

# Technical Report on the Belle II Summer Workshop and Explorer Workshop 2023

Generous DOE support enabled the organization of two interconnected event, the Belle II summer workshop as well as a preceding 1-day Explorer Workshop Event. Both are discussed in the following.

## 1 Belle II Summer Workshop

The 2023 Belle II Summer workshop took place July 24-28, 2024 at Duke University in Durham. The meeting webpage can be found at <https://indico.belle2.org/event/8841/>. The meeting had 58 registered participants with the overwhelming majority attending in person. The event at giving beginning graduate students and postdocs an overview over the Belle II physics program and detector as well as an in-depth exploration of the Belle II software. For the latter, several hands-on sessions were organized to introduce participants to the Belle II software as well as more specialized topics in statistics and Machine Learning. The workshop also featured an ML/AI competition. In addition to the DOE support, the workshop was also supported by the Duke Physics department. We were able to host almost all students that so wished in the Duke Dorms and provide a meal plan. The support enabled us to waive the registration fee for all participants and cover also part of the dorm costs. Furthermore, we covered travel costs for external speakers on ML/AI topics. Figures 1 and 2 show the group picture and a scene from the hands-on sessions, respectively.

## 2 Belle II Explorer Event

A 1-day “Explorer” Event was held on the Sunday before the workshop (July 23rd). The agenda for the event can be found at <https://indico.belle2.org/event/9672/> The event was aimed at faculty and students at institutions with a high fraction of underrepresented minorities (URMs). The purpose was to network, educate and promote HEP research in general and Belle II in particular. Before the workshop, we initiated an extensive outreach program, e.g. contacting a majority of the



Figure 1: Group Picture for the Belle II Summer Workshop



Figure 2: Hands-on-session at the Belle II Summer Workshop

URM serving institutions in North Carolina. We had 21 participants, including Belle II members, however, only 4 from outside Belle II, indicating the challenges we need to overcome to initiate a more robust effort to include more URM serving institutions. The event featured pedagogical talks by posdocs, a faculty roundtable on the development of student research experience, student panels and Q&A session on graduate school as well as a Belle II MasterClass session. We also had student research presentations, flash talks and posters. In general, the feedback we received from a survey we initiated among the participants was very positive and we are happy with the format we chose. Therefore we consider this pilot event a success. The support enabled us to provide food for catered lunch during the workshop as well as dinner. We were also able to support travel for non-Belle II participants.