International School of Space Science (ISSS) – Director Prof. U. Villante
(http://www.cifs-isss.org/)

Directors: M. Boezio (INFN-TS, Italy), S. Coutu (PSU-PA, USA), R. Sparvoli (UniTOV-Rome, Italy)

“Cosmic Ray Physics in Space”
12-16 June 2017

Location: Gran Sasso Science Institute – GSSI (http://www.gssi.infn.it/)

Program

Extended coffee and lunch breaks to stimulate interactions and discussions (including posters)
Poster shall be affixed at the earliest opportunity.

Student’s presentation 6 slides (included title), 8 minutes (6 + 2 discussion)

Monday, 12th

8:30-9:30 Registration
9:30-9:45 Opening Welcome (ISSS-School Director, Course Directors)
9:45-10:35 Sources, acceleration and propagation of GCRs – part I (P. Blasi)
10:35-10:45 Discussion
10:45-11:15 Coffee Break
11:15-12:05 Spectrometers for GCRs: past & future (E. Vannuccini)
12:05-12:15 Discussion
12:30-14:30 Lunch in Cafeteria
14:30-15:20 Sources, acceleration and propagation of GCRs - part II (P. Blasi)
15:20-16:10 Calorimeters for GCRs: past & future (I. De Mitri)
16:10 – 16:25 Discussion of both lectures
16:25-16:55 Coffee Break
16:55-17:45 Elemental abundances and the origin of GCRs (P. Maestro)
17:45-17:55 Discussion

20:00 Dinner at “Oro Rosso”

Tuesday, 13th

9:00-9:50 CGR propagation in the heliosphere (M. Potgieter)
9:50-10:40 Solar activity and SEPs (G. de Nolfo)
10:40 – 10:55 Discussion of both lectures
10:55-11:25 Coffee Break
12:15 – 12:25 Discussion
12:30-14:30 Lunch in Cafeteria
14:30-15:20 The radiation environment around the Earth (H. Evans)
15:20-16:10 Space Weather and cosmic rays (D. Del Moro)
16:10 – 16:25 Discussion of both lectures
16:25-16:55 Coffee Break

20:00 Dinner at “Oro Rosso”

**Wednesday, 14th**

9:00-9:50 Gamma-ray physics in space – part I (F. Aharonian)
9:50-10:40 Search for dark matter with cosmic rays – part I (M. Cirelli)
10:40-10:55 Discussion of both lectures
10:55-11:25 Coffee Break
11:25-12:15 Gamma-ray physics in space – part II (F. Aharonian)
12:15-12:25 Discussion

12:30-14:30 Lunch at the University Cafeteria

14:30-15:20 Search for dark matter with cosmic rays – part II (M. Cirelli)
15:20-15:30 Discussion
15:30-16:30 Presentation of the Gran Sasso Laboratories (V. Caracciolo)
Visit to the INFN Gran Sasso Laboratories

20:00 Dinner at “Oro Rosso”

**Thursday, 15th**

9:00-9:50 Indirect detection of dark matter (P. von Doetinchem)
9:50-10:40 Experiments for gamma-ray detection: past & present (L. Latronico)
10:40-10:55 Discussion of both lectures
10:55-11:25 Coffee Break
11:25-12:15 Future Experiments for gamma-ray detection (K. Ragan)
12:15-12:25 Discussion

12:30-14:30 Lunch in Cafeteria

14:30-15:20 Neutrinos in space (P. Desiati)
15:20 – 16:10 Orbits, spacecraft and space instruments (M. Casolino)
16:10 – 16:25 Discussion of both lectures
16:25-16:55 Coffee Break

20:00 Dinner at “Oro Rosso”

**Friday, 16th – L’Aquila University – Physics Department**

8:30 Bus transportation to University of L’Aquila (from GSSI)
9:00-9:50 Hadronic interactions and air-shower physics (R. Ulrich)
9:50-10:40 CR ground experiments overlapping with space exps: past&future (J. Hoerandel)
10:40 – 10:55 Discussion of both lectures
10:55-11:25 Coffee Break
11:25-12:15 UHE from the ground and in space (A. Castellina)
12:15-12:25 Discussion
12:25-12:35 Conclusions
12:35-13:30 lunch at the Department
13:40 Bus transportation to GSSI