Scope Overview of PingER Linked Open Data (LOD) and Web Observatory Project

1. The basic goal is to build upon and extend previous work on the representation and application of PingER monitoring data in Linked Open Data (LOD) format. To accomplish this goal, the following assumptions can be made:
   a. Work will be based upon the previous efforts of Renan Souza and Thiago Barbosa including use of the PingER ontology and methods used to convert PingER data to RDF (Resource Description Framework) format;
   b. Work will continue to explore use of the Cloudera Impala analytic engine for PingER LOD queries;
   c. PingER LOD data can be used in powerful "mashup" applications and visualizations;
   d. PingER LOD data can be a valuable contribution by SLAC to the Web Observatory Project operated by the Web Science Trust.
2. Skills required for participation in the PingER LOD project:
   a. Familiarity with the PingER project infrastructure and program code;
   b. A working knowledge of Semantic Web technologies (RDF, SPARQL, etc.);
   c. Familiarity with the installation and support of open source software and applications;
   d. Basic DBMS skills;
   e. Ability to coordinate with the Web Science Trust for the inclusion of SLAC as a Web Observatory (http://webscience.org/how-to-getinvolved-with-web-observatory/).
3. Project Outcomes
   a. An improved infrastructure for LOD support of PingER monitoring data;
   b. SLAC PingER monitoring datasets being shared with Web Observatory collaborators;
   c. Additional SLAC experience with the Cloudera Impala analytic engine or comparable tools;
   d. Demonstration of "data mashups" using PingER LOD;
   e. Documentation supporting the PingER LOD efforts;
   f. Identification of areas for future research and development;
   g. A conference or journal submission reporting findings and experience