



# Institute for Research and Innovation in Software for High Energy Physics (IRIS-HEP) - Planning for 2022

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<http://iris-hep.org>



# Critical Items in 2022

COVID: obviously things can change, but we need to proactively plan for the possibility of a return to in-person (+ hybrid) events from spring onwards

REVIEW: the “42 month” review will likely take place in May 2022. From the PTC:

“The outcome of this 42-month review, which is 18 months prior to the end of the award, is an important milestone. Depending on the outcome of this review, NSF may either choose to implement a phase-down plan for the remaining duration of the award, or choose to allow the Software Institute to be renewed for an additional 5 years. A renewal will require the submission of a renewal proposal. This proposal will be appropriately reviewed and evaluated by NSF.”

TEAM: Our team is evolving. Several senior people are taking on new (and greater) roles and our junior people are progressing in their careers. We need to evaluate how we are organized given this evolution.

RENEWAL PROPOSAL: If NSF invites to submit a renewal (probably by circa January, 2023) we will have to work through the goals and institute evolution for a 2nd 5-year mandate for IRIS-HEP starting in summer 2022.

# Events

We need to plan for possible

“Owned” or “Co-Owned” events: PyHEP, Connecting the Dots, CoDaS-HEP & other Training events, ML4PS, etc.

“Partnership” events: HSF, smaller workshops like “Differentiable Programming”, an “Analysis Ecosystem” workshop, etc.

Community events: Snowmass, CHEP, etc.

Blueprint events: CUA-style planning event, other strategic community events relevant to our activities

# General Review Questions

1. Is the Institute enabling new science and broader impacts?
2. Is the Institute demonstrating success in addressing the issues it identified to motivate its formation?
3. Has the Institute responded to changes in the issues of concern from the community?
4. Is the Institute achieving a consensus among the software developers in the Institute's topic area?
5. Are the software products available in the Institute's topic area being integrated or made interoperable, including, but not limited to the products from NSF-supported teams working in its area?
6. Is the Institute achieving broad buy-in among the software user community in the Institute's topic area?
7. Has the Institute created and begun to implement a sustainability plan that is realistic and likely to be successful?
8. Is the Institute succeeding in terms of its success metrics?
9. Is the developed software applicable to domains beyond the domain specific to the Software Institute?

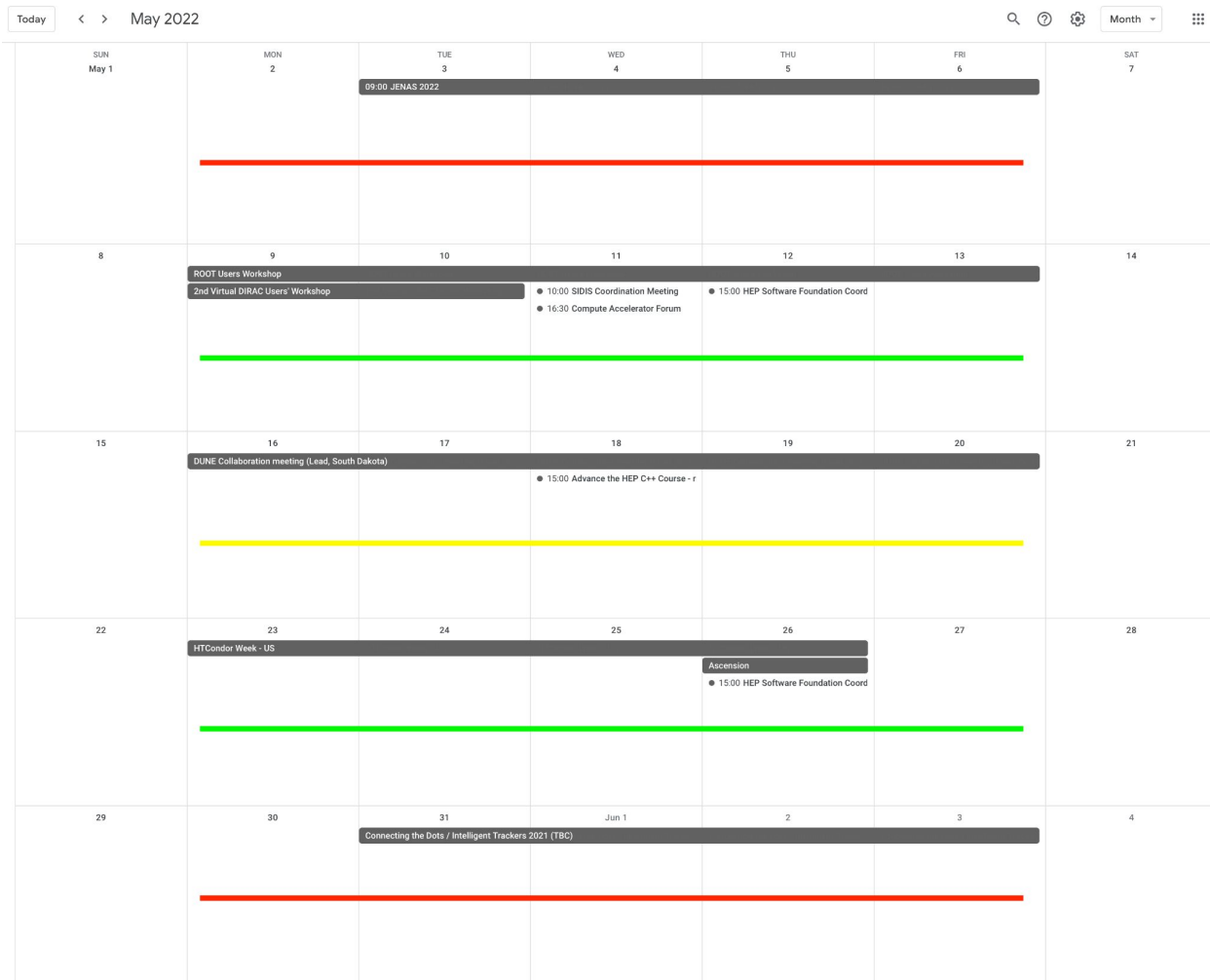
# Non-Explicit Questions

- Are we doing significantly and critically impactful things for the development of the HL-LHC computing and analysis models such that NSF can be confident that its investment via the MREFC will not result in unbounded operational costs and maximize the ROI physics-wise?
- Although the 42-month review should not review the eventual renewal proposal, we should nonetheless give them a general vision of how the first 5-year project has set the stage, and build something unique, which merits a proposal for a 2nd mandate. They should come away excited about the potential and see how the “Institute” whole is greater than the sum of the parts.
- The review panel is advisory and the NSF will decide whether a renewal proposal is warranted (including the eventual size/scope that programmatically could make sense). Our current co-funding indicates obvious questions:
  - Are we providing value for NSF PHY and MPS?
  - Are we providing wider value for NSF OAC?

# Review Dates and Structure

Unclear if this review will be in-person or virtual. In either case we probably talking about 1.5 days of activity. The structure we will propose to NSF is:

1. 5 page summary document
2. Website updates (project status, clearer lifecycle state, clearer partnerships, etc.)
3. Videos on O(6) topics
4. Live presentations approximately corresponding to review questions



# Videos

Inspired a bit by the AS video for the last review, we could do some similar things covering topics (motivation/goals, achievements, community status, IRIS-HEP impact):

Ideas for the review preparatory videos:

- Analysis Ecosystem and the Analysis Grand Challenge
- Training Grand Challenge
- Tracking at the HL-LHC
- Future Analysis Facilities
- Data Grand Challenge
- (OSG / production facilities / facilities R&D?)
- Impact beyond HEP

Plus some additional short (5 minute) “team spotlight” and short (10 minute) individual presentation videos....

# Working backwards from the review

- 1-15 Feb 2022 - Quarterly Report + Steering Board
- Feb 2022 (whole month) - area by area project mgmt review of projects
- 15 Feb - 15 March - website updates to capture the current state (and “lifecycle status”, partnerships, etc.) of all projects
- Week of 28 Mar - 1 Apr or 4-8 April - Advisory Panel meeting (virtual,  $\frac{3}{4}$  day)
- 15 April 2022 - final talk and video preparation begins (final versions available “2 weeks” before review)
- [Some video preparation may begin before that, essentially from 15 Feb onwards, to represent the larger project goals and successes as of Y4Q2.]
- Exact review dates as on the previous slide, to be confirmed/decided by NSF.



# IRIS-HEP Fellows (+ partnerships)

We are currently aiming for summer 2022 undergraduate Fellows and some formulation of a graduate Fellow program for 2022. I am also still working to understand some partnerships and the avenues for broadening participation.

But the time to get this ball rolling is now. Rob Tuck is working on updating the Fellows projects list (marking old projects as inactive) and there will be a call to add new example projects over the next week.

I'll post the timeline and steps for the Fellows selection this coming week for discussion at next week's EB.