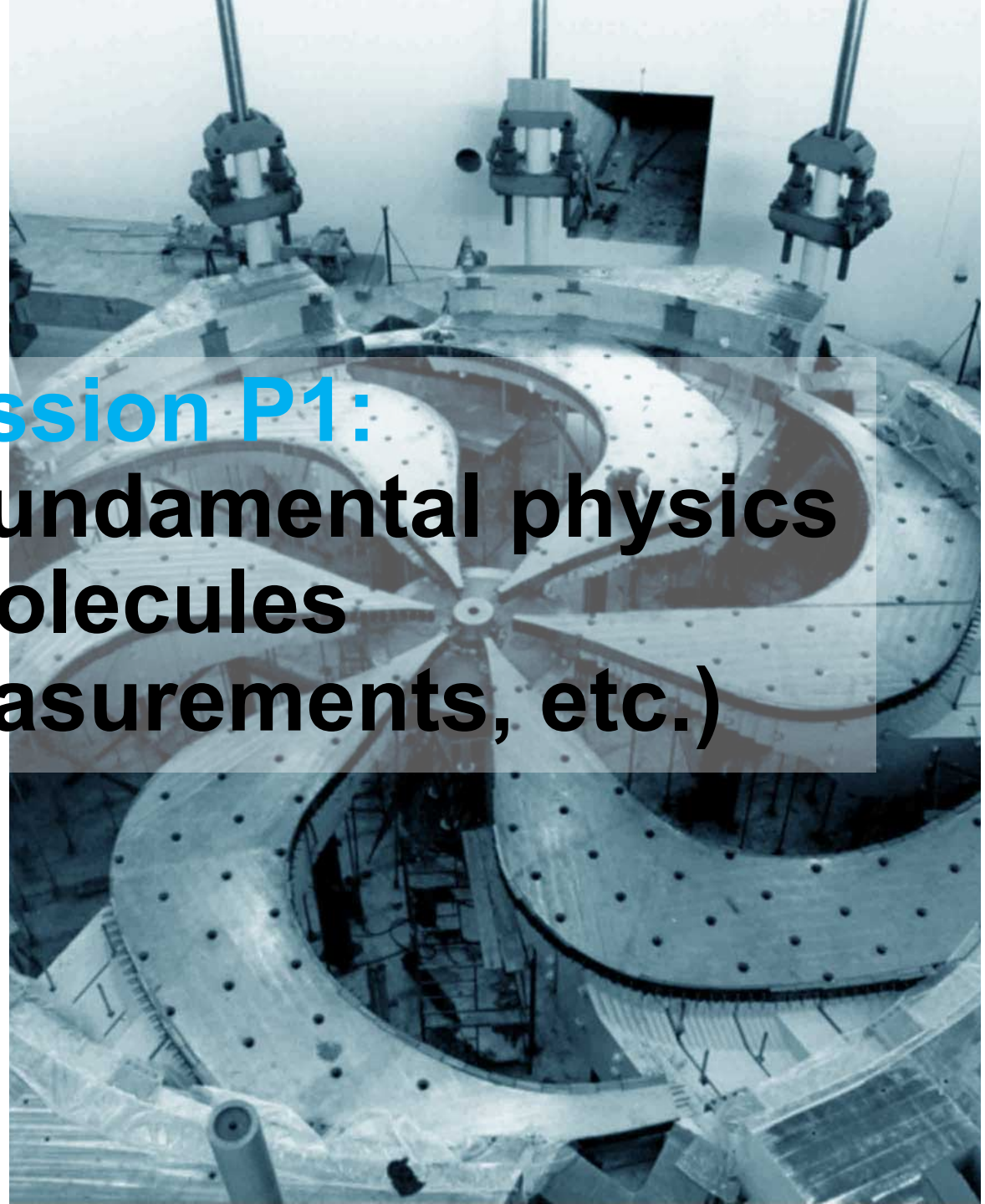
Draft

Summary parallel session P1:
New ideas to probe fundamental physics with nucleons and molecules (EDMs, precision measurements, etc.)



Beatrice Franke, Adam Ritz

DND2020 workshop

2020-11-04

What is asked?

- There will be recordings of the parallel talks available so don't feel too obligated to simply repeat what the speakers said during their sessions.
- We'd like to ask you to be as forward-looking as possible.
- We would like to schedule the next DND to follow up on this meeting as productively as possible.

What ideas could (or could not) be turned into actual experiments at TRIUMF/CENPA?
What homework do we need to do to figure this out?
Should we form a working group to answer such questions?
Who are key people to target for this working group?

Abstracts electron and atomic EDMs

- Text
- Text
- Text

Abstract Albert Young

Extending the reach of fundamental symmetries research with beta decay and measurements with polarized ultracold neutrons

The current thrust of fundamental symmetries experiments with neutron and nuclear systems is complementary to ongoing particle physics searches for Beyond Standard Model physics at the LHC and in deep underground experiments. In a number of important cases such as constraints on BSM couplings with vector and axial vector couplings, low energy beta decay experiments, together with measurements of muon, pions and kaon decay, provide our strongest constraints on new physics. Measurements with slow neutrons also provide us with our strongest constraints in new physics for short-ranged forces over a broad range of energy scales, and provide unique probes for baryon number violating processes in the dark sector. This talk presents aspects of our current research on measurements of angular correlations in 19Ne and neutron decay, and ideas which may lead to new limits and better understanding of short-ranged forces with ultracold neutrons.

Abstract Chen-Yu Liu

Probing for BSM physics through Precision Measurements of the Neutron Lifetime and the Neutron Electric Dipole Moment

I agree to discuss the neutron lifetime experiments, both the bottle and the beam methods. I will also cover the two nEDM efforts ongoing in US.

Comments on IU cyclotron…

TRIUMF

Summary

- Text
- Text
- Text

TRIUMF

Thank you
Merci

www.triumf.ca

Follow us **@TRIUMFLab**

Discovery, accelerated