

# Civil Report Card On GPS Performance

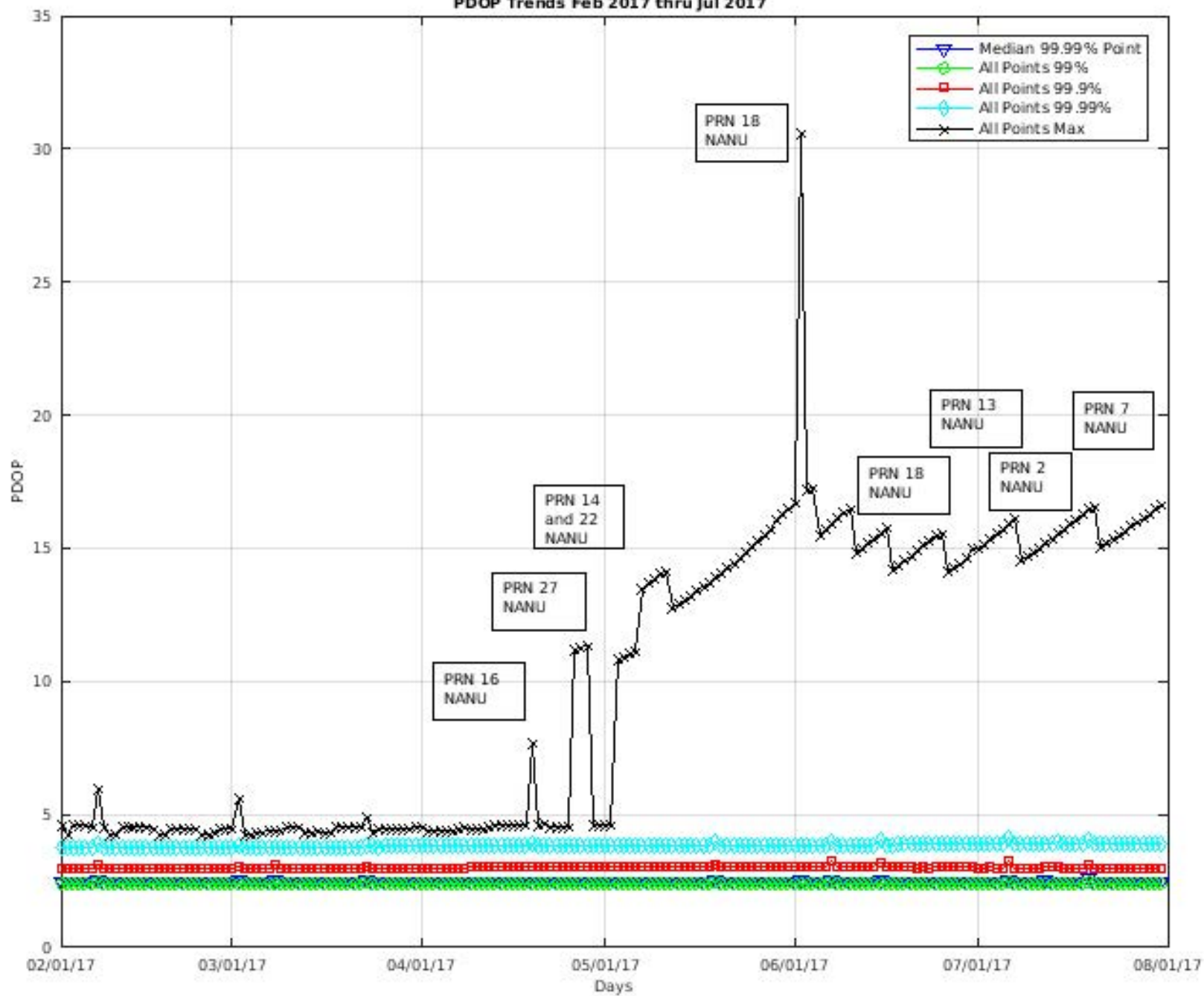
## Jul 2017

Operational Performance Parameter	CY 2016	Jun 2017	Jul 2017	Long term	Short term
<b>Availability Parameters</b>					
<i>Average Number of satellites usable</i>	30.85	30.96	30.98	↑	↑
<i>Average number of satellites usable in primary slots</i>	23.99 (99.94%)	23.97 (99.87%)	23.98 (99.91%)	↓	↑
<i>Average availability of 6 satellites in view</i>	99.94%	100%	100%	↑	→
<b>99.99% Horizontal DOP</b>					
<i>Area Median</i>	1.3	1.3	1.4	↓	↓
<i>Worst Site</i>	4.9	4.3	3.6	↑	↑
<b>99.99% Vertical DOP</b>					
<i>Area Median</i>	2.3	2.4	2.4	↓	→
<i>Worst Site</i>	15.1	15.9	15.9	↓	→
<b>99.99% Position DOP (PDOP)</b>					
<i>Area Median</i>	2.6	2.7	2.7	↓	→
<i>Worst Site</i>	15.8	16.5	16.3	↓	↑
<b>100% RAIM Availability (HAL=185m)</b>					
<i>NPA Service Area (NSA)</i>	76.93%	67.26%	54.21%	↓	↓
<i>World</i>	68.27%	75.75%	66.83%	↓	↓
<b>Accuracy Parameters</b>					
<b>RMS Single Frequency User Range Error</b>					
<i>Constellation Median</i>	1.64	1.28	1.33	↑	↓
<i>Worst Satellite</i>	16.90	7.97	7.68	↑	↑
<b>95% Horizontal Error</b>					
<i>Area Median</i>	1.98	1.62	1.59	↑	↑
<i>Worst Site</i>	7.82	2.47	2.35	↑	↑
<i>Availability (% &lt;4.5m (historical 3-sigma))</i>	99.65%	100%	100%	↑	→
<b>95% Vertical Error</b>					
<i>Area Median</i>	3.87	3.03	3.27	↑	↓
<i>Worst Site</i>	15.03	3.88	4.33	↑	↓
<i>Availability (% &lt; 9m (historical 3-sigma))</i>	99.98%	100%	100%	↑	→

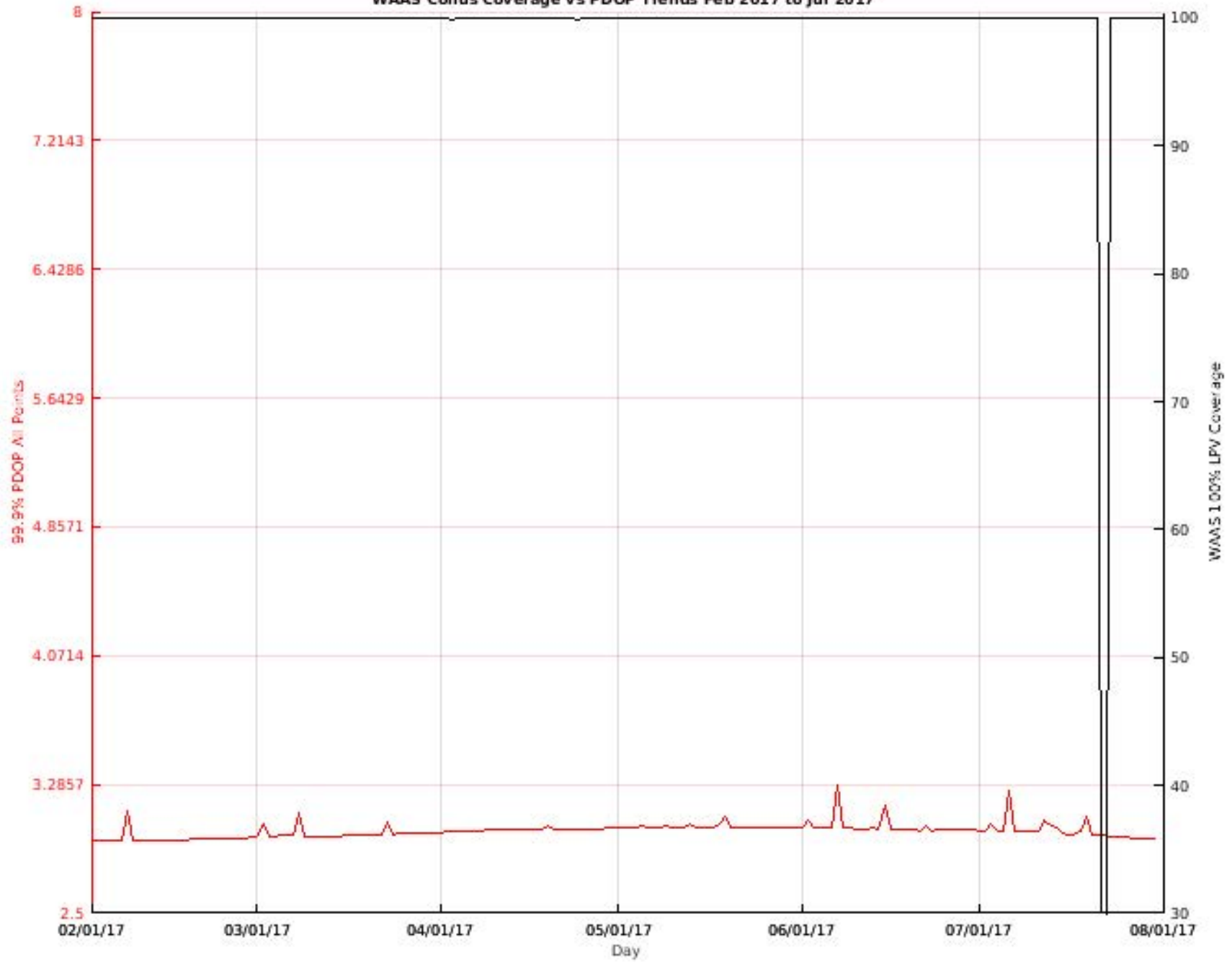
Key: ↑ improving ↓ worsening → no significant change

Long Term is current month vs. prior 12 months; Short Term is current month vs. prior month

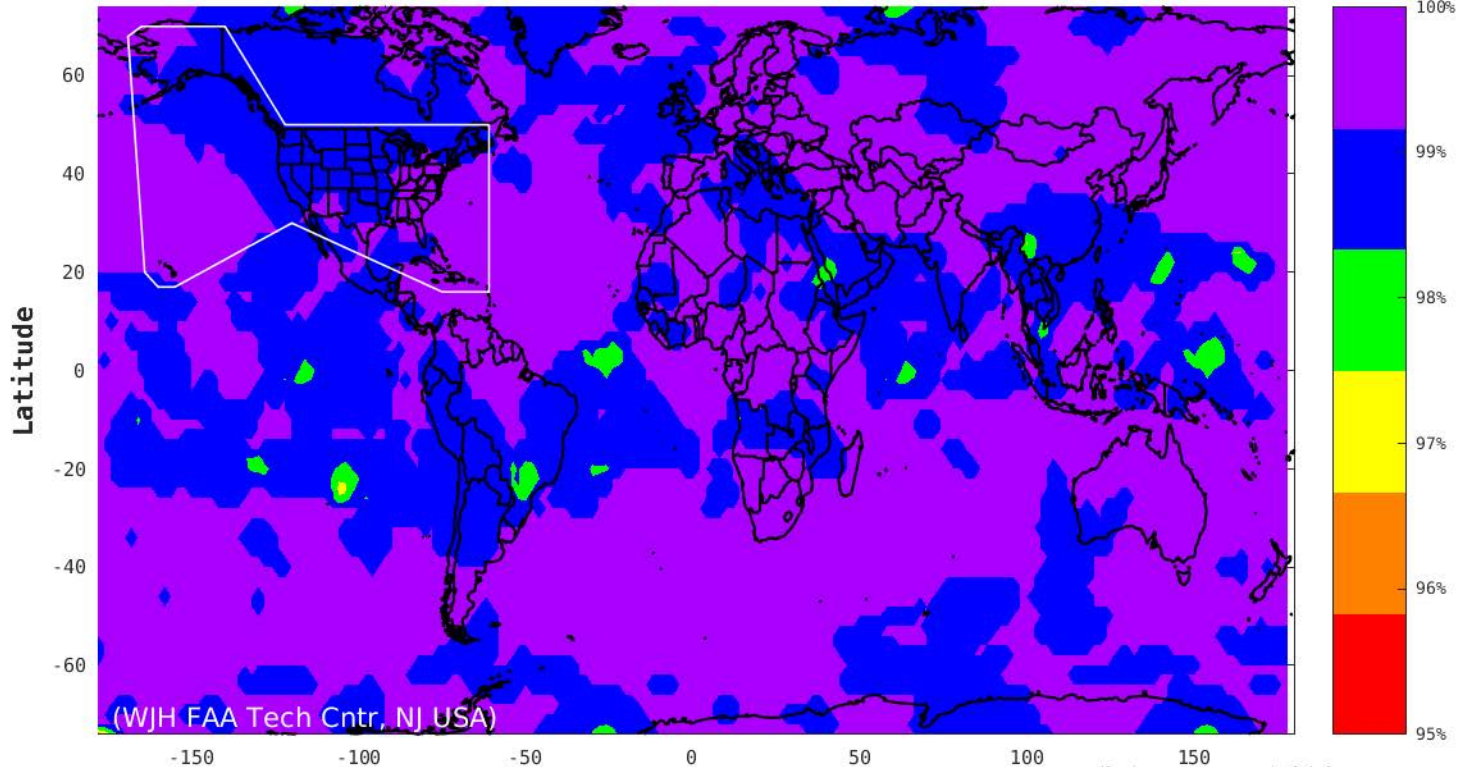
PDOP Trends Feb 2017 thru Jul 2017



WAAS Conus Coverage vs PDOP Trends Feb 2017 to Jul 2017



**SPS RAIM RNP 0.1 (HAL = 185m) Availability  
 FD Only, SA Off, without Baro-Aiding  
 Jul 1 - Jul 31, 2017**



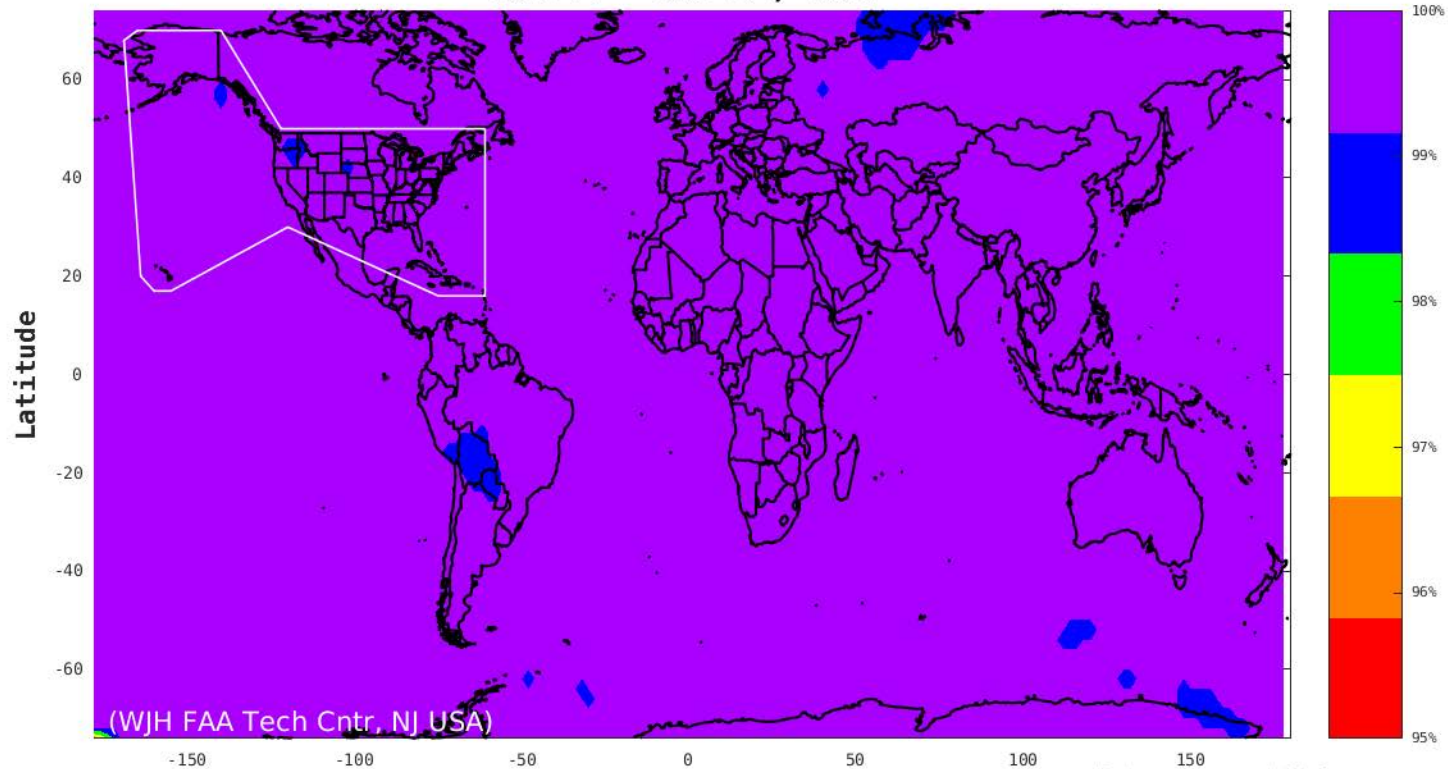
(WJH FAA Tech Cntr, NJ USA)

W.J.H. FAA Technical Center  
 WAAS Test Team  
 08/01/17

**Longitude (2 degree sample size)**

100 Percent Avail.	150 WNR Coverage	Global
95	100.00%	100.00%
98	100.00%	99.96%
99	100.00%	99.87%
100	54.21%	66.83%

**SPS RAIM RNP 0.3 (HAL = 556m) Availability  
FD Only, SA Off, without Baro-Aiding  
Jul 1 - Jul 31, 2017**



W.J.H. FAA Technical Center  
WAAS Test Team  
08/01/17

Longitude (2 degree sample size)

100 Percent Avail.	150 WNR Coverage	Global
95	100.00%	100.00%
98	100.00%	100.00%
99	100.00%	100.00%
100	99.26%	99.12%

# GPS World PDOP 99.99% Index Jul 2017

