Proving Ground Demonstration Plan Proposal
Please fill out and return to the GOES-R Program Office (richard.reynolds@noaa.gov and bonnie.reed@noaa.gov).

(1) **Project Title:**
   a. High Latitude and Arctic Winter Testbed

(2) Organization:
   a. NWS Alaska Region

(3) Products to be demonstrated (list the GOES-R Products you would like to demonstrate as a GOES-R Proving Ground activity):
   a. Volcanic Ash: Detection and Height
   b. Cloud Phase
   c. Cloud/Snow Discrimination
   d. Low Fog and Cloud
   e. SO2 Detection

(4) Demonstration Project Summary:
   a. Purpose/Scope: Demonstrate identified GOES-R surrogate products real-time at all the AK forecast offices, the River Forecast Center, and the Alaska Aviation Weather Unit. Products will be demonstrated within AWIPS and other mechanisms. Forecaster feedback will be captured and provided to the GOES-R algorithm developers.

(5) Participants (Centers) involved:
   a. Providers
      i. AWG
         1. Volcanic Ash (Wayne Feltz Aviation Lead)
            a. Mike Pavolonis – Lead Developer
         2. Cloud Phase (Andy Heidinger, lead)
            a. Mike Pavolonis (CIMSS, mpav@ssec.wisc.edu)
         3. Cloud/Snow Discrimination (Andy Heidinger, lead)
            a. Andy Heidinger (CIMSS, heidinger@ssec.wisc.edu)
         4. Low Fog and Cloud (Andy Heidinger, lead)
            a. Mike Pavolonis (CIMSS, mpav@ssec.wisc.edu)
         5. SO2 Detection (Wayne Feltz Aviation Lead)
            a. Mike Pavolonis – Lead Developer
      ii. GINA
         1. Retrieve products from CIMSS
         2. Provide analysis and feedback
      iii. CIMSS
         1. Capture satellite passes and work with AWG to provide identified products/algorithms to GINA
   b. Consumers

i. NWS Alaska Region Forecast Offices
ii. River Forecast Center
iii. Alaska Aviation Weather Unit

(6) Project schedule/duration (timeline):

a. Begin: March 2010
   i. Identify products (May, 2010)
   ii. Identify AWG Leads (May, 2010)
   iii. Establish an Operations Plan (roles and responsibilities and expectations (Jul 1, 2010))
   iv. AK receive and integrate GOES-R algorithms (Oct 4, 2010)
   v. Produce demonstration products (Oct 11, 2010)
   vi. Distribute products (AK WFOs, RFC, and AAWU, Oct 11, 2010)
   vii. Product Evaluation (Nov 1, 2010 – Jan 7, 2011)
   Actual (Nov 1, 2010 – Aug 31, 2011)
   viii. Midterm Report Due (Dec 10, 2010)
   ix. Final Report Due (Feb 11, 2011)
   Actual (Oct 31, 2011)
b. End: Feb , 2010 (Actual Aug 31, 2011)

(7) Project decision points and deliverables

a. Proving Ground Operations Plan
b. Proving Ground Demonstration and Final Report
c. Plan for Future Improvements/Value Added Products

(8) Responsibilities and Coordination

a. Dr. Jessica Cherry, the High Latitude and Arctic Proving Ground liaison, will lead this effort, utilizing the capture and processing capabilities of GINA at the University of Alaska Fairbanks, insuring that the products are received at all the Alaska Forecast Offices, RFC and AAWU real-time. GINA staff will use algorithms obtained from GOES-R development group to create surrogate products from MODIS. Ground truth stations from Dr. Cherry's research network will be made available to help evaluate the products. She will also capture forecaster feedback for the developers. ALPS workstations are now in place at the three Forecast Offices, the RFC and AAWU to display the products at full resolution. In addition, the products will be loaded onto AWIPS. The project will be expanded to include NPOESS products and greater scientific analysis following the first test season. Peer reviewed publications are another goal of the project. The focus during the first Proving Ground experiment will be on Alaska's river breakup season.

(9) Budget and resource estimate

a. Resources are in place to conduct this testbed.