

DMRadio-50L Mid Systems Review

Report of Contributions

Contribution ID: 1

Type: **not specified**

Overview and Charge Questions

Monday, 26 June 2023 08:30 (10 minutes)

Presenter: Dr LI, Dale (SLAC)

Session Classification: Overview

Contribution ID: 2

Type: **not specified**

System Components, Interfaces, and Nomenclature

Monday, 26 June 2023 08:40 (20 minutes)

Presenter: Dr SIMANOVSKAIA, Maria (SLAC)

Session Classification: Overview

Contribution ID: 4

Type: **not specified**

Cryogenics Overview

Monday, 26 June 2023 09:00 (20 minutes)

50L cryogenics consists of three parts: A horizontal dilution refrigerator (Snoopy), a large volume 4K cryostat (Woodstock), and a thermal bridge between the two (Cold Snout). Cryogenic performance needs, to-do list, and a timeline will be shown. Discussion of risks and challenges.

Presenter: Dr SIMANOVSKAIA, Maria (SLAC)

Session Classification: Component Session

Contribution ID: 5

Type: **not specified**

Cold Snout

Monday, 26 June 2023 09:20 (15 minutes)

Updates on design and testing plans for the cold snout.

Presenter: KELLER, Aya (UC Berkeley)

Session Classification: Component Session

Contribution ID: 6

Type: **not specified**

Cryogenics Discussion

Monday, 26 June 2023 09:35 (10 minutes)

Presenters: KELLER, Aya (UC Berkeley); SIMANOVSKAIA, Maria (SLAC)

Session Classification: Component Session

Contribution ID: 7

Type: **not specified**

Magnet Overview

Monday, 26 June 2023 09:45 (20 minutes)

50L will employ a toroidal magnet with peak field of 1 Tesla commercially sourced by SSI. Overview of the components, timeline, and identified risks to be discussed.

Design decisions, risks, and details of current status of magnet procurement.

Presenter: Dr BARTRAM, Chelsea (SLAC)

Session Classification: Component Session

Contribution ID: 9

Type: **not specified**

Magnet Discussion

Monday, 26 June 2023 10:35 (10 minutes)

Presenters: Dr BARTRAM, Chelsea (SLAC); Dr OUELLET, Jonathan

Session Classification: Component Session

Contribution ID: **10**

Type: **not specified**

Resonator Overview

Monday, 26 June 2023 11:00 (5 minutes)

Resonator components, goals, timetable, risks, and outlook.

Presenter: Prof. CHAUDHURI, Saptarshi (Princeton)

Session Classification: Component Session

Contribution ID: **11**

Type: **not specified**

Inductor Wiring and Resonator Testing

Monday, 26 June 2023 11:05 (20 minutes)

Testing apparatus at Princeton and inductor wiring setup.

Presenter: KOLEVATOV, Roman (Princeton)

Session Classification: Component Session

Contribution ID: 12

Type: **not specified**

Tunable Capacitor

Monday, 26 June 2023 11:25 (20 minutes)

Overview and steps to design a tunable capacitor for the desired frequency range of 5kHz to 5MHz. Strategies for testing will be discussed.

Presenters: Dr LEDER, Alex Sebastian (UC Berkeley); DONES, Andrei (UC Berkeley); GOULART, Dillon (UC Berkeley); CASTAÑO, Pablo (UC Berkeley)

Session Classification: Component Session

Contribution ID: 13

Type: **not specified**

Resonator Discussion

Monday, 26 June 2023 11:55 (5 minutes)

Session Classification: Component Session

Contribution ID: 14

Type: **not specified**

Tension Straps

Monday, 26 June 2023 10:05 (15 minutes)

Kevlar and aluminum strap mechanism for holding the two halves of the toroidal magnet in place during assembly and cool down.

Presenter: FRY, Jessica (MIT)

Session Classification: Component Session

Contribution ID: 15

Type: **not specified**

Magnet Cradle

Monday, 26 June 2023 10:20 (15 minutes)

Discussion of magnet cradle design and thermal modeling.

Presenters: DROSTER, Alex (UC Berkeley); Dr ECHEVERS, Johnny (UC Berkeley)

Session Classification: Component Session

Contribution ID: **16**

Type: **not specified**

Calibration Overview

Monday, 26 June 2023 13:35 (5 minutes)

DMRadio-50L calibration strategy, methods, and techniques.

Presenter: Dr SALEMI, Chiara (SLAC)

Session Classification: Component Session

Contribution ID: 17

Type: **not specified**

Sideband Injection

Monday, 26 June 2023 13:40 (10 minutes)

Presenter: FRY, Jessica (MIT)

Session Classification: Component Session

Contribution ID: **18**

Type: **not specified**

Resonator Testing

Monday, 26 June 2023 13:50 (15 minutes)

Tunable transformer and high-Q resonator testing in dilution refrigerator.

Presenter: SINGH, Joe (Stanford)

Session Classification: Component Session

Contribution ID: **19**

Type: **not specified**

Timeline and Risks

Monday, 26 June 2023 14:05 (5 minutes)

Presenter: SALEMI, Chiara (SLAC)

Session Classification: Component Session

Contribution ID: 20

Type: **not specified**

Calibration Discussion

Monday, 26 June 2023 14:10 (10 minutes)

Session Classification: Component Session

Contribution ID: 21

Type: **not specified**

Sheath, Gasket, and Wings

Monday, 26 June 2023 13:00 (30 minutes)

Presenters: ALSHIRAWI, Abdulla (Stanford); RAPIDIS, Nicholas (Stanford)

Session Classification: Component Session

Contribution ID: 22

Type: **not specified**

Sheath Discussion

Monday, 26 June 2023 13:30 (5 minutes)

Session Classification: Component Session

Contribution ID: 23

Type: **not specified**

DAQ Overview and Planning

Monday, 26 June 2023 14:40 (15 minutes)

Presenter: PAPPAS, Kaliroë (MIT)

Session Classification: Component Session

Contribution ID: 24

Type: **not specified**

DAQ Discussion

Monday, 26 June 2023 14:55 (5 minutes)

Session Classification: Component Session

Contribution ID: 25

Type: **not specified**

DAQ Overview

Monday, 26 June 2023 14:35 (5 minutes)

Presenter: Dr BARTRAM, Chelsea (SLAC)

Session Classification: Component Session

Contribution ID: 26

Type: **not specified**

Tunable Transformer

Monday, 26 June 2023 11:45 (10 minutes)

Presenter: SINGH, Joe (Stanford)

Session Classification: Component Session

Contribution ID: 27

Type: **not specified**

Commissioning Plan

Monday, 26 June 2023 15:00 (15 minutes)

Presenter: Dr LI, Dale (SLAC)

Session Classification: Overview

Contribution ID: **28**

Type: **not specified**

Summary and Close Out

Monday, 26 June 2023 15:15 (15 minutes)

Presenter: Dr LI, Dale (SLAC)

Session Classification: Overview