

Civil Report Card On GPS Performance

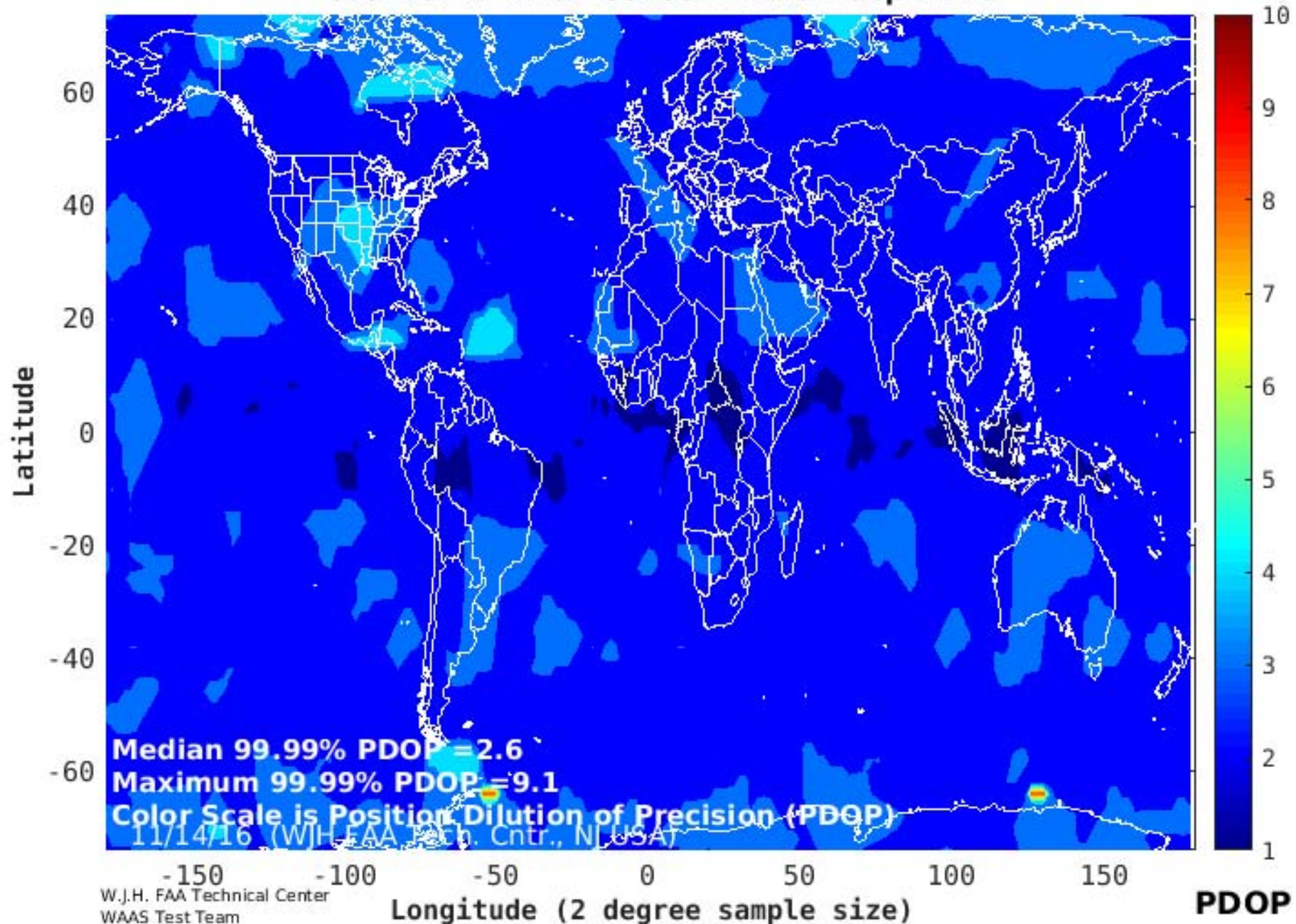
Sep 2016

Operational Performance Parameter	CY 2015	Aug 2016	Sep 2016	Long term	Short term
Availability Parameters					
<i>Average Number of satellites usable</i>	30.50	30.97	30.97	↑	→
<i>Average number of satellites usable in primary slots</i>	23.99 (99.94%)	23.98 (99.93%)	23.97 (99.87%)	↓	↓
<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	2.7	2.3	↑	↑
99.99% Vertical DOP					
<i>Area Median</i>	2.5	2.3	2.2	↑	↑
<i>Worst Site</i>	34.5	9.4	8.8	↑	↑
99.99% Position DOP (PDOP)					
<i>Area Median</i>	2.8	2.6	2.6	↑	→
<i>Worst Site</i>	35.7	9.6	9.1	↑	↑
100% RAIM Availability (HAL=185m)					
<i>NPA Service Area (NSA)</i>	51.34%	89.79%	89.05	↑	↓
<i>World</i>	55.97%	79.47%	84.93	↑	↑
Accuracy Parameters					
RMS Single Frequency User Range Error					
<i>Constellation Median</i>	1.91	1.44	1.63	↑	↓
<i>Worst Satellite</i>	2.38	1.97	16.9	↓	↓
95% Horizontal Error					
<i>Area Median</i>	2.71	1.93	2.11	↑	↓
<i>Worst Site</i>	9.02	3.27	4.97	↑	↓
<i>Availability (% <4.5m (historical 3-sigma))</i>	98.66%	99.94%	99.53%	↑	↓
95% Vertical Error					
<i>Area Median</i>	4.61	3.31	3.78	↑	↓
<i>Worst Site</i>	8.36	4.38	5.02	↑	↓
<i>Availability (% < 9m (historical 3-sigma))</i>	99.79%	99.99%	99.99%	↑	→

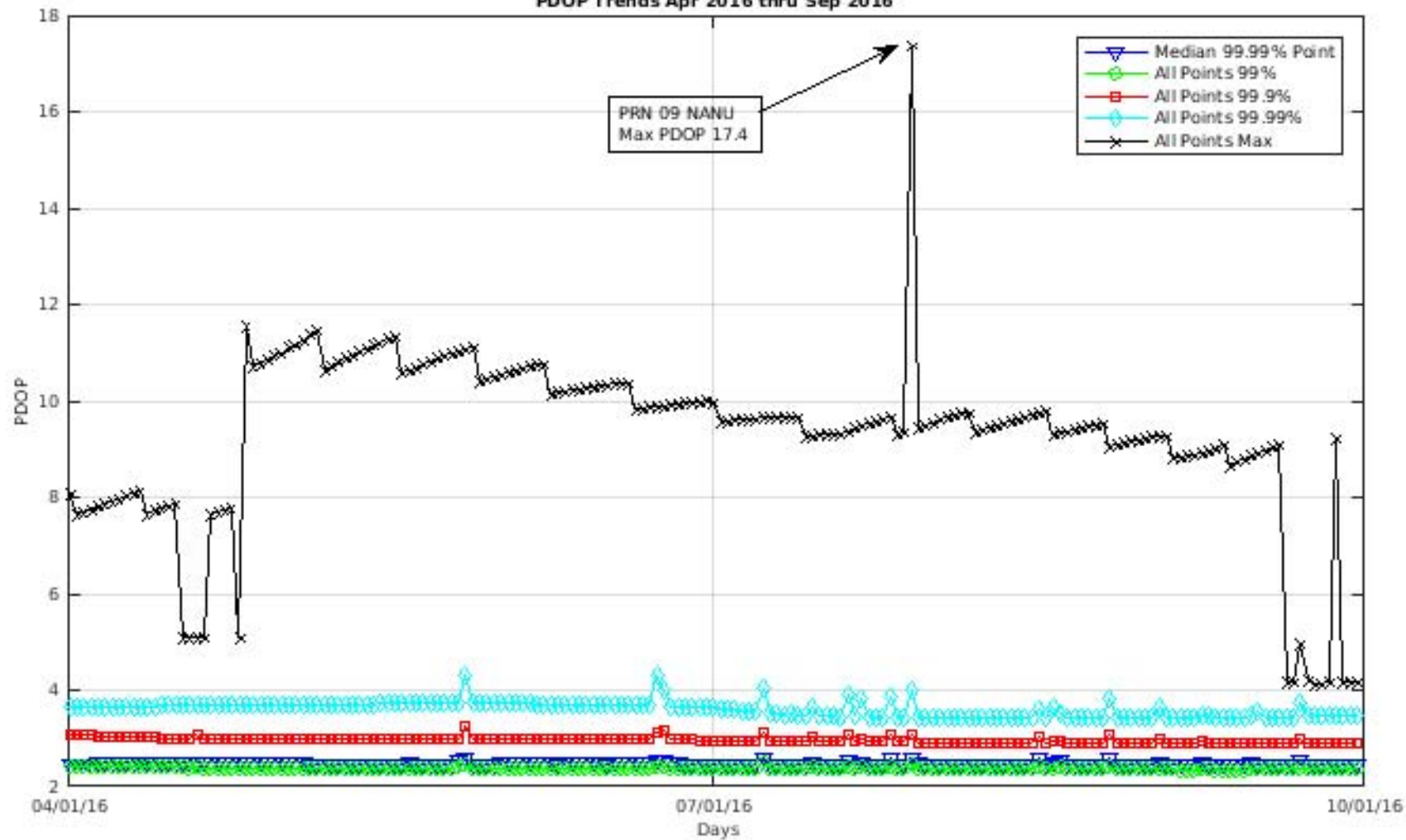
Key: ↑ improving ↓ worsening → no significant change

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

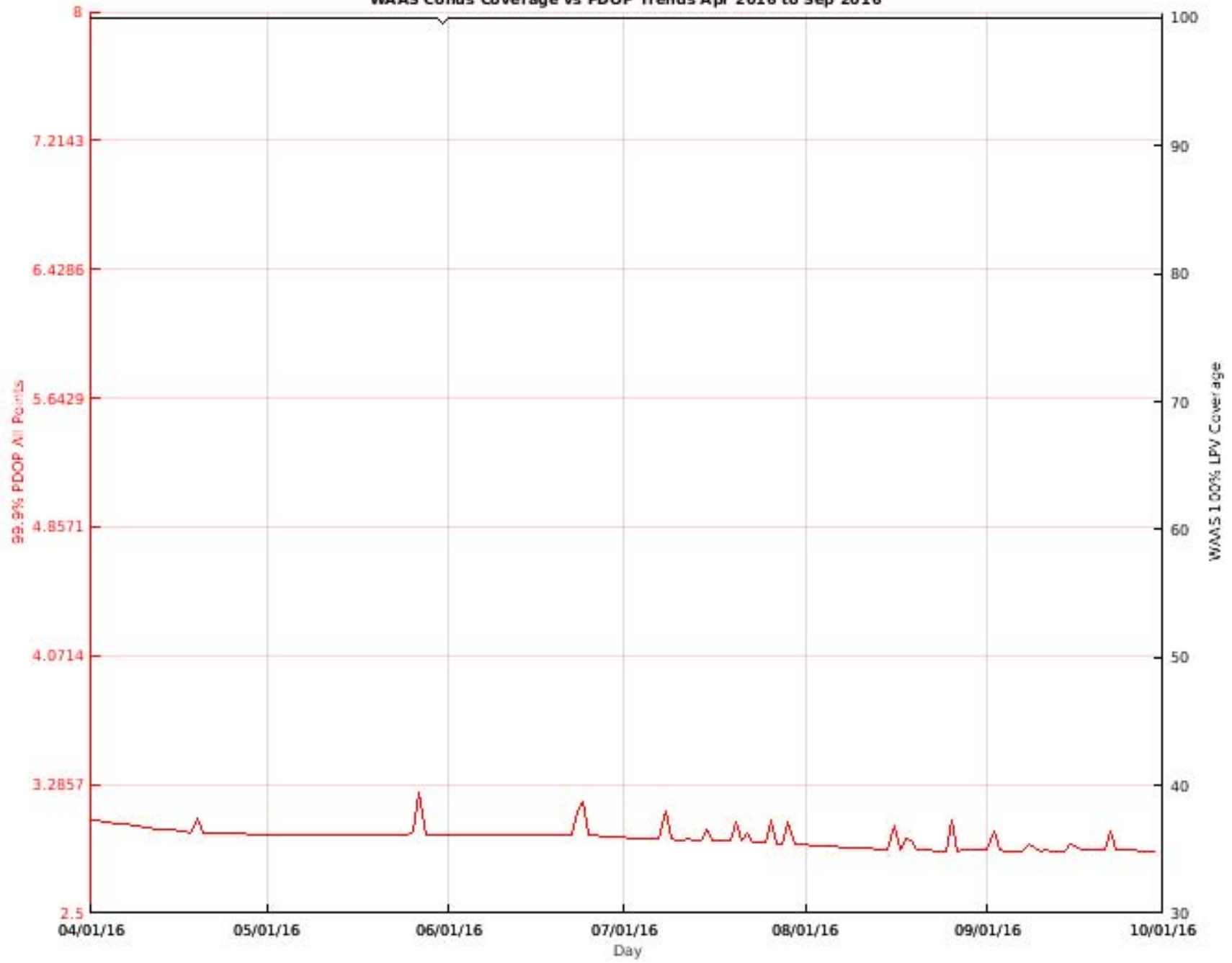
GPS World PDOP 99.99% Index Sep 2016



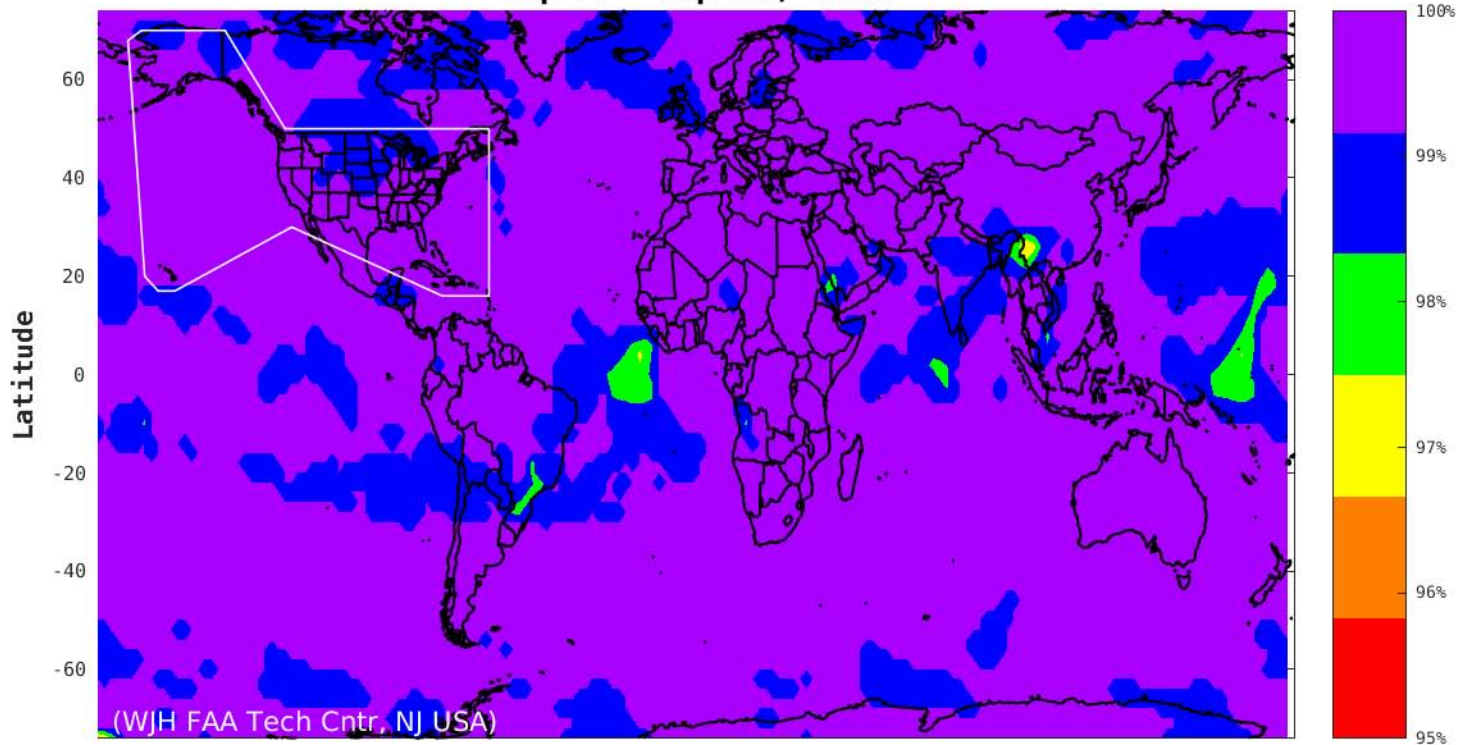
PDOP Trends Apr 2016 thru Sep 2016



WAAS Conus Coverage vs PDOP Trends Apr 2016 to Sep 2016



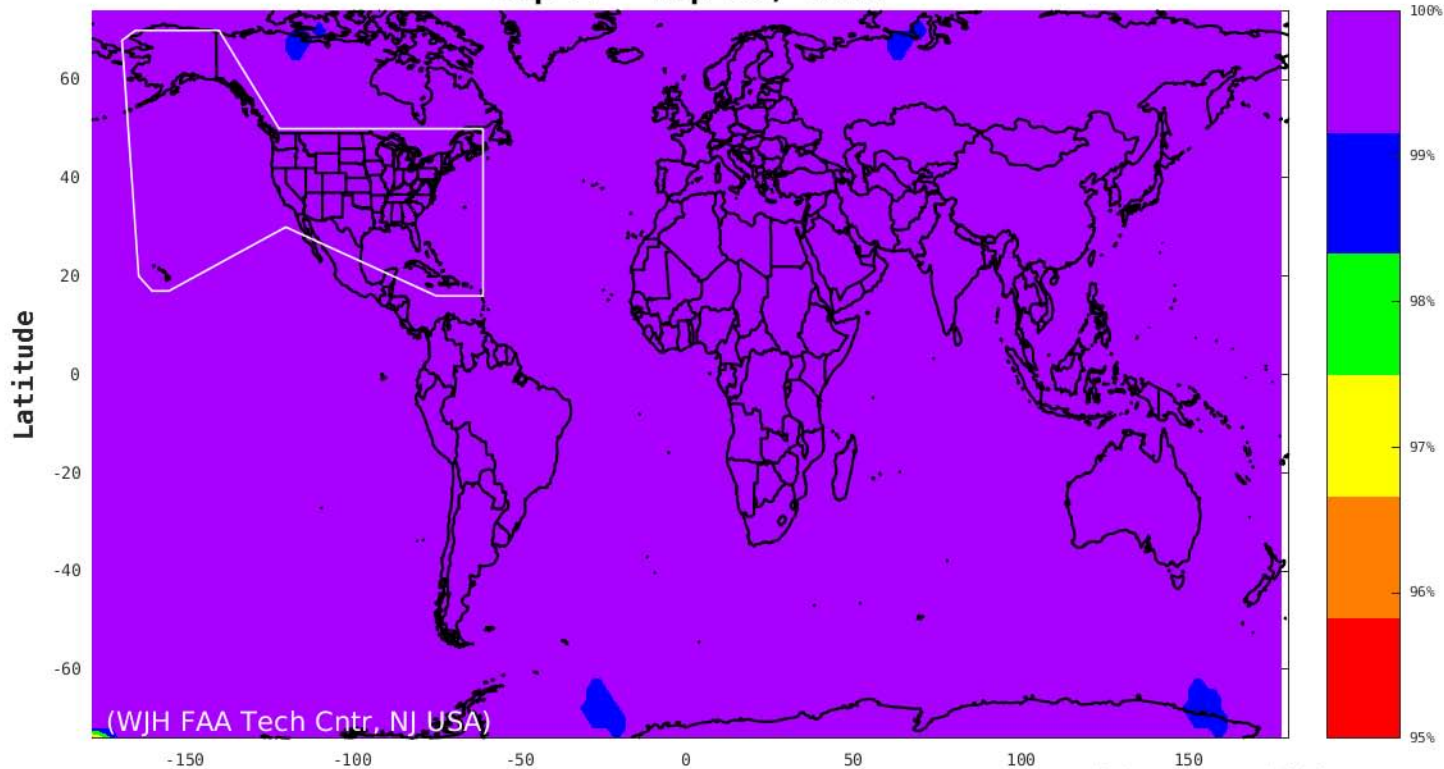
**SPS RAIM RNP 0.1 (HAL = 185m) Availability
 FD Only, SA Off, without Baro-Aiding
 Sep 1 - Sep 30, 2016**



W.J.H. FAA Technical Center
 WAAS Test Team
 11/14/16

100 Percent Avail.	150 WNR Coverage	Global
95	100.00%	100.00%
98	100.00%	99.96%
99	100.00%	99.16%
100	89.05%	84.93%

**SPS RAIM RNP 0.3 (HAL = 556m) Availability
FD Only, SA Off, without Baro-Aiding
Sep 1 - Sep 30, 2016**



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WAAS Test Team
11/14/16

Percent Avail.	WNR Coverage	Global
95	100.00%	100.00%
98	100.00%	100.00%
99	100.00%	100.00%
100	100.00%	99.64%