

# **Hot Topics in Astroparticle Physics**

**Monday, 14 September 2015 - Saturday, 26 September 2015**

**LNGS**

## **Programme**

The lecture courses on different topics will be delivered by leading scientists. Each Lecturer gives 2 X 1 hour lectures, with a coffee break between two lectures (Pontecorvo Room, typically in the morning, excluding Wednesday 16 Sept.) and then leads a wide frontal discussion on the themes of his lecture (afternoon, after lunch, typically in Rossi Room, excluding Friday 18 September).

THERE IS NO CONFERENCE FEE

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### **14 September, Monday**

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Morning, Pontecorvo Room

10:00 - Opening

10:10 - A. Vainshtein - Two lectures on "Selected questions in QCD"

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Afternoon, Rossi Room

14:30 - A. Vainshtein - Discussion on problems in QCD

### **15 September, Tuesday**

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Morning, Pontecorvo Room

Lectures on Magnetars (see program here: [http://agenda.infn.it/event/cfa\\_magnetar](http://agenda.infn.it/event/cfa_magnetar))

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Afternoon, Rossi Room

14:30 - Common discussion on the actual problems in Particle Physics

### **16 September, Wednesday**

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Morning, Pontecorvo Room

Lectures on Magnetars (see program here: [http://agenda.infn.it/event/cfa\\_magnetar](http://agenda.infn.it/event/cfa_magnetar))

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Afternoon, Pontecorvo Room

14:30 - R. Barbieri - Two lectures on "Beyond the Standard Model as of 2015"

17:00 - Visit to underground laboratory

### **17 September, Thursday**

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Morning, Pontecorvo Room

9:30 - Y. Kamyshev - Two lectures on "The Road to Experimental Observation of Baryon Number Violation"

12:00 - Z. Berezhiani - Short seminar on "Anti dark matter"

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Afternoon, Rossi Room

14:30 - R. Barbieri - Discussion on BSM Physics

and Y. Kamyshev - Discussion on BV physics

### **18 September, Friday**

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Morning, Pontecorvo Room

09:30 - B. Bajc - Short seminar on "Landau poles in grand unification"

10:20 - M. Mannarelli - Short seminar on "Color superconductors"

11:30 - S. Karshenboim - "Advances in precision atomic physics vs. particle physics: proton radius problem"

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Afternoon, Pontecorvo Room

14:30 - S. Karshenboim - Discussion on fundamental constants

and Y. Kamyshev - Discussion on BV physics

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### **21 September, Monday**

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Morning, Pontecorvo Room

12:00 - F. Villante — "Solar models, solar neutrinos and helioseismology: a discussion of the solar abundance problem"

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Afternoon, Pontecorvo Room

14:30 - V. Berezhinsky - Lecture on "Hot Problems in Ultra High Energy Cosmic Rays"

### **22 September, Tuesday**

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Morning, Pontecorvo Room

9:30 - A. Dolgov - Two lectures on "Problems in standard cosmological model"

12:00 - S. Morisi - Short seminar on "Asymmetric dark matter"

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Afternoon, Rossi Room

14:30 - R. Biondi - Short seminar on "Decaying dark matter and IceCube neutrinos"

15:20 - M. Chianese - Short seminar on "PeV decaying DM at IceCube"

### **23 September, Wednesday**

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Morning, Pontecorvo Room

9:30 - O. Kancheli - two lectures on "Black Holes: old and new questions"

12:00 - A. Addazi - Short seminar on "Direct generation of a Majorana mass for the neutron from exotic instantons"

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Afternoon, Rossi Room

14:30 - A. Dolgov - Discussion on cosmological problems

### **24 September, Thursday**

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Morning, Rossi Room

10:00 - O. Kancheli - Discussion on Gravity and BH

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Afternoon, Rossi Room

14:30 - Z. Berezhiani — Discussion summary on the themes of the conference