

Civil Report Card On GPS Performance

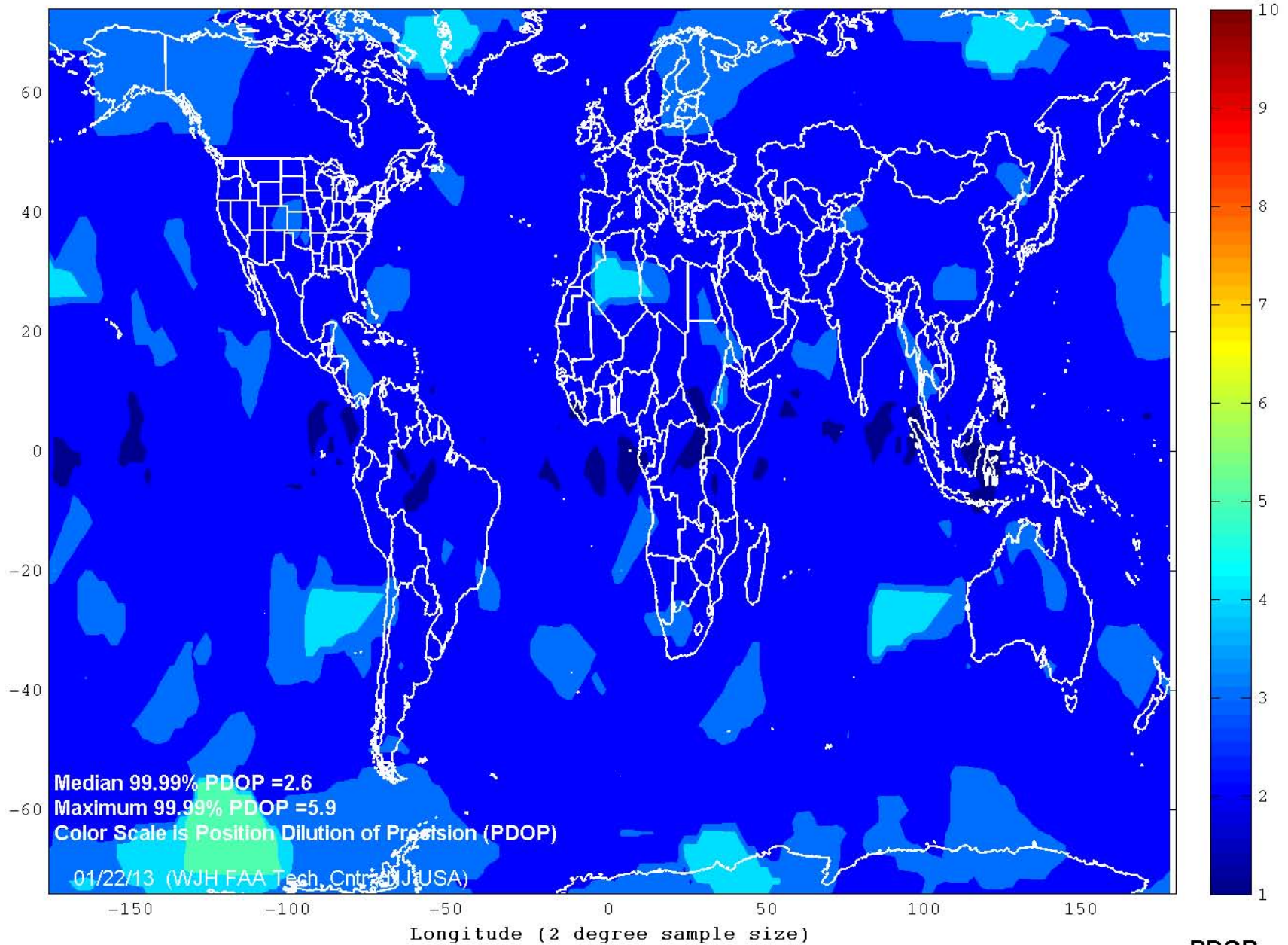
December 2012

Operational Performance Parameter	CY 2011	Nov 2012	Dec 2012	Long term	Short term
Availability Parameters					
<i>Average Number of satellites usable</i>	30.65	30.97	30.97	↑	→
<i>Average number of satellites usable in primary slots</i>	23.78 (99.10%)	23.97 (99.90%)	23.99 (99.96%)	↑	↑
<i>Average availability of 6 satellites in view</i>	99.99%	99.99%	99.99%	→	→
99.99% Horizontal DOP					
<i>Area Median</i>	1.5	1.3	1.3	↑	→
<i>Worst Site</i>	3.0	2.7	3.4	↓	↓
99.99% Vertical DOP					
<i>Area Median</i>	2.8	2.4	2.3	↑	↑
<i>Worst Site</i>	5.8	6.4	5.0	↑	↑
99.99% Position DOP (PDOP)					
<i>Area Median</i>	3.1	2.7	2.6	↑	↑
<i>Worst Site</i>	6.5	6.6	5.9	↑	↑
100% RAIM Availability (HAL=185m)					
<i>NPA Service Area (NSA)</i>	-	40.74%	67.16%	-	↑
<i>World</i>	-	57.60%	64.94%	-	↑
Accuracy Parameters					
RMS Single Frequency User Range Error					
<i>Constellation Median</i>	1.95	2.21	2.04	↓	↑
<i>Worst Satellite</i>	2.57	3.52	3.41	↓	↑
95% Horizontal Error					
<i>Area Median</i>	2.71	2.70	2.45	↑	↑
<i>Worst Site</i>	10.10	8.34	6.48	↑	↑
<i>Availability (% <4.5m (historical 3-sigma))</i>	98.74%	99.90%	99.98%	↑	↑
95% Vertical Error					
<i>Area Median</i>	5.03	6.01	5.57	↓	↑
<i>Worst Site</i>	10.39	9.09	7.13	↑	↑
<i>Availability (% < 9m (historical 3-sigma))</i>	99.53%	99.64%	99.95%	↑	↑

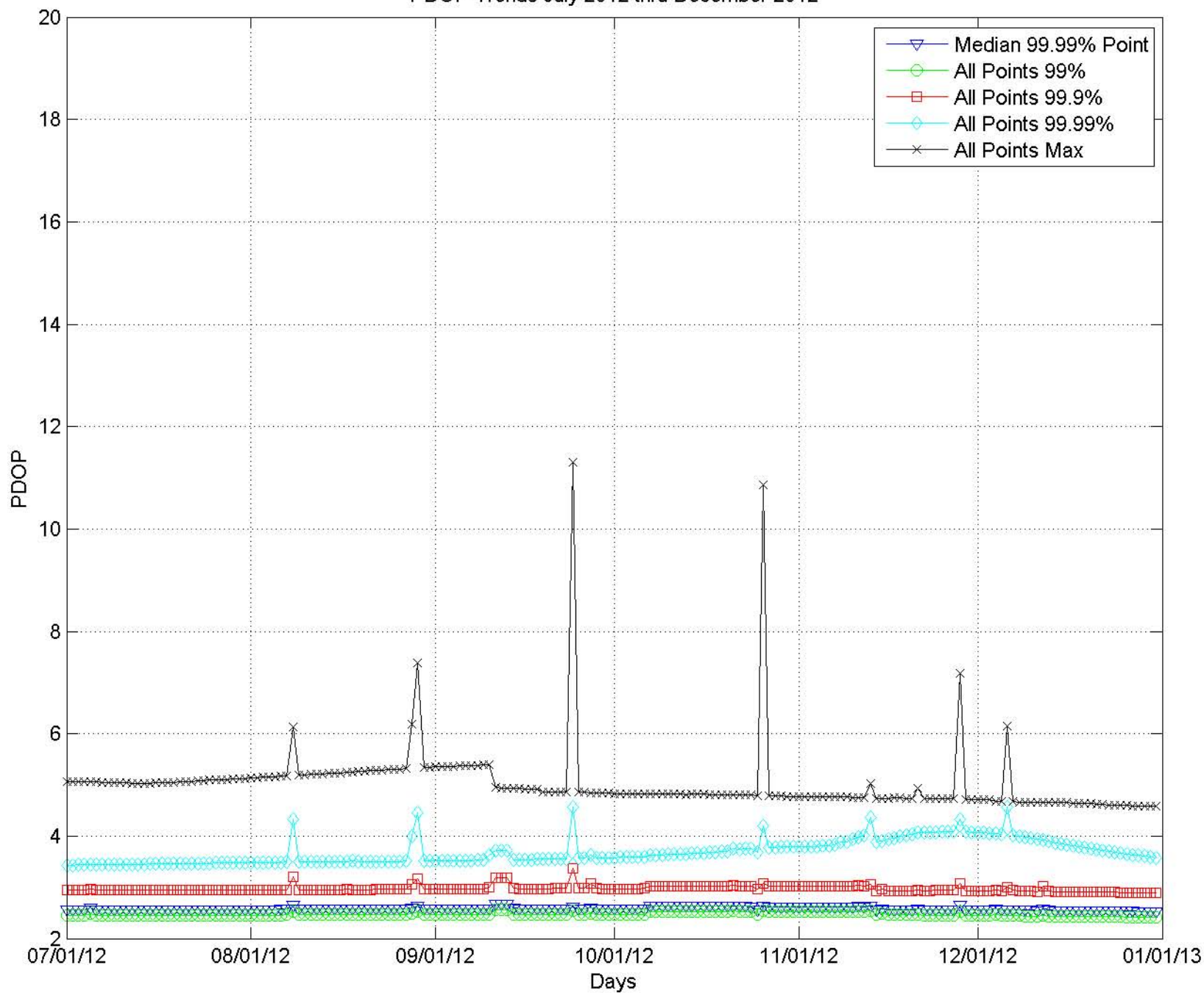
Key: ↑ improving ↓ worsening → no significant change

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

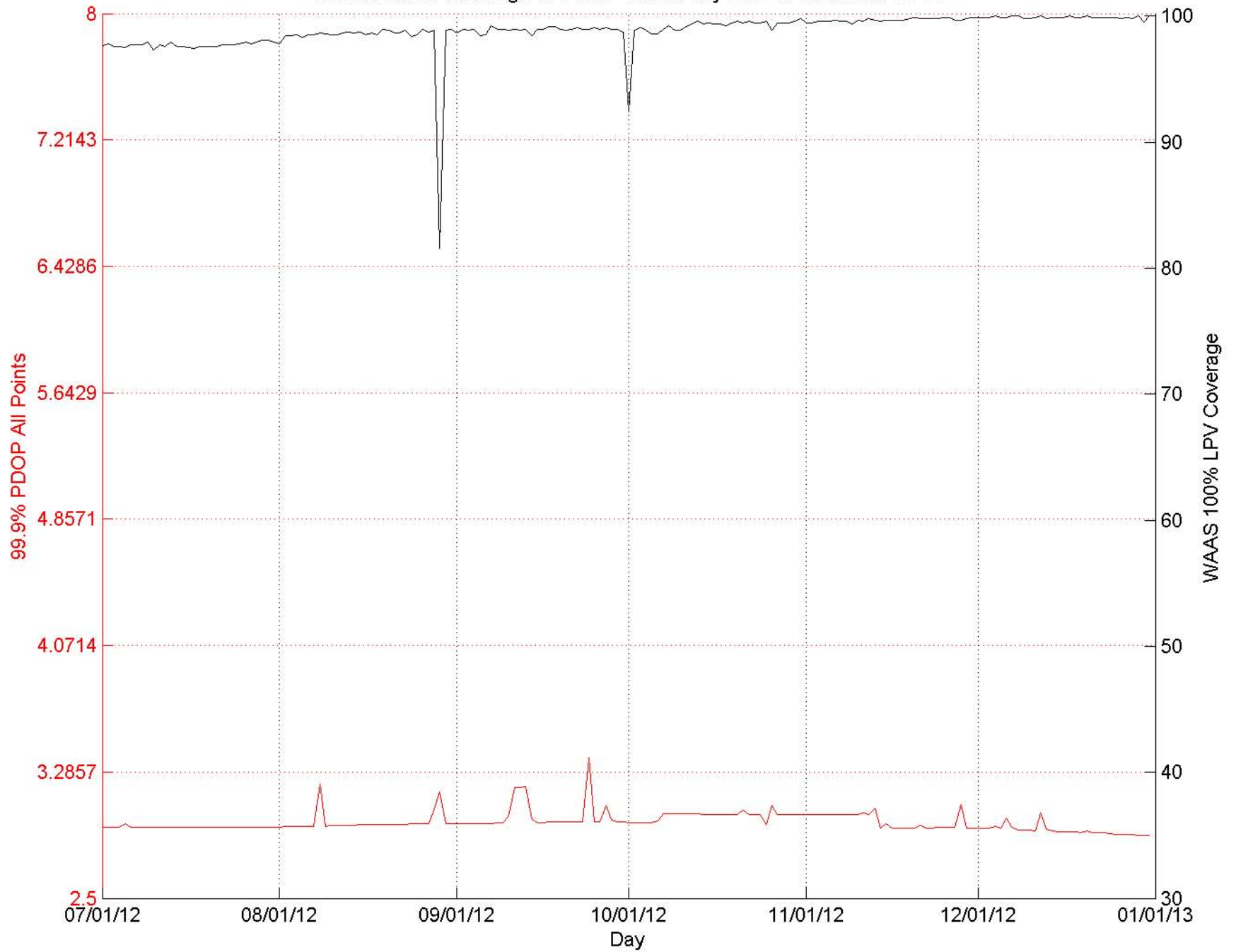
GPS World PDOP 99.99% Index December 2012



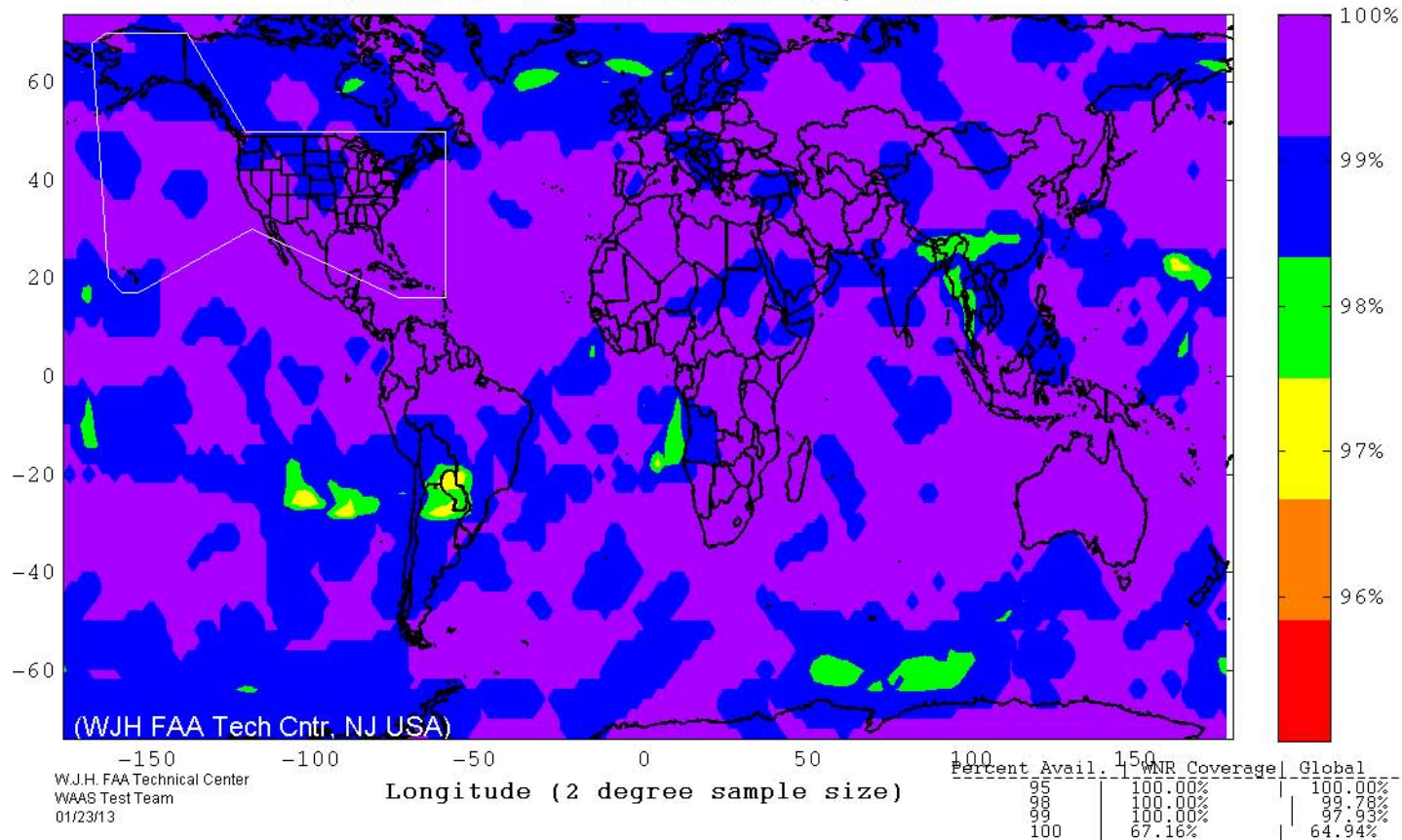
PDOP Trends July 2012 thru December 2012



WAAS Conus Coverage vs PDOP Trends July 2012 to December 2012



SPS RAIM RNP 0.1 (HAL = 185m) Availability
 FD Only, SA Off, without Baro-Aiding
 December 1 - December 31, 2012



SPS RAIM RNP 0.3 (HAL = 556m) Availability
 FD Only, SA Off, without Baro-Aiding
 December 1 - December 31, 2012

