

Civil Report Card On GPS Performance

December 2010

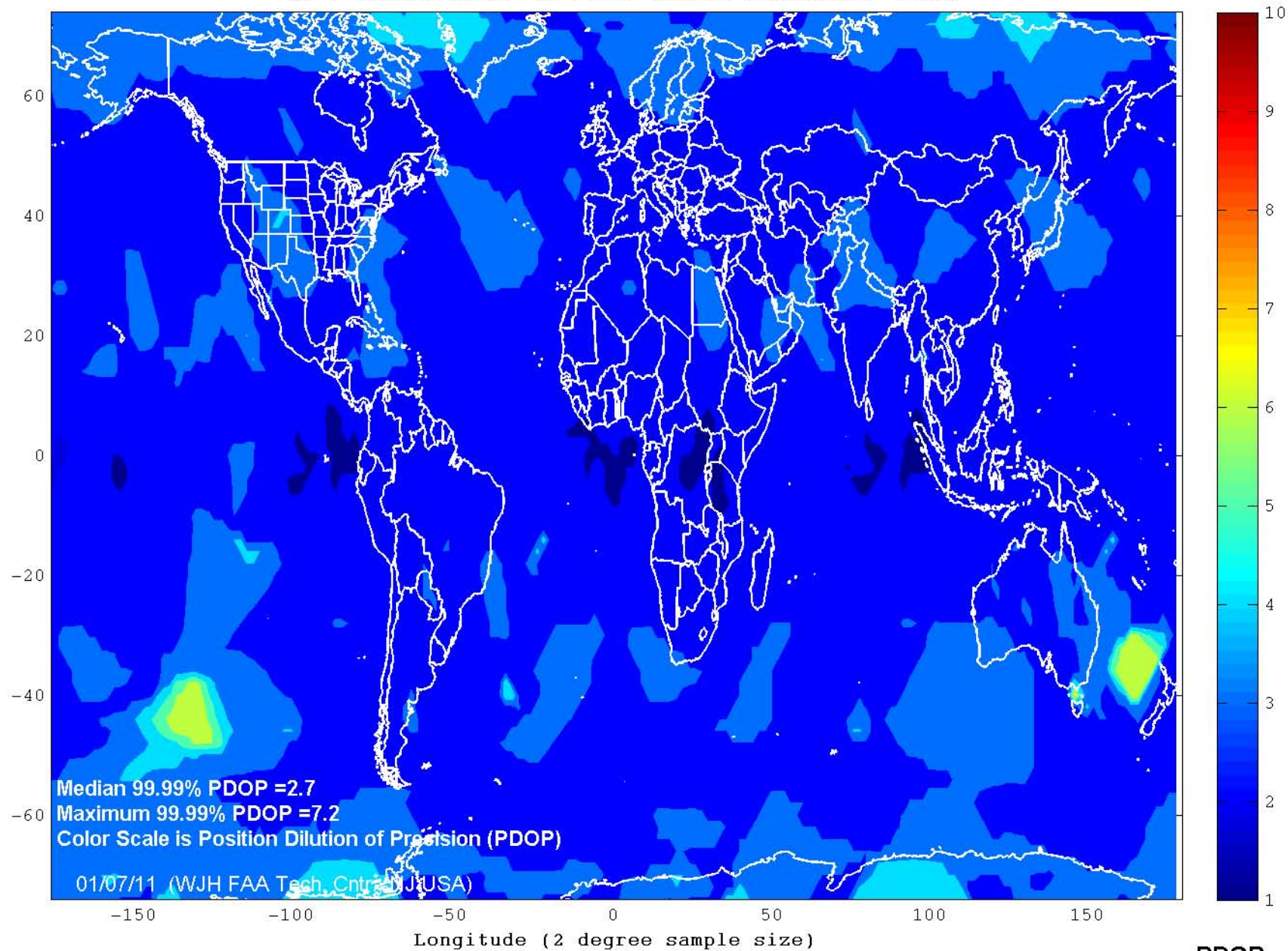
Operational Performance Parameter	CY 2009	Nov 2010	Dec 2010	Long term	Short term
Availability Parameters					
<i>Average Number of satellites usable</i>	30.85	30.96	30.97	↑	↑
<i>Average number of satellites usable in primary slots</i>	23.90 (99.59%)	23.96 (99.86%)	23.99 (99.96%)	↑	↑
<i>Average availability of 6 satellites in view</i>	99.99%	100%	100%	↑	→
99.99% Horizontal DOP					
<i>Area Median</i>	1.7	1.4	1.3	↑	↑
<i>Worst Site</i>	4.8	3.9	2.8	↑	↑
99.99% Vertical DOP					
<i>Area Median</i>	3.1	2.5	2.4	↑	↑
<i>Worst Site</i>	12.0	8.1	6.8	↑	↑
99.99% Position DOP (PDOP)					
<i>Area Median</i>	3.5	2.8	2.7	↑	↑
<i>Worst Site</i>	12.8	8.6	7.2	↑	↑
Accuracy Parameters					
RMS Single Frequency User Range Error					
<i>Constellation Median</i>	1.67	1.71	1.77	↓	↓
<i>Worst Satellite</i>	2.26	2.70	2.66	↓	↑
95% Horizontal Error					
<i>Area Median</i>	2.10	2.16	2.26	↓	↓
<i>Worst Site</i>	3.95	4.72	4.22	↓	↓
<i>Availability (% <4.5m (historical 3-sigma))</i>	99.80%	99.77%	99.87%	↑	↑
95% Vertical Error					
<i>Area Median</i>	4.11	4.09	4.34	↓	↓
<i>Worst Site</i>	5.97	4.75	5.21	↑	↓
<i>Availability (% < 9m (historical 3-sigma))</i>	99.98%	99.99%	99.99%	↑	→

Key: ↑ improving ↓ worsening → no significant change

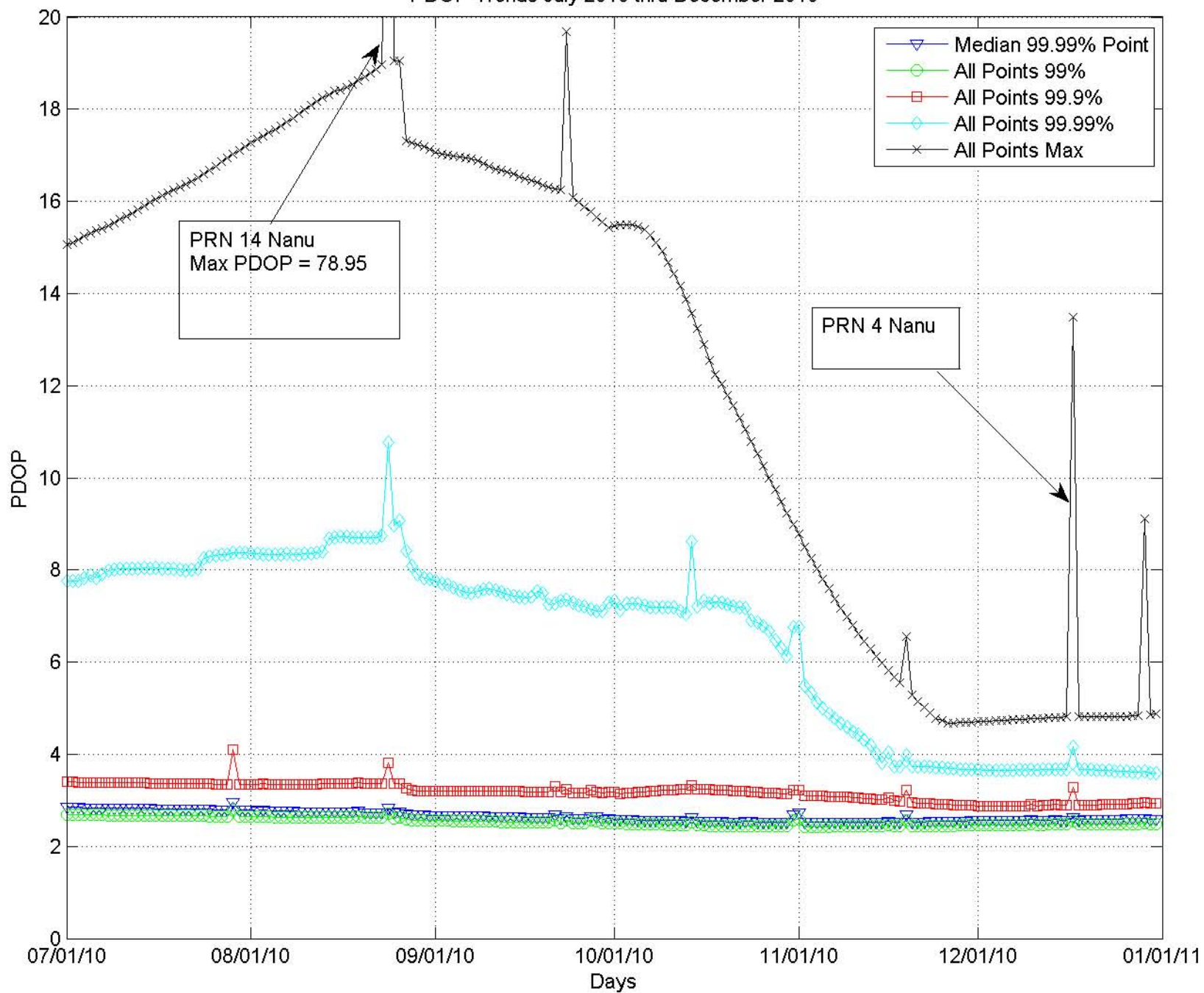
Long Term is current month vs. prior 24 months; Short Term is current month vs. prior month

Compiled from WAAS network as requested by the Defense Science Board

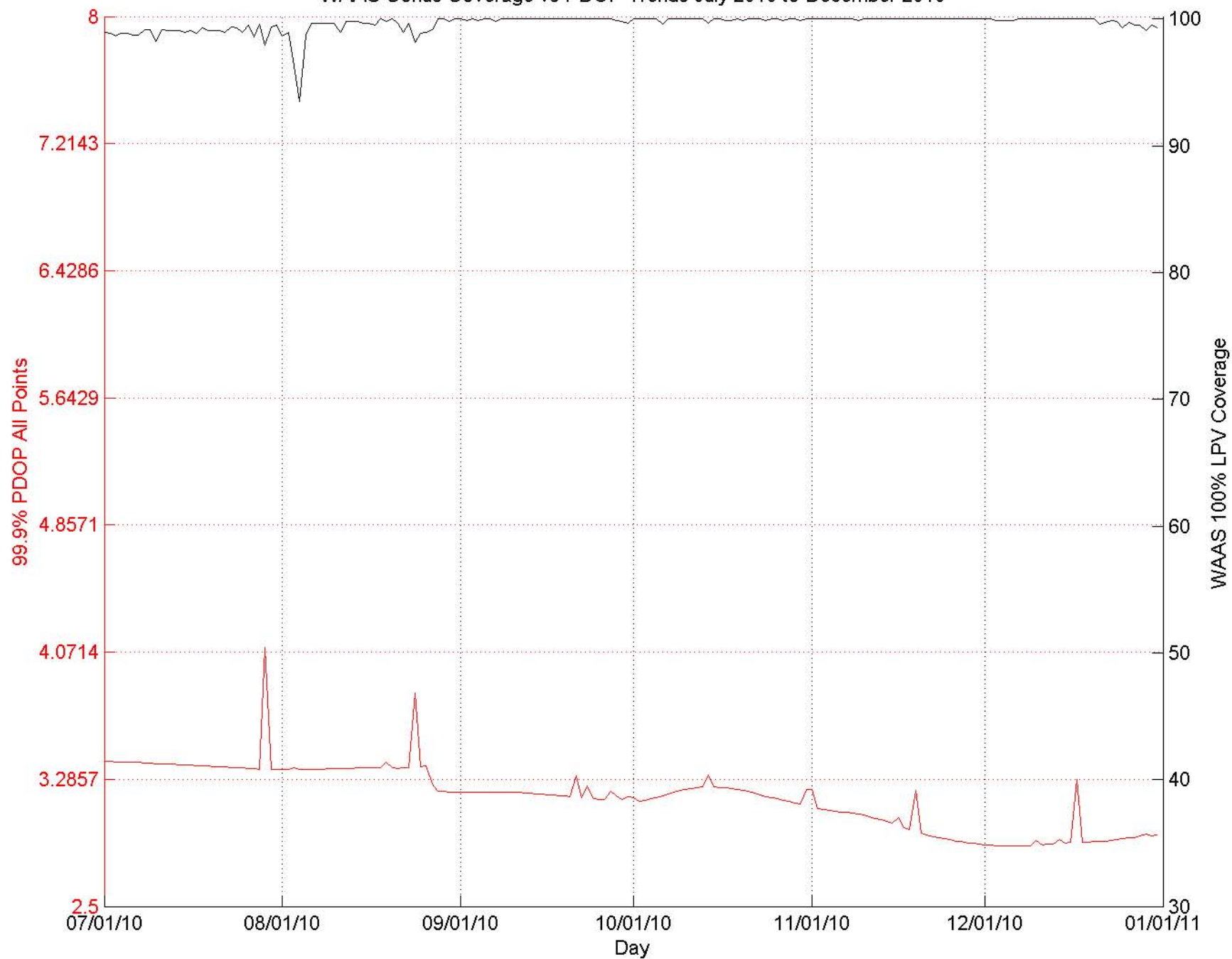
GPS World PDOP 99.99% Index December 2010



PDOP Trends July 2010 thru December 2010



WAAS Conus Coverage vs PDOP Trends July 2010 to December 2010



Six Satellite Availability Trends July 2010 thru December 2010

