

Welcome to the Summer 2023 SBN Analysis Workshop!

Steven Gardiner, Daniele Gibin, Georgia Karagiorgi, Joseph Zennamo
July 25, 2023

Thank you for joining!

Off to a great start! 65 participants registered as of yesterday!

A huge thank you to all for being here, and to all the workshop topic leads!

A huge thank you also to the SBND and ICARUS production teams!

And a huge thanks to Joseph for the donuts!

SBN Program Summer Analysis Workshop

Jul 24, 2023, 12:00 AM → Jul 29, 2023, 11:59 PM America/Chicago

Daniele Gibin (Università di Padova and INFN Sezione di Padova), Georgia Karagiorgi (Columbia University), Georgia Karagiorgi (Columbia University), Joseph Zennamo (Fermilab), Steven Gardiner

Registration: Event Registration [Register](#)

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TUESDAY, JULY 25

8:00 AM → 6:00 PM **Hornet's Nest**

- 9:00 AM** **Welcome!** ⌚ 10m [Register](#)
Speakers: Daniele Gibin (Università di Padova and INFN Sezione di Padova), Georgia Karagiorgi (Columbia University), Joseph Zennamo (Fermilab), Steven Gardiner (Fermilab)
- 9:10 AM** **Kickoff - Topic 1: 2D Simulation/Signal Processing** ⌚ 15m [Register](#)
Speaker: Michael Mooney (Colorado State University)
- 9:25 AM** **Kickoff - Topic 2: Sync. and Benchmarking of SBND/ICARUS Sim and Reco** ⌚ 15m [Register](#)
Speakers: Giuseppe Cerati (Fermilab), Steven Gardiner (Fermilab)
- 9:40 AM** **Kickoff - Topic 3: Detector and G4 Systematics** ⌚ 15m [Register](#)
Speakers: Andrew Mastbaum (Rutgers University), Ibrahim Safa (University of Wisconsin - Madison)
- 9:55 AM** **Kickoff - Topic 4: First Results Strategy** ⌚ 15m [Register](#)
Speakers: Elizabeth Worcester (BNL), Joseph Zennamo (Fermilab)

6:30 PM → 9:00 PM **Group Dinner** ⌚ 2h 30m [Register](#)

WEDNESDAY, JULY 26

8:00 AM → 6:00 PM **Hornet's Nest**

- 11:00 AM** **Topic 1 Check-in** ⌚ 1h [Register](#)
Speaker: Michael Mooney (Colorado State University)
- 11:00 AM** **Topic 2 Check-in** ⌚ 1h [Register](#)
Speaker: Steven Gardiner (Fermilab)

Logistics: Schedule

Slight change in schedule times, please be sure to check the indico page!

Today: Kickoff at **9am until 10:10am**

Tomorrow: Check-in at **11am-12noon**

Thursday: Check-in at **11:30am-12:30pm**

Friday: Closeout at **11:40am-1:20pm**

The rest of the time is all hands-on time!

<https://indico.fnal.gov/event/59757/>

Logistics: Topics and Leads/Contacts

Four broad topics:

1. Getting **2D drift simulation and deconvolution** integrated in both SBND and ICARUS and calibrated

Leads: Mike Mooney, Hanyu Wei

2. Understanding where **SBND and ICARUS simulation/reconstruction** diverge, **re-benchmarking** reconstruction performance, and working on **fixes/convergence**

Leads: Steven Gardiner, Giuseppe Cerati

3. Developing methods to assess **full systematics envelope**, with a primary focus on detector and Geant4 systematics

Leads: Ibrahim Safa, Andy Mastbaum

4. Informing our **2024 SBN results strategy**, e.g. POT needed, exclusive or multi-channel search, etc.

Leads: Joseph Zennamo, Elizabeth Worcester

Logistics: Samples, useful tips and resources

- Despite some (ongoing) issues, samples are pouring in as we speak, thanks hugely to the production teams!

See what samples are available for **SBND** here:

https://docs.google.com/presentation/d/1hT-ruXoXVv_8BhFAVKN1DWjQz_MzC52diDMK4hzaAzM/edit?usp=sharing

And for **ICARUS** here:

https://docs.google.com/presentation/d/1ygXAC1hRG0UULkjETDBW_mBJPVWt0dhmlhNHAIOqKZA/edit?usp=sharing

- A recent tutorial (including references to other ones) about CAFfile usage, from Bruce:
https://sbn-docdb.fnal.gov/cgi-bin/sso/RetrieveFile?docid=31355&filename=CAFAna_Tutorial.pdf&version=1

Logistics: Fun!

We are organizing a **group dinner** for this evening (~6:30pm), most likely at the Two Brothers Roundhouse.

Please sign up by 2pm today if you'd like to join:

<https://forms.gle/KtiJtQ4Goz3iaM6e7>

Justin Mueller and Jacob Zettlemeier are also organizing a Bowling outing on Thursday evening. More details/a poll will follow soon!