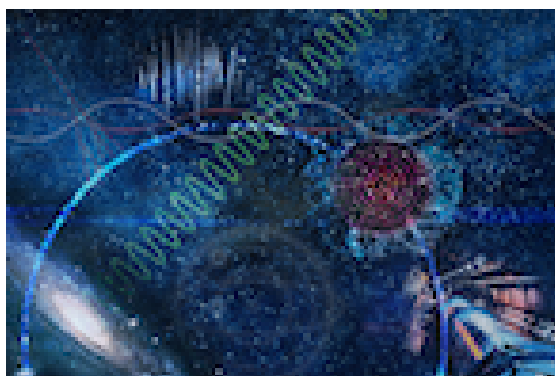


MU days 2022



Report of Contributions

Contribution ID: 1

Type: **not specified**

Social event: Construction site tours

Thursday, 20 October 2022 13:30 (3h 30m)

Contribution ID: 2

Type: **not specified**

FPF

Thursday, 20 October 2022 11:00 (25 minutes)

Presenter: PANI, Priscilla (DESY)

Session Classification: Overview: Topic Highlights

Contribution ID: 3

Type: **not specified**

CML

Friday, 21 October 2022 10:05 (25 minutes)

Presenter: BLOCK, Michael (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Overview: LK II

Contribution ID: 4

Type: **not specified**

MRU

Thursday, 20 October 2022 11:25 (25 minutes)

Presenter: VALERIUS, Kathrin (KIT)

Session Classification: Overview: Topic Highlights

Contribution ID: 5

Type: **not specified**

Short overview of GSI

Thursday, 20 October 2022 11:50 (15 minutes)

Presenter: GIUBELLINO, Paolo (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Overview: Topic Highlights

Contribution ID: 6

Type: **not specified**

GridKA

Friday, 21 October 2022 09:45 (20 minutes)

Presenter: SCHNEPF, Matthias

Session Classification: Overview: LK II

Contribution ID: 7

Type: **not specified**

GSI LKII

Thursday, 20 October 2022 12:05 (20 minutes)

Presenter: LEIFELS, Yvonne (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Overview: Topic Highlights

Contribution ID: 8

Type: **not specified**

Higgs factory

Friday, 21 October 2022 15:15 (30 minutes)

Presenter: BLEKMAN , Freya (DESY)

Session Classification: Topical Talk on future initiatives

Contribution ID: 9

Type: **not specified**

Einstein Telescope

Presenter: HEURS, Michèle (Institute for Gravitational Physics Leibniz Universität Hannover)

Session Classification: Topical Talk on future initiatives

Contribution ID: **10**

Type: **not specified**

IceCube-Gen2

Friday, 21 October 2022 15:45 (30 minutes)

Presenter: BLOT, Summer (DESY)

Session Classification: Topical Talk on future initiatives

Contribution ID: 11

Type: **not specified**

(CML) Kilonova emission from realistic neutron star merger simulations

Friday, 21 October 2022 11:00 (7 minutes)

Presenter: COLLINS, Christine (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Flashtalks: Session 1

Contribution ID: 12

Type: **not specified**

(FPF) New constraints on extended Higgs sectors from the trilinear Higgs coupling

Friday, 21 October 2022 11:07 (7 minutes)

Presenter: BRAATHEN, Johannes

Session Classification: Flashtalks: Session 1

Contribution ID: 13

Type: **not specified**

(MRU) The "muon puzzle" seen from the perspective of IceCube

Friday, 21 October 2022 11:14 (7 minutes)

Presenter: SOLDIN, Dennis (KIT)

Session Classification: Flashtalks: Session 1

Contribution ID: 14

Type: **not specified**

(CML) Recent results from Borexino: measurement of CNO solar neutrinos and directionality of sub-MeV solar neutrinos

Friday, 21 October 2022 11:21 (7 minutes)

Presenter: SINGHAL, Apksha (FZ Jülich)

Session Classification: Flashtalks: Session 1

Contribution ID: 15

Type: **not specified**

(FPF) Electroweak Baryogenesis in extended Higgs sectors

Friday, 21 October 2022 11:28 (7 minutes)

Presenter: BIERMANN, Lisa

Session Classification: Flashtalks: Session 1

Contribution ID: 16

Type: **not specified**

(MRU) The ULTRASAT UV camera: design and first characterization results

Friday, 21 October 2022 11:49 (7 minutes)

Presenter: ZAPPON, Francesco

Session Classification: Flashtalks: Session 1

Contribution ID: 17

Type: **not specified**

(CML, zoom) Hyperon reconstruction in PANDA

Friday, 21 October 2022 11:42 (7 minutes)

Presenter: ALICKE, Anna (Forschungszentrum Jülich(FZJ))

Session Classification: Flashtalks: Session 1

Contribution ID: 18

Type: **not specified**

(GSI LKII, zoom) High statistics PET images of radioactive carbon beams for tumor therapy

Friday, 21 October 2022 11:56 (7 minutes)

Presenter: KOSTYLEVA, Daria (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Flashtalks: Session 1

Contribution ID: 19

Type: **not specified**

(FPF) A detailed map of Higgs boson interactions ten years after the discovery

Friday, 21 October 2022 13:49 (7 minutes)

Presenter: OJEDA, Martina

Session Classification: Flashtalks: Session 2

Contribution ID: 20

Type: **not specified**

(MRU) Differences between Auger and TA spectra: Systematics or indication of a local astrophysical source?

Friday, 21 October 2022 11:35 (7 minutes)

Presenter: PLOTKO, Pavlo (DESY)

Session Classification: Flashtalks: Session 1

Contribution ID: 21

Type: **not specified**

(CML) Studies of the expanding matter lifetime at high μ_B with HADES experiment

Friday, 21 October 2022 13:56 (7 minutes)

Presenter: STEFANIAK, Maria (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Flashtalks: Session 2

Contribution ID: 22

Type: **not specified**

(MRU) Searches for Heavy Neutral Leptons

Friday, 21 October 2022 14:03 (7 minutes)

Presenter: OVCHYNNIKOV, Maksym (KIT)

Session Classification: Flashtalks: Session 2

Contribution ID: 23

Type: **not specified**

(FPF) From the precision frontier to physics beyond the SM

Friday, 21 October 2022 14:10 (7 minutes)

Presenter: AMOROSO, Simone

Session Classification: Flashtalks: Session 2

Contribution ID: 24

Type: **not specified**

(CML) Hydrogen-based nuclear spin ordering: from fundamental symmetries to contrast agents in MRI (2021 Erwin Schrödinger Prize)

Friday, 21 October 2022 14:17 (7 minutes)

Presenters: BARSKIY, Danila; BUDKER, Dmitry (Helmholtz Institute Mainz, JGU)

Session Classification: Flashtalks: Session 2

Contribution ID: 25

Type: **not specified**

(FPF) LFU violation and prospects at Belle II

Friday, 21 October 2022 13:07 (7 minutes)

Presenter: GANIEV, Eldar

Session Classification: Flashtalks: Session 2

Contribution ID: 26

Type: **not specified**

(InnoPool, zoom) Updates on LUXE and quantum computing

Friday, 21 October 2022 15:07 (7 minutes)

Presenter: CHINN YAP, Yee

Session Classification: Flashtalks: Session 3

Contribution ID: 27

Type: **not specified**

(InnoPool) ADC-MAPP

Friday, 21 October 2022 15:00 (7 minutes)

Presenter: HAUNGS, Andreas (KIT)

Session Classification: Flashtalks: Session 3

Contribution ID: 28

Type: **not specified**

(CML) A “charming” view on matter formation with ALICE

Friday, 21 October 2022 13:14 (7 minutes)

Presenter: KALTEYER, Annalena (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Flashtalks: Session 2

Contribution ID: 29

Type: **not specified**

(FPF) Fast calorimeter simulations with Machine Learning techniques

Friday, 21 October 2022 13:21 (7 minutes)

Presenter: MC KEOWN, Peter

Session Classification: Flashtalks: Session 2

Contribution ID: 30

Type: **not specified**

(MRU) Extending the Physics Reach of the Pierre Auger Observatory using Low-Level Trigger Data

Friday, 21 October 2022 13:28 (7 minutes)

Presenter: SCHIMASSEK, Martin (KIT)

Session Classification: Flashtalks: Session 2

Contribution ID: 31

Type: **not specified**

(CML, zoom) Axion searches at storage rings

Friday, 21 October 2022 13:00 (7 minutes)

Presenter: SWATHI, Karanth

Session Classification: Flashtalks: Session 2

Contribution ID: 32

Type: **not specified**

FT22

Session Classification: Flashtalks: Session 2

Contribution ID: 33

Type: **not specified**

(MRU) Bush fires & the Crab Nebula

Friday, 21 October 2022 13:42 (7 minutes)

Presenter: HOLCH, Tim (DESY)

Session Classification: Flashtalks: Session 2

Contribution ID: 34

Type: **not specified**

(CML) High accuracy mass measurements of exotic nuclei with an MR-TOF-MS

Friday, 21 October 2022 13:35 (7 minutes)

Presenter: HORNUNG, Christine (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Flashtalks: Session 2

Contribution ID: 35

Type: **not specified**

Heavy element nucleosynthesis as a probe of matter at the extremes

Thursday, 20 October 2022 17:00 (45 minutes)

Gabriel Martínez-Pinedo is awarded the Leibniz Prize 2022 in recognition of his outstanding work in theoretical astrophysics on the formation of the heavy elements. Heavy elements with atomic numbers beyond that of iron are created in the universe as a result of certain astrophysical processes and require extreme densities of neutrons. But the question of how these astrophysical processes take place was one of the unsolved problems of physics in the 21st century – and this is precisely where Martínez-Pinedo’s research brought about a paradigm shift: it is not the collapse of heavy stars in supernova explosions that is the pivotal process here but the fusion of neutron stars. Based on this finding, Martínez-Pinedo was able to predict that such an event should be a thousand times brighter in terms of observation than the nova explosions known from the Milky Way; the term “kilo-nova” was created to describe this phenomenon. This prediction was actually verified when a neutron star merger was observed for the first time in 2017 using gravitational waves and telescopes.

Presenter: MARTINEZ PINEDO, Gabriel (GSI Helmholtzzentrum für Schwerionenforschung GmbH(GSI))

Session Classification: Topical talk

Contribution ID: 36

Type: **not specified**

FT25

Session Classification: Flashtalks: Session 3

Contribution ID: 37

Type: **not specified**

FT26

Session Classification: Flashtalks: Session 3

Contribution ID: **38**

Type: **not specified**

FT27

Session Classification: Flashtalks: Session 3

Contribution ID: 39

Type: **not specified**

FT28

Session Classification: Flashtalks: Session 2

Contribution ID: 40

Type: **not specified**

(Satellite talk) Gravitational Wave Astronomy

Friday, 21 October 2022 09:15 (30 minutes)

Einstein Telescope Community Meeting Autumn 2022:
<https://indico.desy.de/event/34669/timetable/#20221021>

The German Einstein Telescope Community is invited to a face-to-face meeting in Hanover to present status and perspectives in Gravitational Wave Astronomy.

The status of future projects such as the PTA (Pulsar Timing Array), LISA (Laser Interferometer Space Antenna) space mission and potential observing opportunities at 10 kHz and beyond will be presented.

Current German activities towards the realization of the Einstein Telescope (ET) will be presented and discussed in view of a German contribution to this future Gravitational Wave interferometer.

Presenter: BRANCHESI, Marica

Session Classification: Topical Talk on future initiatives

Contribution ID: 41

Type: **not specified**

Deutsches Zentrum für Astrophysik (DZA)

Friday, 21 October 2022 09:00 (15 minutes)

Presenters: STEGMANN, Christian; HASINGER, Günther

Session Classification: Topical Talk on future initiatives

Contribution ID: 42

Type: **not specified**

General information

Thursday, 20 October 2022 10:45 (15 minutes)

Presenters: HEINEMANN, Beate (DESY); RALPH, Engel (ETP); GALATYUK, Tetyana (TU Darmstadt / GSI)

Session Classification: Intro: Welcome