



GPS Laser Retroreflector Array Project

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- ◆ Systematic co-location in space through the precision orbit determination of GPS satellites via SLR will contribute significantly towards improving the accuracy and stability of the ITRF.
- ◆ GPS will then provide a means to accurately and uniformly distribute this new accuracy to all systems utilizing GPS.
- ◆ NASA-DoD partnership to support laser ranging of the next generation GPS satellites.
- ◆ Targeting first unit on GPS III SV9 in the in 2019 to 2021 timeframe.
- ◆ Baseline delivery of at least 27 arrays.



Positioning the World for Tomorrow





Status



- ◆ GPS-LRA Project team formed at NASA GSFC to begin formulation work in anticipation of final approval of LRA on GPS III.
- ◆ Partnership established with the Naval Research Laboratory for:
 - Development of Formulation products: Interface Control Document, Instrument Requirements, etc.
 - Development of the retroreflector design.
 - Build and test of an Engineering Qualification Model.



Preliminary Formulation Schedule



- ✓ Requirements review held September 20, 2012.
- ◆ Preliminary Design Review: Early 2013
- ◆ Engineering Qualification Model Environmental Testing: Summer 2013
- ◆ Critical Design Review: Fall 2013