



## IF08: Noble Elements

Monthly Group Meeting (27 July 2020)

Eric Dahl (cdahl@northwestern.edu)

Roxanne Guenette (guenette@fas.harvard.edu)

Jen Raaf (jlraaf@fnal.gov)

# Noble Element Instrumentation

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## Science

- ➔ Neutrino oscillation and interactions
- ➔ Neutrinoless double beta decay searches
- ➔ Dark Matter searches
- ➔ Collider physics
- ➔ ...

## Calibration

- ➔ Microphysics
- ➔ External calibration systems
- ➔ ...

## Technology

- ➔ Liquid Argon
- ➔ Gaseous Argon
- ➔ Liquid/Gaseous/Solid Xenon
- ➔ Single-phase/Dual phase TPCs
- ➔ Liquid Helium
- ➔ Other use of noble element (scintillating bubble chambers)
- ➔ Calorimeters
- ➔ ...

## Facilities

- ➔ Extraction and Storage of noble element
- ➔ ...

# Noble Element Instrumentation

## Science

- Neutrino oscillation and interactions
- Neutrinoless double beta decay searches
- Dark Matter searches
- Collider physics
- ...

## Technology

- Liquid Argon
  - Gaseous Argon
  - Liquid/Ge
  - ...
- use of noble element (scintillating bubble chambers)
- Calorimeters
  - ...

**Overlap with many science groups and with some other topical groups (e.g. instrumentation, computing...)**

## Cal

- Microphy
- External calibration systems
- ...

## Facilities

- Extraction and Storage of noble element
- ...

# How to join us!

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- Email list: SNOWMASS-IF-08-NOBLE-ELEMENTS
- Slack Channel: #if08-noble\_elements
- Website: [https://snowmass21.org/instrumentation/noble\\_elements](https://snowmass21.org/instrumentation/noble_elements)
- Plans for the group in near future:
  - ➔ Build on top of the Instrumentation BRN effort
  - ➔ Continue to solicit LOIs from the community (**deadline 31 August 2020**)
  - ➔ SNOWMASS Planning meeting (**5-9 October 2020**)

**Monthly Meetings (report from proposed LOIs)**  
**Last Monday of each months @ 3PM CDT**  
**Next: 31 August, 28 September**