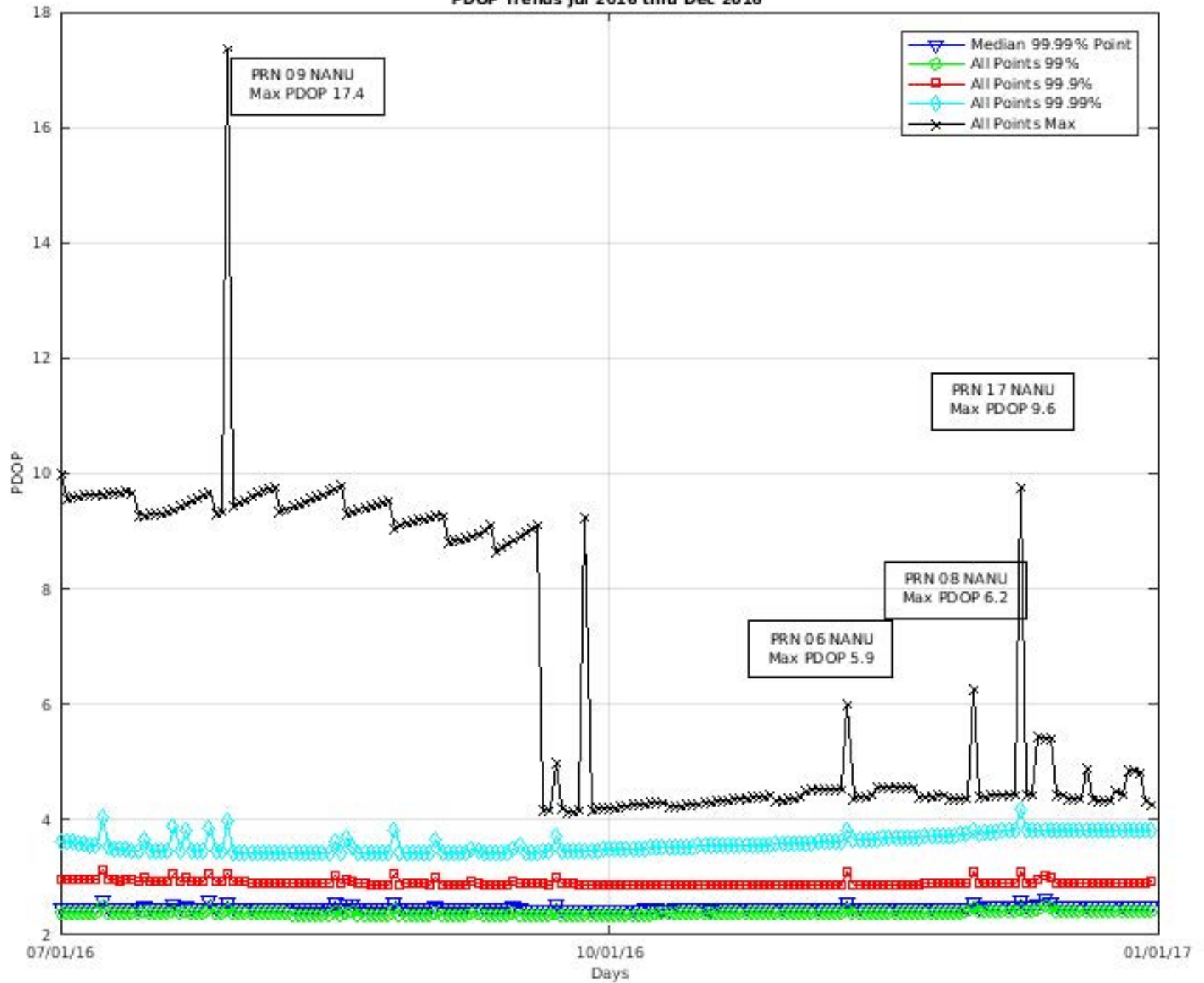
Dec 2016

Operational Performance Parameter	CY 2015	Nov 2016	Dec 2016	Long term	Short term
Availability Parameters					
<i>Average Number of satellites usable</i>	30.50	30.99	30.92	↑	↓
<i>Average number of satellites usable in primary slots</i>	23.99 (99.94%)	23.99 (99.96%)	23.98 99.94	↓	↓
<i>Average availability of 6 satellites in view</i>	99.99%	100%	100%	↑	→
99.99% Horizontal DOP					
<i>Area Median</i>	1.4	1.3	1.3	↑	→
<i>Worst Site</i>	9.4	2.5	3.1	↑	↓
99.99% Vertical DOP					
<i>Area Median</i>	2.5	2.2	2.4	↑	↓
<i>Worst Site</i>	34.5	5.4	9.1	↑	↓
99.99% Position DOP (PDOP)					
<i>Area Median</i>	2.8	2.6	2.7	↑	↓
<i>Worst Site</i>	35.7	5.9	9.6	↑	↓
100% RAIM Availability (HAL=185m)					
<i>NPA Service Area (NSA)</i>	51.34%	99.42%	90.95%	↑	↓
<i>World</i>	55.97%	80.54%	74.13%	↑	↓
Accuracy Parameters					
RMS Single Frequency User Range Error					
<i>Constellation Median</i>	1.91	1.64	1.62	↑	↑
<i>Worst Satellite</i>	2.38	13.12	15.52	↓	↓
95% Horizontal Error					
<i>Area Median</i>	2.71	1.81	1.81	↑	→
<i>Worst Site</i>	9.02	7.82	3.48	↑	↑
<i>Availability (% <4.5m (historical 3-sigma))</i>	98.66%	99.91%	99.94%	↑	↑
95% Vertical Error					
<i>Area Median</i>	4.61	3.95	3.95	↑	→
<i>Worst Site</i>	8.36	15.03	4.75	↑	↑
<i>Availability (% < 9m (historical 3-sigma))</i>	99.79%	100%	100%	↑	→

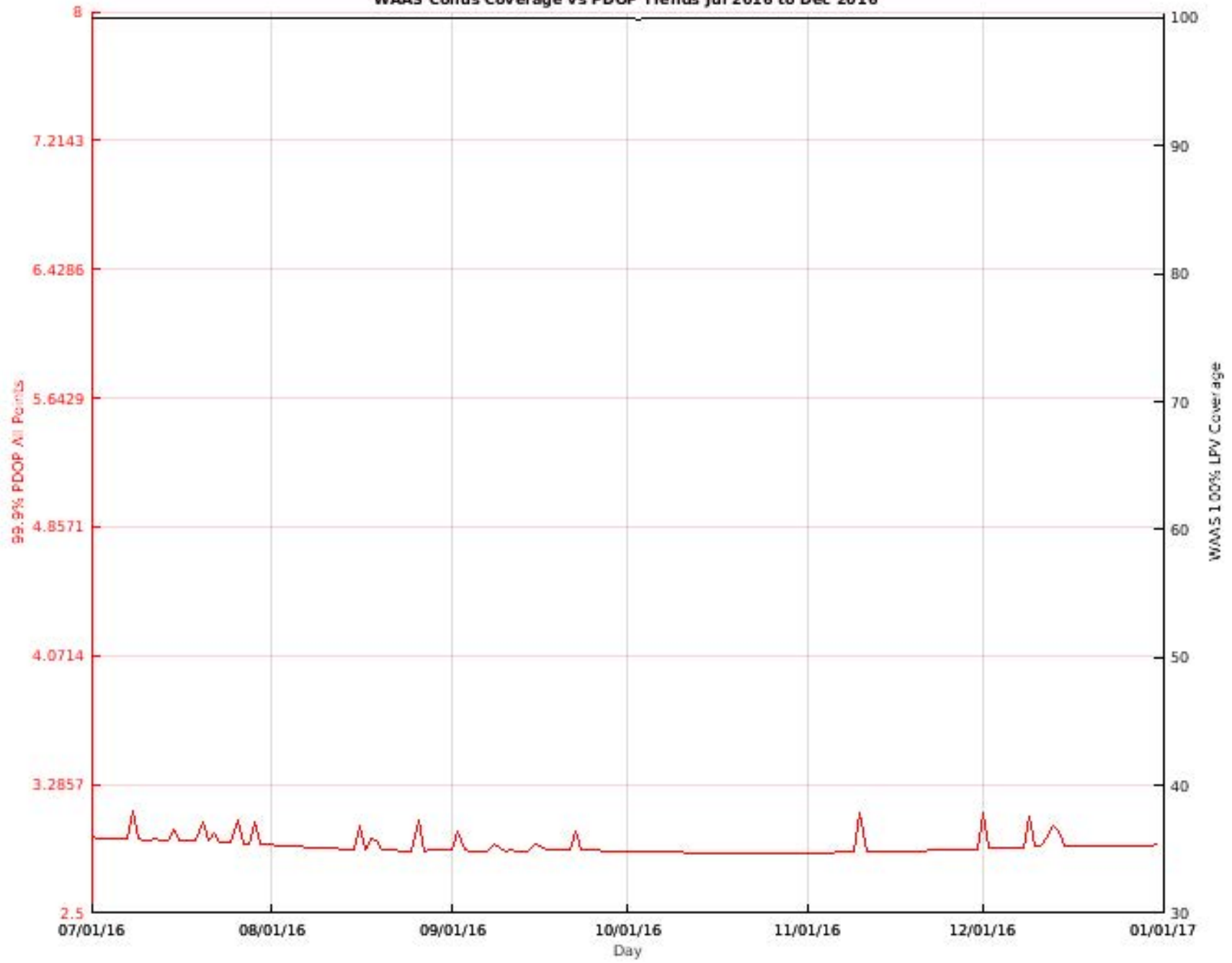
Key: ↑ improving ↓ worsening → no significant change

Long Term is current month vs. prior 24 months; Short Term is current month vs. prior month

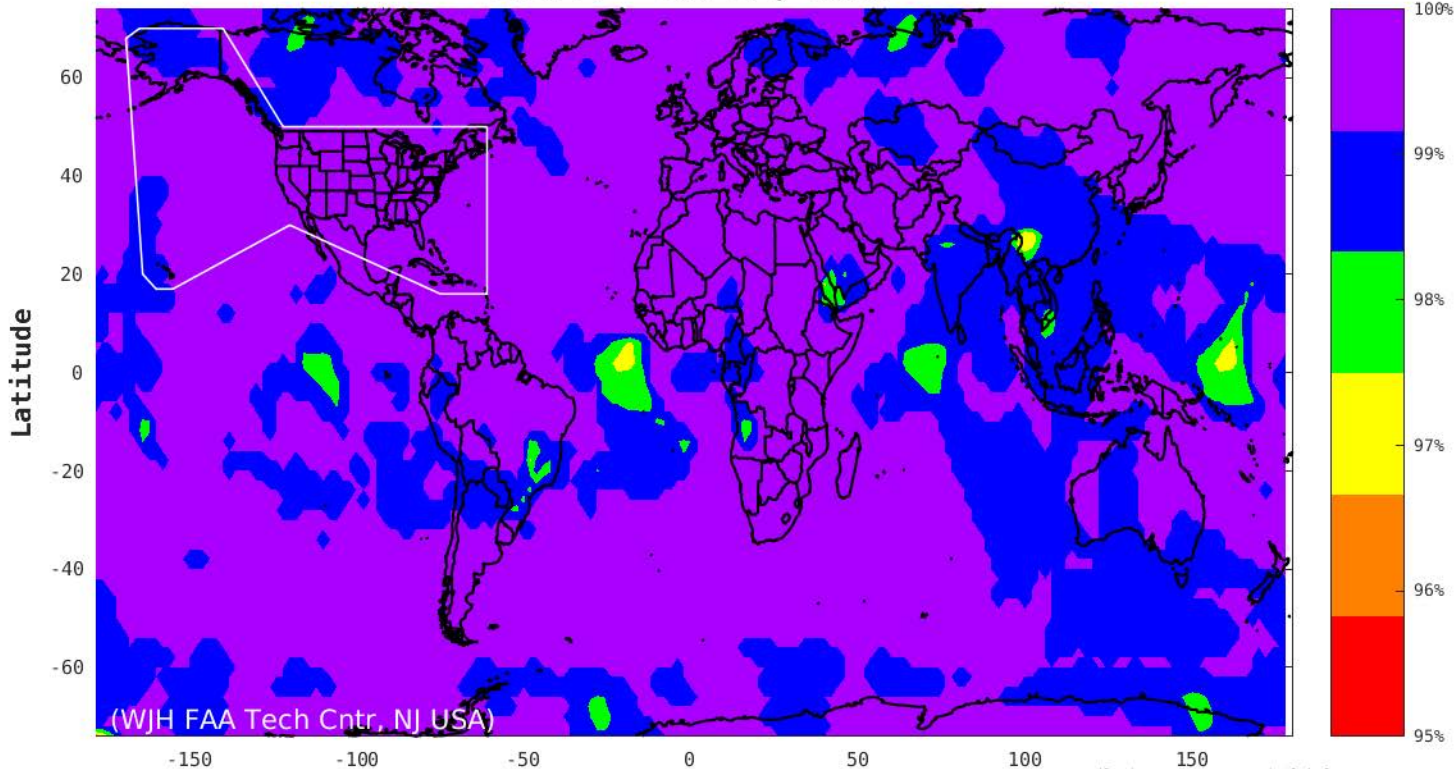
PDOP Trends Jul 2016 thru Dec 2016



WAAS Conus Coverage vs PDOP Trends Jul 2016 to Dec 2016



**SPS RAIM RNP 0.1 (HAL = 185m) Availability
 FD Only, SA Off, without Baro-Aiding
 Dec 1 - Dec 31, 2016**

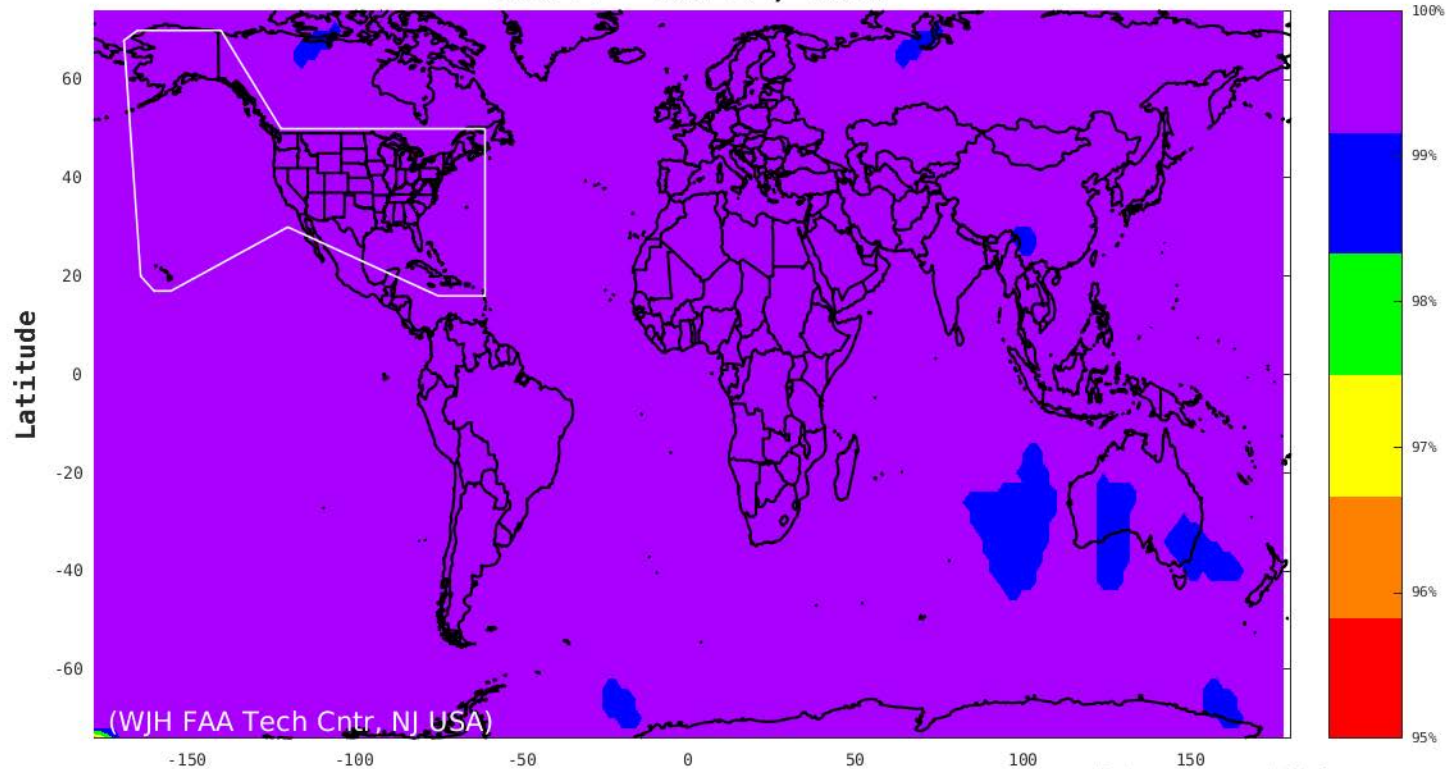


W.J.H. FAA Technical Center
 WAAS Test Team
 01/23/17

Longitude (2 degree sample size)

100 Percent Avail.	150 WNR Coverage	Global
95	100.00%	100.00%
98	100.00%	99.86%
99	100.00%	98.21%
100	90.95%	74.13%

**SPS RAIM RNP 0.3 (HAL = 556m) Availability
 FD Only, SA Off, without Baro-Aiding
 Dec 1 - Dec 31, 2016**



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 01/23/17

Percent Avail.	WNR Coverage	Global
95	100.00%	100.00%
98	100.00%	100.00%
99	100.00%	100.00%
100	100.00%	98.36%

GPS World PDOP 99.99% Index Dec 2016

