

## IF9 Workshops being planned for November/December

- Foundries and foundry access – Maurice
- Calibration & Test beams and irradiation facilities – Ian
- Facilities for unique environments – Jim
  - Low environmental noise
  - Cryogenic facilities (LAr to mK)
  - Low-background LOIs will be covered by Underground Facilities working group

# Microfabrication/Foundry Facilities “Workshop”

The image shows a screenshot of an IF calendar and a guest list. The calendar is for December 2021, showing Sunday, December 5th, and Monday, December 6th. The time slots range from GMT-08 to 5 PM. On Monday, December 6th, there are several events: MSL Site Access (10 AM - 11 AM), Xenon Lab Access (10 AM - 11 AM), Student Round Table (11 AM - 12 PM), Weekly chat (12:15 - 1 PM), Weekly chat, 1:30pm (1:30 PM - 2:00 PM), and IF Microfab/Foundry facilities disc (2 - 3pm). To the right of the calendar is a guest list for 20 guests, with 1 no. and 19 awaiting. The guest list includes: Maurice Garcia-Sciveres, Anthony Affolder, Artur Apresyan \*, Carini, Gabriella \*, Cecil, Thomas W. \*, Christopher Rogan \*, Dragone, Angelo \*, juan estrada \*, Farah Fahim \*, Ian Shipsey \*, Kent Irwin \*, James Fast \*, Katherine Dunne \*, mayly@iastate.edu \*, Mitch \*, Matt Pyle, John Parsons \*, Maruyama, Reina \*, Andrew Sonnenschein \*, and Steven Worm \*.

Today < > December 2021

SUN 5 MON 6

GMT-08

10 AM

11 AM

12 PM

1 PM

2 PM

3 PM

4 PM

5 PM

MSL Site Access

Xenon Lab Access

Student Round Table  
11am - 12pm

Weekly chat  
12:15 - 1pm

Weekly chat, 1:30pm

IF Microfab/Foundry facilities disc  
2 - 3pm

20 guests  
1 no, 19 awaiting

Chat with guests

- M Maurice Garcia-Sciveres
- Anthony Affolder
- A Artur Apresyan \*
- C Carini, Gabriella \*
- Y Cecil, Thomas W. \*
- C Christopher Rogan \*
- D Dragone, Angelo \*
- juan estrada \*
- F Farah Fahim \*
- I Ian Shipsey \*
- K Kent Irwin \*
- J James Fast \*
- K Katherine Dunne \*
- m mayly@iastate.edu \*
- M Mitch \*
- Matt Pyle
- J John Parsons \*
- M Maruyama, Reina \*
- A Andrew Sonnenschein \*
- S Steven Worm \*

On IF calendar,  
additionally with explicit guest list  
but all welcome to join

Not really a workshop yet, just  
a first meeting to see if we have/  
want one or more white papers  
on this topic

Will prepare a guided  
discussion

# **Snowmass Workshop on Calibration and Test Beams and Irradiation Facilities Needs and Capabilities**

Dates Tuesday Nov 30 & Wednesday Dec 1

Time 1200-1500 EDT each day

## Day 1

The needs of the Energy Frontier Caterina Vernieri & Maksym Titov (coordinators)

1 hour

The needs of the Neutrino Frontier Kate Scholberg (coordinator)

1 hour

The needs of the Rare and Precision Frontier Marina Artuso & Bob Bernstein  
(coordinators) 1 hour

## Day 2

Test Beams worldwide Henric Wilkens (CERN) 15'

Irradiation Facilities Worldwide Federico Ravotti (CERN) 15'

LoI 154 A 50 ton water Cherenkov test platform in a charged particle test beam

Mark Hartz (TRIUMF) (20')

LoI 277 New Test Beam Facility at Fermilab Evan Niner (FNAL) (20')

LoI 279 High intensity proton irradiation facility Petra Merkel (FNAL) (20')

LoI 278 Linac to End Station A (LESA) as an electron test beam Natalia Toro (20')

Test Beams at BNL Mark Palmer 15'

NSRL @ BNL Mike Sivertz 15'

Test Beams & Irradiation Facilities @LBNL Timon Heim 15'

# White Papers 1 - Facilities

Facilities - Foundries			
72	<a href="#">IF2_IF9-017.pdf</a>	christopher.leitz@ll.mit.edu	Large-format Germanium detectors
243	<a href="#">IF6_IF9_Kevin_Ryu-037.pdf</a>	kevin.ryu@ll.mit.edu	Superconducting detectors for high energy physics
280	<a href="#">IF9_IF0_Dan_Pulver-022.pdf</a>	MEL.Director@ll.mit.edu	Device processing
115	<a href="https://www.snowmass21.org/docs/files/summaries/IF/SNOWMA">https://www.snowmass21.org/docs/files/summaries/IF/SNOWMA</a> <a href="#">SS21-IF1_IF2-177.pdf</a>	cecil@anl.gov	Superconducting Detector Facility for HEP
Facilities - Calibration and Test Beam			
154	<a href="#">IF2_IF9-NF10_NF6_Mark_Hartz-151.pdf</a>	mhartz@triumf.ca	A 50 ton scale water Cherenkov test platform in a charged particle test beam
277	<a href="#">IF9_IF0-AF0_AF0_Evan_Niner-054.pdf</a>	edniner@fnal.gov	New test beam facility at Fermilab
278	<a href="#">IF9_IF0-AF0_AF0_Petra_Merkel-041.pdf</a>	petra@fnal.gov	High intensity proton irradiation facility
279	<a href="#">IF9_IF0-AF5_AF0_Natalia_Toro-045.pdf</a>	ntoro@slac.stanford.edu	Linac to End Station A (LESA) as an electron test beam
Facilities - Low Noise (Environmentally stable) and Low Temperature			
95	<a href="https://www.snowmass21.org/docs/files/summaries/IF/SNOWMA">https://www.snowmass21.org/docs/files/summaries/IF/SNOWMA</a> <a href="#">SS21-IF0_IF0_William_Terrano-087.pdf</a>	Terrano	Highly Environmentally-Stable Facilities
120	<a href="https://www.snowmass21.org/docs/files/summaries/IF/SNOWMA">https://www.snowmass21.org/docs/files/summaries/IF/SNOWMA</a> <a href="#">SS21-IF1_IF2-CF1_CF2_Hollister-155.pdf</a>	Hollister	Establishment of a National Millikelvin User Facility
273	<a href="#">IF8_IF9-042.pdf</a>	czhang@bnl.gov	Investigations of fundamental parameters of liquid argon for particle detection

# White Papers 2 - Orphan Topics

Coupling experiment and simulations			
<a href="#">16</a>	<a href="#">CF1_CF0-NF5_NF0-RF4_RF0-AF5_Af0-IF9_IF0-052.pdf</a>	shawest@princeton.edu	Neutron yield in ( $\alpha$ , n)-reactions in rare-event searches
<a href="#">124</a>	<a href="#">IF1_IF9-CF1_CF2-UF2_UF5-124.pdf</a>	dbowring@fnal.gov	Coupling experiment and simulation to model non-equilibrium quasiparticle dynamics in superconductors
Gravitation			
<a href="#">63</a>	<a href="#">CF7_CF6-IF1_IF9_adhikari-063.pdf</a>	rana@caltech.edu	LIGO Voyager A Gravitational-wave Probe of Cosmology and Dark Matter
Microwave and RF Technologies			
<a href="#">125</a>	<a href="#">IF1_IF9-CF2_CF0_Gianpaolo_Carosi-137.pdf</a>	qu2@llnl.gov	Topological microwave circulators for HEP applications
<a href="#">256</a>	<a href="#">IF7_IF9-CF2_CF4_Austin_Minnich-117.pdf</a>	aminnich@caltech.edu	Towards quantum-limited transistor microwave amplifiers