Anisotropies in core-collapse supernova explosions

Monday 21 October 2019 - Wednesday 23 October 2019

Oratorio SS Elena e Costantino

Scientific Programme

Monday October 21

Morning Session
8.30-9.30 *Registration*
9.30-9.45 M. Miceli/F. Bocchino/S. Milioto, *Welcome*
Session 1: SN progenitors and pre-SN environment (Chair: P. Zhou)
9.45-10.30 A. Chieffi, *The role of rotation on the evolution of massive stars*
10.30-11.15 C. Trigilio, *Anisotropies in winds and nebulae around Luminous Blue Variables*
11.15-12.00 *Coffee break*
Session 2: Early supernova evolution and interaction with CSM (Chair: A. Chieffi)
12.00-12.45 A. Pastorello, *Gap transients and interacting supernovae*
12.45-13.05 H. Lee, *Tracing end of star from SNR observation*

Afternoon Session
Session 3: Explosion physics of CC-SNe (Chair: S. Orlando)
14.30-15.15 A. Wongwathanarat, *Long-term evolution of core-collapse supernova asymmetries from shock revival to shock breakout*
15.15-16.00 M. Obergaulinger, *Magnetorotational explosions and the road to proto-magnetars*
16.00-16.35 *Coffee break*
16.35-16.50 R. Bonito, *Equity, Diversity, and Inclusion in Astronomy* (solicited)
16.50-17.35 S. Nagataki, *Anisotropies in SN1987A*
17.35-17.55 A. Tutone, *3D MHD modeling from the onset of the SN to the full-fledged SNR*

Tuesday October 22

Morning Session
Session 4: Engine driven SNe, GRBs and GWs (Chair: S. Nagataki)
9.00-9-45 G. Terreran, *Pursuing the afterlife: unveiling the inner engine from late-time observations of supernovae*
9.45-10.30 L. Izzo, *Jet-cocoon signatures in broad-line supernovae associated with gamma-ray bursts*
10.30-11.15 E. Troja *Neutron star mergers across the electromagnetic spectrum*
11.15-11.45 *Coffee break*
Session 5: Magnetars, Pulsars and PWNe (Chair: E. Troja)
11.45-12.30 A. Borghese, *Highly magnetic neutron stars: an observational review*
12.30-13.15 B. Olmi, *Pulsar Wind Nebulae and their winds*

Afternoon Session
Session 6: From SNe to SNRs: asymmetries and anisotropies (Chair: M. Lemoine-Goumard)
14.30-15.15 S. Orlando: *Linking the morphology of SNRs to anisotropies in parent core-collapse SNe through MHD simulations*
15.15-16.00 J. Vink: *The anisotropy of the ejecta in Cassiopeia A*
16.00-16.20 A. Piquenot, *Revisiting the ejecta asymmetries in CasA with a novel method for component separation in X-rays*
16.20-16.40 S. Ustamujic, *Investigating the effects of the inhomogeneous interstellar medium in shaping the morphology of SNR IC 443*
16.40-17.10 Coffee break
17.10-18.30 *Visit to the historical museum of the Palermo Observatory*

20.30 Social dinner

Wednesday October 23

Morning Session
Session 6 From SNe to SNRs: asymmetries and anisotropies (Chair: J. Vink)
9.30-10.15 P. Zhou, *Supernova remnants hosting magentars*
10.15-10.35 E. Greco, *Discovery of an overionized jet-like structure in the SNR IC443*
10.35-10.55 S. Derlopa, *First 3D Morpho-kinematical model of a SNR. Case of VRO 42.05.01 (G 166.0 +4.3)*
10.55-11.30 Coffee break
11.30-12.15 M. Lemoine Goumard, *Anisotropies in the gamma-ray emission of SNRs*
12.15-12.35 P. Kostic, *3D hydrodynamical simulation of the clumpy supernova ejecta*
12.35-13.00 M. Miceli, *Discussion and greetings*