

LArFCS Cryogenic System Progress

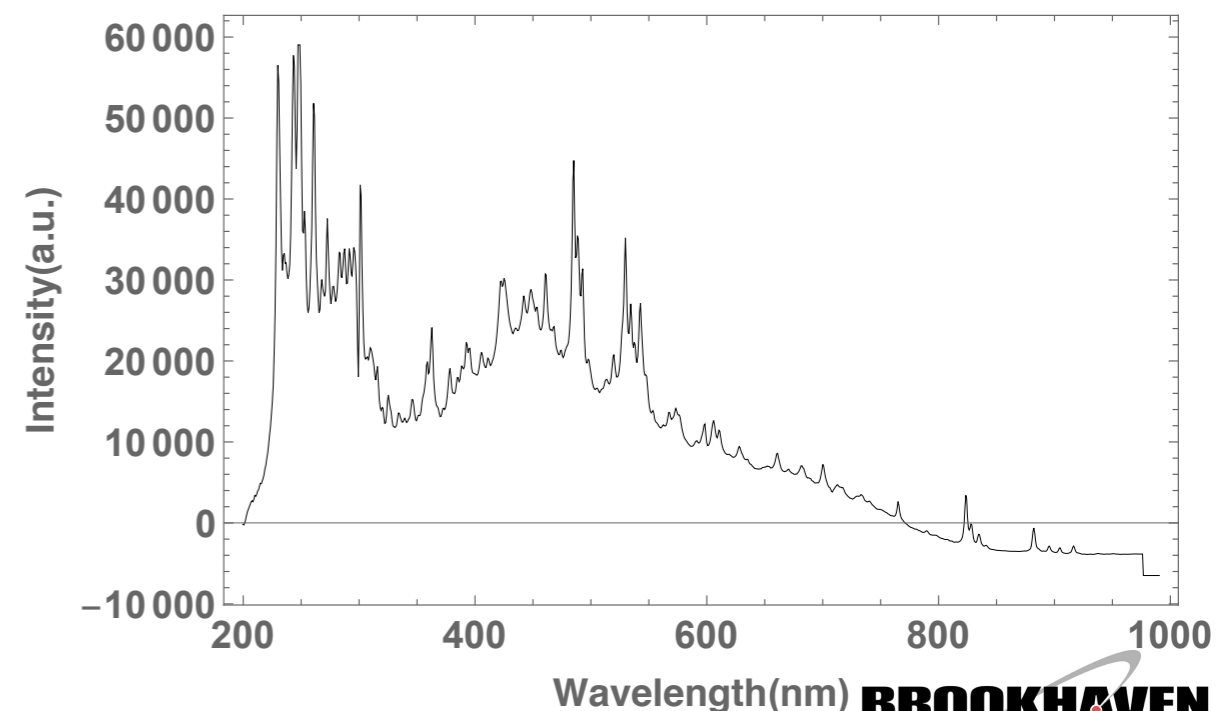
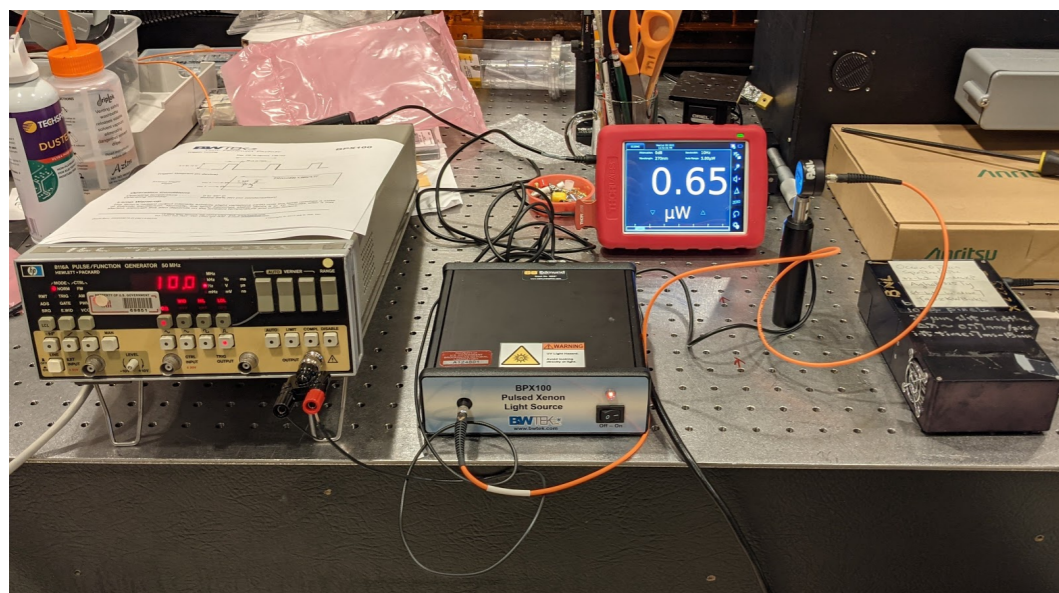
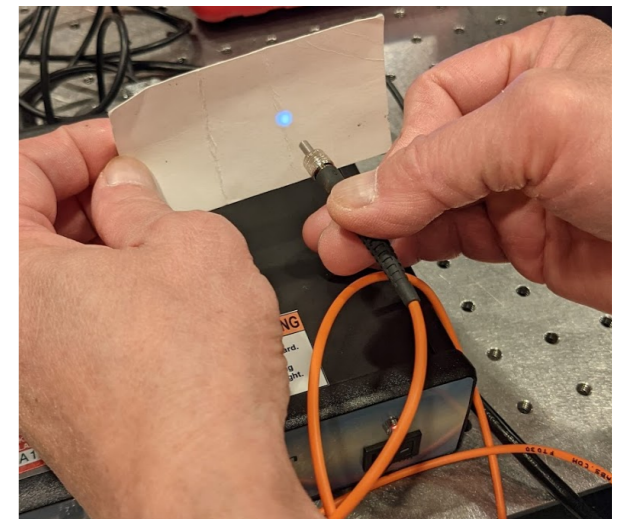
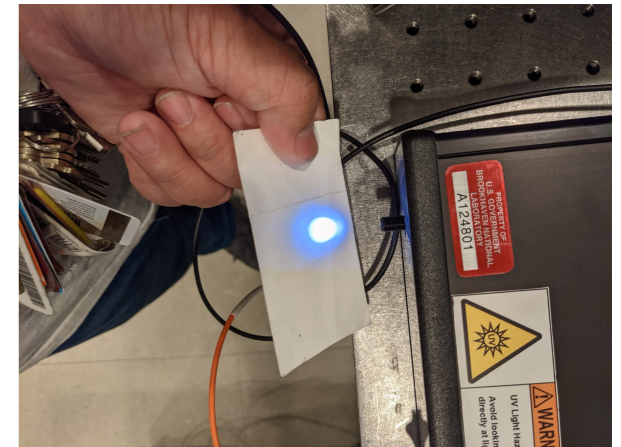
Yichen, Sergey

8/3/21

LArFCS Construction

► Xenon lamp initial test

- An initial test conducted at Instrumentation laser lab
- Xenon lamp external triggered by TTL from a pulser
- Power read by photodiode with 200um fiber
- Spectrum measured, agrees with vendor spec sheets
- Very intensive light spot at the output port, will measure later



LArFCS Construction

▸ **LArFCS purifier cleaning, Ultrasonic bath wash**

- **CMS response to the inquiry of disposal**
 - Citranox is allowed to be disposed to the drain as long as it can be neutralized to pH 6-9.
 - If the Citranox solution is not neutralized, can be processed as chemical waste, the pH needs to be measured to determine: pH<2 is hazardous waste; pH>2 is industrial waste
 - Simple Green is not allowed to be disposed to the drain, need to be disposed as an industrial waste
- **pH meter located at Mihfang's lab**
 - Achim is checking with CMS for procedures for neutralizing the solution
- **Cleaning procedure**
 - After consulted experts, cleaning only with Citranox solution should be sufficient
 - I will cleaning with Citranox solution only once Achim hear back from CMS

LArFCS Construction

▶ **6000-Gallon Commissioning**

- **Site survey PO received by Airgas**
 - Contacted Airgas manager at Islandia branch for schedule
 - Their cryo tech is occupied by a new tank project at NYU
 - It is expected to be done in 10 business days
 - A thorough survey is expected to ensure the tank ready for delivery
- **Painting Work Order**
 - Paints finally received on 07/27
 - Building manager Tom is scheduling for work expecting to start next week
 - The area will be cleared with barricades for the aerial lift and avoid contaminations
 - No access to the tank during painting.
 - Need to coordinate the time schedule with the site survey. Checked with Airgas, color doesn't matter to the survey

Summer student virtual tool

- ▶ **Univ. Houston summer student virtual tool scheduled for 08/18/21**
 - Chao organized the one day event for introduction to LArTPC neutrino experiments
 - Schedule <https://indico.bnl.gov/event/12592/#day-2021-08-18>
 - I'm giving an introduction on the LArTPC and virtual tool to our lab first
 - Slides drafted, available on BNLIF docdb #332

WEDNESDAY, 18 AUGUST		
10:00 AM	→ 10:20 AM	Introduction to BNL neutrino program Speaker: Mary Bishai (Brookhaven National Laboratory)
10:20 AM	→ 10:40 AM	Introduction to liquid argon time projection chamber (LArTPC) Speaker: Yichen Li (Physics Department)
10:40 AM	→ 11:00 AM	Tour of BNL LAr test stand Speaker: Yichen Li (Physics Department)
11:00 AM	→ 11:20 AM	Tour of SBND at FNAL Speaker: Diana Patricia Mendez Mendez (Brookhaven National Laboratory)
11:20 AM	→ 11:40 AM	Tour of ICARUS at FNAL Speaker: Andrea Scarpelli (Brookhaven National Laboratory)
11:40 AM	→ 12:00 PM	Q&A and Homework