

DRD5 Collaboration meeting

Report of Contributions

Contribution ID: 1

Type: **not specified**

Contribution 1: "searching for new physics with exotic atoms and cryogenic detectors"

Thursday, 30 October 2025 14:20 (20 minutes)

Say if there is room, I was thinking of giving an online presentation at the DRD5 collaboration meeting: "searching for new physics with exotic atoms and cryogenic detectors".

I will cover our recent work: arXiv:2502.03537 which was just accepted at PRL

Presenters: OHAYON, Ben (Technion IIT); OHAYON, Ben (Racah Institute of Physics)

Session Classification: WP-1

Contribution ID: 2

Type: **not specified**

Welcome & update on DRD5 issues

Presenter: DOSER, Michael (Massachusetts Inst. of Technology (US))

Session Classification: WP-2

Contribution ID: **3**

Type: **not specified**

WP-3: overview

Thursday, 30 October 2025 11:20 (20 minutes)

Presenters: GIACHERO, Andrea; Dr GASTALDO, Loredana (Kirchhoff Institute for Physics, Heidelberg University)

Session Classification: WP-3

Contribution ID: 4

Type: **not specified**

Contribution 1: Primer: TES, MMC, limitations

Thursday, 30 October 2025 12:20 (25 minutes)

Presenter: Prof. KEMPF, Sebastian

Session Classification: WP-3

Contribution ID: 5

Type: **not specified**

Contribution 2: Beam tests results with SNSPD's

Thursday, 30 October 2025 11:40 (20 minutes)

Presenters: BORNHEIM, Adi (California Institute of Technology (US)); KORZH, Boris Alexander (Universite de Geneve (CH))

Session Classification: WP-3

Contribution ID: 6

Type: **not specified**

Contribution 3: TES development at IHEP

Thursday, 30 October 2025 12:00 (20 minutes)

Presenter: YAN, Daikang (IHEP, China)

Session Classification: WP-3

Contribution ID: 7

Type: **not specified**

Contribution 4

Thursday, 30 October 2025 12:45 (15 minutes)

Session Classification: WP-3

Contribution ID: 8

Type: **not specified**

WP-2: quick introduction

Thursday, 30 October 2025 09:10 (5 minutes)

Presenters: CARICATO, Anna Paola; DUJARDIN, Christophe

Session Classification: WP-2

Contribution ID: 9

Type: **not specified**

Contribution 1: Primer: QD's (colloidal, solid state, ...)

Thursday, 30 October 2025 09:35 (20 minutes)

Presenter: TURTOS, Rosana

Session Classification: WP-2

Contribution ID: **10**

Type: **not specified**

Contribution 2: Beam test results with QD's

Thursday, 30 October 2025 09:55 (20 minutes)

Presenter: LYON, Anne-Mazarine (CERN)

Session Classification: WP-2

Contribution ID: 11

Type: **not specified**

Contribution 3: QD's in calorimetry and beyond

Thursday, 30 October 2025 10:15 (20 minutes)

Presenter: HADDAD, Yacine (Universitaet Bern (CH))

Session Classification: WP-2

Contribution ID: 12

Type: **not specified**

Contribution 4: Characterization of stability and radiation hardness of quantum dots

Thursday, 30 October 2025 10:35 (20 minutes)

Presenters: CHATTERJEE, Rajdeep Mohan (Tata Institute of Fundamental Research (IN)); CHOUDHURY, Tribikram (Institute of Engineering and Management (IN))

Session Classification: WP-2

Contribution ID: 13

Type: **not specified**

WP-1: overview

Thursday, 30 October 2025 14:00 (20 minutes)

Presenters: HUME, David (NIST); FUCHS, Elina

Session Classification: WP-1

Contribution ID: 14

Type: **not specified**

Contribution 2: Primer on atomic interferometers

Thursday, 30 October 2025 14:40 (20 minutes)

Presenter: Dr BAYNHAM, Charles

Session Classification: WP-1

Contribution ID: 15

Type: **not specified**

Contribution 3: Primer on timing / frequency networks

Thursday, 30 October 2025 15:00 (20 minutes)

Presenter: PIZZOCARO, Marco

Session Classification: WP-1

Contribution ID: **16**

Type: **not specified**

Contribution 4

Thursday, 30 October 2025 15:20 (20 minutes)

Session Classification: WP-1

Contribution ID: 17

Type: **not specified**

WP-4: Overview

Friday, 31 October 2025 09:00 (20 minutes)

Presenter: QVARFORT, Sofia

Session Classification: WP-4

Contribution ID: 18

Type: **not specified**

Contribution 1: Quantum sensing with motional states of trapped ions

Friday, 31 October 2025 09:20 (20 minutes)

Presenter: ARANEDA, Gabriel

Session Classification: WP-4

Contribution ID: **19**

Type: **not specified**

WP-5: Overview

Friday, 31 October 2025 11:00 (20 minutes)

Presenters: MARINO, Alberto (Oak Ridge National Laboratory); Dr STADNIK, Yevgeny (The University of Sydney); STADNIK, Yevgeny (The University of Sydney)

Session Classification: WP-5 (and WP-4)

Contribution ID: 20

Type: **not specified**

Contribution 2: Optimising magnetic resonance force microscopes for dark matter detection

Friday, 31 October 2025 11:50 (20 minutes)

Hani Zaheer

Presenter: ZAHEER, Hani

Session Classification: WP-5 (and WP-4)

Contribution ID: 21

Type: **not specified**

Contribution 1: Primer: optomechanical systems

Friday, 31 October 2025 11:20 (30 minutes)

Presenter: GERACI, Andrew

Session Classification: WP-5 (and WP-4)

Contribution ID: 22

Type: **not specified**

WP-6: Overview

Friday, 31 October 2025 14:10 (20 minutes)

Presenters: KORNAKOV, Georgy (Warsaw University of Technology (PL)); CHATTERJEE, Rajdeep Mohan (Tata Institute of Fundamental Research (IN))

Session Classification: WP-6

Contribution ID: 23

Type: **not specified**

Contribution 1: summary of 1st infrastructure workshop (cryogenic beam test)

Friday, 31 October 2025 14:30 (20 minutes)

Presenter: PIERINI, Maurizio (CERN)

Session Classification: WP-6

Contribution ID: 24

Type: **not specified**

Contribution 2: COST action as an example for funds for networking

Friday, 31 October 2025 14:50 (20 minutes)

Presenter: KORNAKOV, Georgy (Warsaw University of Technology (PL))

Session Classification: WP-6

Contribution ID: 25

Type: **not specified**

Contribution 3: Facilities overview

Friday, 31 October 2025 15:10 (20 minutes)

Presenter: DOSER, Michael (Massachusetts Inst. of Technology (US))

Session Classification: WP-6

Contribution ID: 26

Type: **not specified**

Contribution 4: DRD5 dissemination, education, schools

Friday, 31 October 2025 15:30 (20 minutes)

Presenter: KORNAKOV, Georgy (Warsaw University of Technology (PL))

Session Classification: WP-6

Contribution ID: 27

Type: **not specified**

Contribution 2: Spins as detectors

Friday, 31 October 2025 09:40 (20 minutes)

Presenter: BLOCH, Itay

Session Classification: WP-4

Contribution ID: 28

Type: **not specified**

Defects for DM detection

Presenter: Dr GKOU GKOUSIS, Vagelis (University of Zurich)

Session Classification: WP-4

Contribution ID: 29

Type: **not specified**

Contribution 3: Defect-based method for dark matter detection in silicon

Friday, 31 October 2025 10:00 (25 minutes)

Presenters: GKOU GKOUSIS, Evangelos Leonidas; Dr GKOU GKOUSIS, Vagelis (University of Zurich)

Session Classification: WP-4

Contribution ID: **30**

Type: **not specified**

Welcome & update on DRD5 issues

Thursday, 30 October 2025 09:00 (10 minutes)

Presenter: DOSER, Michael (Massachusetts Inst. of Technology (US))

Contribution ID: **38**

Type: **not specified**

Unicorn project: development of nanocomposites

Thursday, 30 October 2025 09:15 (20 minutes)

Presenter: BROVELLI, Sergio

Session Classification: WP-2

Contribution ID: 39

Type: **not specified**

Contribution 3: At the edge of perception: a new world visible through quantum sensing

Friday, 31 October 2025 12:10 (20 minutes)

Chelsea Bartram

Presenters: BARTRAM, Chelsea (Boston University); BARTRAM, Chelsea; BARTRAM, Chelsea; BARTRAM, Chelsea (SLAC); BARTRAM, Chelsea (UNC Chapel Hill)

Session Classification: WP-5 (and WP-4)

Contribution ID: 40

Type: **not specified**

Contribution 4: Tweezer arrays of nanoparticles for nuclear and particle physics

Friday, 31 October 2025 12:30 (20 minutes)

Presenters: MOORE, David (Stanford University); MOORE, David (Yale University)

Session Classification: WP-5 (and WP-4)

Contribution ID: 41

Type: **not specified**

Contribution 5: Quantum Enhanced Impulse Measurements with Mechanical Sensors in the Search for Dark Matter

Friday, 31 October 2025 12:50 (20 minutes)

Sohitri Ghosh

Presenter: GHOSH, Sohitri

Session Classification: WP-5 (and WP-4)