

## Plan Overview

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*A Data Management Plan created using DMPTool*

**Title:** Research in Theoretical Particle Physics at Los Alamos HEP

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**Template:** Department of Energy (DOE): Office of Science

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### **Copyright information:**

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## Research in Theoretical Particle Physics at Los Alamos HEP

### Data types and sources

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The sections in the template outline are based on Suggested Elements of a DMP (see Links tab) provided by DOE, but DMPs are not required to follow this template. For the data types and sources suggested element, a brief, high-level description of the data to be generated or used through the course of the proposed research and which of these are considered digital research data necessary to validate the research findings may be included.

Data will be generated using monte Carlo simulations of lattice QCD and event generators for LHC. The results of the simulations will be published in open journals. The raw and processed data will be archived on local, institutional and national (NERSC, FNAL, OLCF) storage facilities. It will be made available to other researchers on request and to students and post-docs for further analysis and validation.

Data will not include any trade secrets or PIO

### Content and format

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A statement of plans for data and metadata content and format including, where applicable, a description of documentation plans, annotation of relevant software, and the rationale for the selection of appropriate standards. (Existing, accepted community standards should be used where possible. Where community standards are missing or inadequate, the DMP could propose alternate strategies that facilitate sharing, and should advise the sponsoring program of any need to develop or generalize standards.)

The data is stored in a number of formats, XML, hdf5, binary. In each case it has headers with annotations. NERSC, FNAL and OLCF are community accepted repositories.

### Sharing and preservation

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A description of the plans for data sharing and preservation.

To the extent possible, all data used in the figures and analysis will be included in the publication. Additional data will be made available on request and the publications will specify how to request

the data, starting with the date of publication and for three years after that. No resources other than Los Alamos network connectivity are required to access and transfer data.

## Protection

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**A statement of plans, where appropriate and necessary, to protect confidentiality, personal privacy, Personally Identifiable Information, and U.S. national, homeland, and economic security; recognize proprietary interests, business confidential information, and intellectual property rights; and avoid significant negative impact on innovation, and U.S. competitiveness.**

The data generated will not contain PIO or compromise U.S. national, homeland, and economic security. It will recognize proprietary interests, business confidential information, and intellectual property rights; avoid significant negative impact on innovation, and U.S. competitiveness; and otherwise be consistent with all applicable laws, regulations, and DOE orders and policies.

The data will not involve human or animal subjects.

## Rationale

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**A discussion of the rationale or justification for the proposed data management plan including, for example, the potential impact of the data within the immediate field and in other fields, and any broader societal impact.**

The data generated will help elucidate the interactions of elementary particles and interactions and help interpret experiments carried out at national and international facilities.

## Software & Codes

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**Both the Advanced Scientific Computing Research and Fusion Energy Sciences program areas address software and codes. Program specifics are listed below.**

A large fraction of the software and codes are already publically available. The rest are being developed and annotated. They will be archived and made available on request at the time of publication.

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