Quantum Optomechanical Architectures for Dark Matter Detection

Report of Contributions

https://indico.fnal.gov/e/21499

Contribution ID: **0** Type: **not specified**

Welcome and intro remarks (Dan Carney)

Monday, 28 October 2019 09:00 (15 minutes)

Contribution ID: **1** Type: **not specified**

Welcome remarks

Contribution ID: **2** Type: **not specified**

Review of dark matter model space: parameter regimes, signal types (Gordan Krnjaic)

Monday, 28 October 2019 09:15 (30 minutes)

Contribution ID: **3** Type: **not specified**

Review on quantum sensing with mechanical systems (Cindy Regal)

Monday, 28 October 2019 09:45 (30 minutes)

Contribution ID: **4** Type: **not specified**

Overview of detector array & gravitational detection concept (Jake Taylor)

Monday, 28 October 2019 11:00 (1 hour)

Contribution ID: **5** Type: **not specified**

Lessons from liquid noble detectors (Rafael Lang)

Monday, 28 October 2019 14:00 (30 minutes)

Contribution ID: **6** Type: **not specified**

Lessons from axion searches (Nicole Crisosto)

Monday, 28 October 2019 14:30 (30 minutes)

Contribution ID: **7** Type: **not specified**

Considerations with specific architectures: levitated devices (Andy Geraci)

Monday, 28 October 2019 16:00 (30 minutes)

Contribution ID: **8** Type: **not specified**

Considerations with specific architectures: suspended pendulums (Nobuyuki Matsumoto)

Monday, 28 October 2019 16:30 (30 minutes)

Contribution ID: **9** Type: **not specified**

Some non-gravitational DM targets with optomechanics (Dan Carney)

Tuesday, 29 October 2019 09:30 (30 minutes)

Contribution ID: **10** Type: **not specified**

Detection proposals outside of mechanical sensing (Tongyan Lin)

Tuesday, 29 October 2019 09:00 (30 minutes)

Contribution ID: **11** Type: **not specified**

Lessons from previous sensing experiments: LIGO (Thomas Corbitt)

Tuesday, 29 October 2019 11:00 (30 minutes)

Contribution ID: **12** Type: **not specified**

Lessons from previous sensing experiments: HAYSTAC (Ben Brubaker)

Tuesday, 29 October 2019 11:30 (30 minutes)

Contribution ID: **13** Type: **not specified**

Backaction evasion measurements (Jon Cripe)

Tuesday, 29 October 2019 13:30 (30 minutes)

Contribution ID: **14** Type: **not specified**

Superfluid optomechanics (Jack Harris)

Tuesday, 29 October 2019 14:00 (30 minutes)

Contribution ID: **15** Type: **not specified**

Wrap-up discussion: roadmap to large scale experiment

Tuesday, 29 October 2019 14:30 (30 minutes)