LAGO DISTRIBUTED NETWORK OF DATA REPOSITORIES

H. Asorey\textsuperscript{1}, A. Martínez-Méndez\textsuperscript{2}, L.A. Núñez\textsuperscript{3,4}, and A. Valbuena-Delgado\textsuperscript{3} for the LAGO Collaboration\textsuperscript{5}

We describe a set of tools, services and strategies of the Latin American Giant Observatory (LAGO) data repository network, to implement Data Accessibility, Reproducibility and Trustworthiness.

The Latin American Giant Observatory (LAGO), is an extended continental astroparticle observatory oriented to basic research on: the Extreme Universe, Space Weather, and Atmospheric Radiation, with singles and small arrays particle detectors, covering a huge range of geomagnetic rigidity cutoffs and atmospheric absorption/reaction levels (Asorey et al. 2016).

Unlike other instruments where data flows from only one place to a network of data repositories, in LAGO each site preserves, catalogs and generates data locally which, referrers not only to raw data but also to data produced during the analysis and/or simulation of cosmic rays phenomena. Dspace provides basic functionality for storing and retrieving of digital content with a straightforward adaptability for non-native types of contents and metadata schemes, supporting two interoperability protocols: OAI-PMH (Open Archive Initiatives Protocol for Metadata Harvesting) and SWORD (Simple WebService Offering Repository Deposit) (Smith et al. 2003; Lewis et al. 2012). We have overcome one of the most important DSpace limitations: its inability to upload/download multiple records, developing a script to ingest data profiling from the some DSpace capabilities (Asorey et al. 2015). This data repository network will also be useful for the solar physics and space climatology communities.

The Data Accessibility, Reproducibility and Trustworthiness (DART) initiative was launched by CHAIN-REDS (Coordination and Harmonisation of Advanced e-infrastructure for Research and Educati- 

\textsuperscript{1}Laboratorio Detección de Partículas y Radiación, Centro Atómico Bariloche & Instituto Balseiro, Bariloche, Argentina.
\textsuperscript{2}Escuela de Ingeniería de Sistemas, Universidad Industrial de Santander, Bucaramanga, Colombia (alexander.martinez1@correo.uis.edu.co).
\textsuperscript{3}Escuela de Física, Universidad Industrial de Santander, Bucaramanga, Colombia.
\textsuperscript{4}Departamento de Física, Universidad de Los Andes, Mérida, Venezuela.
\textsuperscript{5}The Latin American Giant Observatory (LAGO), http://lagoproject.org, see the full list of members and institutions at http://lagoproject.org/collab.html.

REFERENCES

Smith, M., Barton, M., Bass, M., et al. 2003, D-lib magazine, 9