

Introduction and goals of the workshop

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Gargnano del Garda, 25-28 September 2022



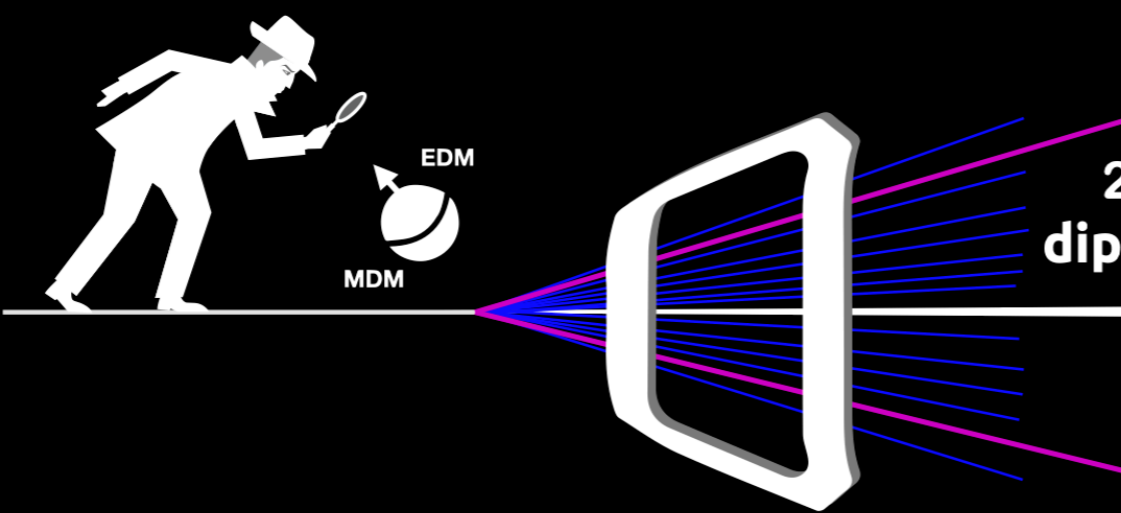
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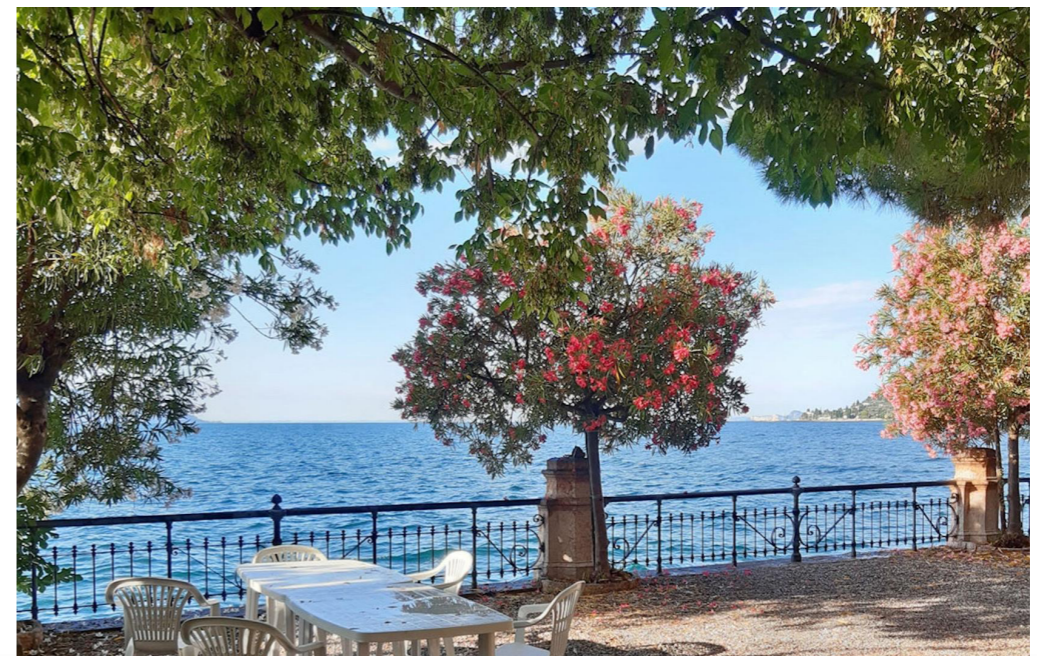
Welcome to Gargnano!

- ▶ Sessions start at 9:00 and finish at 18:00. Agenda [link](#).



2nd Workshop on electromagnetic dipole moments of unstable particles

25-28 September 2022
Gargnano del Garda, Italy



Practical information

- ▶ Zoom connection for hybrid participation.
Registration required
- ▶ Wi-Fi: eduroam
- ▶ Accommodation at Palazzo Feltrinelli and Palazzo Bertolini
- ▶ Breakfast (8:00-9:00), lunch (13:00-14:30) dinner (19:30) and coffee breaks are provided
- ▶ Please sign the **attendance sheet**
- ▶ Organising committee: Tiziana Bussini, Nicola Neri, Elisabetta Spadaro Norella, Giorgia Tonani

Goals of the workshop

Study EMD/MDM at LHC(b)

- ▶ Proposals for directly probing MDM/EDM of unstable particles at LHC(b)
 - **charm** baryons: fixed-target production (Λ_c^+ , Ξ_c^+) and spin precession in bent crystals at LHC
 - **strange** baryons: production in pp collisions and charm, beauty weak decays (e.g. $\Lambda_b \rightarrow J/\psi\Lambda$). Spin precession in LHCb dipole magnet
 - **tau** lepton: possibility of dedicated fixed-target experiment with bent crystals. Production from $D_s^+ \rightarrow \tau^+ \nu_\tau$ decays

Study EMD/MDM at LHC(b)

- ▶ Proof-of-principle experiment at LHC IR3
 - goals of the test
 - machine operations
 - detector layout
- ▶ Next steps towards an experiment at LHC
 - simulations studies
 - preparation of a Letter of Intent

Main topics of discussion

- ▶ **Theory** motivations: SM and BSM
- ▶ **Experimental** proposals
- ▶ **Physics** program
- ▶ **Machine** layout
- ▶ **Experimental** techniques
- ▶ **R&D** in progress
- ▶ **Simulation** studies

Let's start the workshop
and wish you interesting
and fruitful discussions!