Scientific Programme





Afternoon Session

14.00-15.00 Registration

15.00-15.30 M. Miceli/F. Bocchino/M. Palma, Welcome

1. SN progenitors and pre-SN activity

15.30-16.15 M. Limongi, *Presupernova evolution of massive stars*

16.15-16.35 F. Bocchino, *Pre-supernova outbursts in Galactic Red Supergiants: predicting the next Galactic SN event*

16.35-17.00 Coffee break

2: Early supernova evolution

17.00-17.20 B. Van Baal, Modelling Supernova Nebular lines in 3D NLTE

17.20-17.40 L. Ferrari, The metamorphosis of the Type Ib supernova 2019yvr: late-time interaction

17.40-18.00 R. Walter, Resolving core-collapse supernova with quantum optics



Tuesday October 24

Morning Session

3. Explosion physics of CC-SNe

9.30-10.15 M. Gabler, Anisotropies in neutrino driven supernovae

10.15-10.35 K. Nakamura, Systematic 3D MHD simulations of core-collapse supernova and implications for multi-messenger signals

10.35-10.55 B. Giudici, Instabilities in core-collapse supernovae: the study 14 red super giant progenitor models in three dimensions

10.55-11.30 Coffee break

11.30-12.15 M.A. Aloy, Anisotropies induced in supernova explosions by rotation and magnetic fields

12.15-12.35 G. La Malfa, *Modeling the evolution of a magnetorotational supernova remnant* **12.35-13.15** Open discussion

Afternoon Session

4. Magnetars, SN-GRBs connection

15.00-15.45 S. Mereghetti, Magnetars and their supernova remnants

15.45-16.30 P. Mazzali, Asphericity in Stripped-envelope SN explosions.

16.30-17.00 Coffee break

17.00-17.45 M. G. Dainotti, *The GRB fundamental plane relation, its interpretation and application as cosmological tool*

17.45-18.30 Open discussion



20.30 Social Dinner

V

Wednesday October 25

Morning Session

5. The case of SN 1987A

9.30-10.15 J. Larsson, The asymmetric explosion of SN 1987A

10.15-10.35 E. Greco, Evidence for a Pulsar Wind Nebula in SN1987A

10.35-10.55 O. Petruk , Toward understanding the radio history of SN1987A

10.55-11.15 V. Sapienza, A diagnostic to trace shocked ejecta in SN 1987A using XRISM - Resolve

11.15-11.45 Coffee break

6. Supernova remnants

11.45-12.30 Orlando, S. *Tracing Core-Collapse Supernova Echoes in Remnant Structures* **12.30-12-50** F. Zangrandi, *First Study of the SNR Population in the LMC with eROSITA*

Afternoon Session

15.00-15.45 D. Patnaude, *X-ray Microcalorimeter Observations of Supernova Remnants: A Window into Asymmetries in Supernovae and Their Progenitors*

15.45-16.05 R. Bandiera, *X-ray synchrotron polarization in partially random magnetic fields.* General theory and applications to SN 1006.

16.05-16.30 Coffee break

16.30-17.30 Open discussion



Thursday October 26

7. Anisotropies in gamma-rays

9.30-10.15 M. Lemoine-Goumard, Supernova remnants and pulsar wind nebulae at gamma-ray energies

10.15-10.35 R. Giuffrida, Evidence for proton acceleration and escape from the Puppis A SNR using Fermi-LAT observations

10.35-10.55 A. Tutone, *Prospects for the candidate PeVatron SNR G106.3+2.7 with the ASTRI Mini-Array*

10.55-11.30 Coffee break

11.30-12.30 Open discussion

12.30-13.00 M. Miceli, Final remarks and greetings