



# MULTI<sup>3</sup> – A cubic approach to dark matter

Department of Physics G. Galilei, Padova, March 1 - 5, 2010

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## Agenda

### Monday, March 1 (afternoon)

#### AULA S – DEPARTMENT OF PHYSICS

- 14:30-15:00 Organizers: Welcome and presentation of the workshop and goals  
15:00-16:00 P. Ullio: “Status of dark matter searches” (45+15 min)  
**16:00-16:30** *Coffee break at Dep. Physics*  
16:30-17:30 S. Colafrancesco: “A multi<sup>3</sup> approach: from the galactic center to large scale structures” (45+15)  
17:30-18:30 L. Pieri: “N-body simulations and dark matter structures” (45+15)

**18:30-20:00** *Welcome spritz at bar Aurora, via Marzolo 4*

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### Tuesday, March 2 (morning)

#### AULA S – DEPARTMENT OF PHYSICS

- 09:00-09:40 P. Brun: “Dark matter searches with IACTs” (30+10)  
09:40-10:20 A. Morselli: “Dark matter searches with Fermi” (30+10)  
10:20-11:00 E. Borriello: “Dark matter constraints from galactic radio observations” (30+10)  
**11:00-11:30** *Coffee break at Dep. Physics*  
11:30-12:10 A. Cuoco: “Constraints from gamma-rays” (30+10)  
12:10-12:50 F. Iocco: “Constraints on large dark matter annihilation cross-sections from the early Universe” (30+10)

**13:30-14:30** *Lunch Break*

### Tuesday, March 2 (afternoon)

#### AULA PRESIDENZA DI SCIENZE – Via Jappelli 1

- 14:30-16:30 Free discussions. Chairmen: Michael Gustafsson, Lidia Pieri  
**16:30 – 17:00** *Coffee break at Bar Aurora, via Marzolo 4*  
17:00-18:30 Topic talks and discussions:  
D. Tran: “Indirect detection of unstable dark matter”.  
R. Lineros: “Cosmic-ray propagation”,  
M. Taoso: “Dark matter gamma-ray lines: Higgs in space”,  
P. Panci: “Fermi constraints on diffuse gamma-rays”,  
M.A. Sanchez-Conde: “The search of axion-like-particles with Fermi and Cherenkov telescopes”,  
L. Maccione: “Constraining Decaying DM with Fermi-LAT gamma-rays”

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### Wednesday, March 3 (morning)

#### AULA S – DEPARTMENT OF PHYSICS

- 09:00-10:00 T. Delahaye: “Cosmic ray propagation – analytical” (45+15)  
10:00-11:00 L. Maccione: “Cosmic ray propagation with numerical codes” (45+15)  
**11:00-11:30** *Coffee Break at Dep. Physics*  
11:30-12:10 M. Pato: “Multi-messenger constraints on annihilating dark matter” (30+10)  
12:10-12:50 D. Cerdeno: “Dark matter searches and Direct Detection” (30+10)  
12:50-13:30 I.G. Irastorza: “Dark matter searches and Direct Detection” (30+10)

#### **13:30-14:30** *Lunch Break*

### Wednesday March 3 (afternoon)

#### AULA PRESIDENZA DI SCIENZE – Via Jappelli 1

- 14:30-16:30 Free discussion. Chairmen: Michele Doro, Miguel Pato

#### **16:30 –23:00** *TRIP TO VENICE AND DINNER*

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### Thursday March 4 (morning)

#### AULA S – DEPARTMENT OF PHYSICS

- 09:00-09:40 T. Kamon: “Collider searches for SUSY DM” (30+10)  
09:40-10:20 G. Landsberg: “Collider searches for non-SUSY DM” (30+10)  
10:20-11:00 A. Canepa: “Dark matter searches at the Tevatron” (30+10)  
**11:00-11:30** *Coffee Break at Dep. Physics*  
11:30-12:10 M. Fornasa: “Combining direct detection with colliders” (30+10)  
12:10-13:30 Topics talks and discussions:  
A. Goudelis: “Determining the WIMP mass through the complementary between gamma-ray detection, direct searches and the ILC”,  
B. Canadas: “What else can we learn about DM from neutrino telescopes”

#### **13:30-14:30** *Lunch Break*

### Thursday March 4 (afternoon)

#### AULA A – DEPARTMENT OF PHYSICS

- 15:00-16:00 Department’s colloquia: “The role of Particle Physics in the economy and society of United States” Young-kee Kim (Fermilab)

#### AULA PRESIDENZA DI SCIENZE – via Jappelli 1

- 16:00- 16:30** *Coffee break at Bar Aurora, via Marzolo 4*  
16:30-18:30 Free discussion. Chairmen: Mattia Fornasa, David Cerdeño
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### Friday March 5, open session

#### AULA R – DEPARTMENT OF PHYSICS, 3<sup>RD</sup> FLOOR

- 09:30-13:30 Discussion and future plans (open session, for those who can stay)