

Surname Name

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Scientific Work

Follow-up of Supernovae:, Photometric and Spectroscopic Evolution, Rates

Supernova and Gamma-ray Burst connection

Galactic and extragalactic Novae

Supernovae-Ia and Gamma-ray Bursts as rulers for cosmological parameters

Kilonovae and short Gamma-ray Bursts

Brief description

My ongoing research concern the study of several classes of transient phenomena such as: Supernovae, Gamma-ray Bursts, Kilonovae and Novae.

Gamma-ray bursts and their Afterglows. My interest in this area started in 2000 when I became member of the SWIFT follow-up team. Most efforts are devoted to the study of the connection between Supernovae and GRBs [16]

Supernovae. Photometric and the spectroscopic study of all types of SNe (Ia, Ib/c, II-linear, II-plateau) near maximum light and at late stages and their theoretical modeling. The observations at maximum provide us with the necessary data for using SNe (Ia and II) as standard candles. The observations at later stages allow one to discriminate among different energy sources (i.e. radioactive decay, pulsar, light-echo), to model the mechanisms of the explosion, and to shed light on the nature of the progenitor [17, 21, 23, 25, 26, 31]

Kilonovae. The study of kilonovae associated with short GRBs (e.g. 179817A) has been carried out for individual objects in [1,6,8] , while the kilonova rate has been derived in [18, 20, 27, 30].

Novae. Classical and Recurrent Novae are objects of great interest because they are considered potential progenitors of SNe-Ia and important contributors to the Galactic nucleosynthesis. A review paper on this subject has been published on Astronomy & Astrophysics Review [19, 22, 24, 28, 32]

SOXS @ NTT

SOXS will be a unique spectroscopic facility for the NTT 3.5-m telescope in ESO-La Silla Observatory. It is a high-efficiency spectrograph with a resolution of $\sim 4,500$, capable of simultaneously observing the complete spectral range 350 - 2000 nm with a good average sensitivity, and with a "light" imaging facility in the visible band (ugrizY) over a 3.5'x3.5' field of view [1-15]

2020 List of Publication

1. 2020SPIE11450E..1BG

SOXS end-to-end simulator: development and applications for pipeline design, Genoni, M.; Landoni, M.; Li Causi, G. *and 44 more*

2. 2020SPIE11447E..7CC

Operational modes and efficiency of SOXS, Claudi, R.; Biondi, F.; Elias-Rosa, N. *and 45 more*

3. 2020SPIE11447E..6PB

The AIV strategy of the common path of Son Of X-Shooter , Biondi, Federico; Santhakumari, Kalyan Kumar Radhakrishnan; Claudi, Riccardo *and 48 more*

4. 2020SPIE11447E..60A

Manufacturing, integration, and mechanical verification of SOXS Aliverti, Matteo; Oggioni, Luca; Genoni, Matteo *and 46 more*

5. 2020SPIE11447E..6CC

Development status of the UV-VIS detector system of SOXS for the ESO-NTT telescope Cosentino, Rosario; Hernandez, Marcos; Ventura, Hector *and 47 more*

6. 2020SPIE11447E..66K

Design and development of the SOXS calibration unit, Kuncarayakti, Hanindyo; Achrén, Jani; Campana, Sergio *and 43 more*

7. 2020SPIE11447E..5VB

Final design and development status of the acquisition and guiding system for SOXS , Brucalassi, Anna; Pignata, Giuliano; Araiza-Duran, José Antonio *and 43 more*

8. 2020SPIE11447E..5NV

The development status of the NIR Arm of the new SoXS instrument at the ESO/NTT telescope, Vitali, F.; Aliverti, M.; Capasso, G. *and 45 more*

9. 2020SPIE11447E..5LR

Progress on the UV-VIS arm of SOXS , Rubin, Adam; Ben-Ami, Sagi; Hershko, Ofir *and 45 more*

10. 2020SPIE11447E..5FZ

SOXS: effects on optical performances due to gravity flexures, temperature variations, and subsystems alignment , Zanmar Sanchez, Ricardo; Aliverti, Matteo; Munari, Matteo *and 43 more*

11. 2020SPIE11447E..09S

Development status of the SOXS spectrograph for the ESO- NTT telescope , Schipani, P.; Campana, S.; Claudi, R. *and 50 more*

12. 2020arXiv201212722C

Progress and tests on the Instrument Control Electronics for SOXS Colapietro, M.; Capasso, G.; D'Orsi, S. *and 46 more*

13. 2020arXiv201212683R

Development status of the SOXS instrument control software Ricci, Davide; Baruffolo, Andrea; Salasnich, Bernardo *and 43 more*

14. 2020arXiv201212678Y

The SOXS Data-Reduction Pipeline, Young, David R.; Landoni, Marco; Smartt, Stephen J. *and 43 more*

15. 2020arXiv201212677L

The SOXS scheduler for remote operation at LaSilla: Concept and design, Landoni, Marco; Young, Dave; Marty, Laurent *and 46 more*

16. 2020arXiv201203392M

Tracing dark energy history with gamma ray bursts

Muccino, M.; Izzo, L.; Luongo, O. *and 5 more*

17. 2020arXiv201107819A

Sensitivity of future liquid argon dark matter search experiments to core-collapse supernova neutrinos, Agnes, P.; Albergo, S.; Albuquerque, I. F. M. *and 273 more*

18. 2020A&A...643A.113A 32

Observational constraints on the optical and near-infrared emission from the neutron star-black hole binary merger candidate S190814bv
Ackley, K.; Amati, L.; Barbieri, C. *and 151 more*

19. Spectroscopic classification of AT2020xyv as a classical nova in M31 Izzo, L.; Della Valle, M.; Gilmozzi, R. *and 5 more*

20. 2020arXiv201013726H

Lunar Gravitational-Wave Antenna , Harms, Jan; Ambrosino, Filippo; Angelini, Lorella *and 51 more*

21. 2020MNRAS.499..974G

SN 2017ivv: two years of evolution of a transitional Type II supernova
Gutiérrez, C. P.; Pastorello, A.; Jerkstrand, A. *and 39 more*

22. 2020ATel14048....1I

UVES observations of Nova Reticuli 2020 during Minimal Science Operations show it is entering the nebular phase
Izzo, L.; Molaro, P.; Aydi, E. *and 7 more*

23. 2020arXiv200807754K 11

A new measurement of the Hubble constant using Type Ia supernovae calibrated with surface brightness fluctuations , Khetan, N.; Izzo, L.; Branchesi, M. *and 14 more*

24. 2020A&ARv..28....3D 8

Observations of galactic and extragalactic novae

Della Valle, Massimo; Izzo, Luca

25. 2020vstb.conf..22D

Search for SN explosions from Pop III analogs in the (relatively) near

Universe, Della Valle, M.

26. 2020MNRAS.496...95G

DES16C3cje: A low-luminosity, long-lived supernova

Gutiérrez, C. P.; Sullivan, M.; Martinez, L. *and 91 more*

27. 2020hst..prop16275T

Compact binary mergers: R-process kilonovae and ultra- relativistic

jets, Tanvir, Nial Rahil; Amati, Lorenzo; Antier, Sarah *and 112 more*

28. 2020MNRAS.492.4975M 6

Search for ${}^7\text{Be}$ in the outbursts of four recent novae

Molaro, P.; Izzo, L.; Bonifacio, P. *and 3 more*

29. 2020MNRAS.492L..22T 32

Measurement of the spin of the M87 black hole from its observed

twisted light , Tamburini, Fabrizio; Thidé, Bo; Della Valle, Massimo

30. 2020MNRAS.492.1731G 2

Search for the optical counterpart of the GW170814 gravitational

wave event with the VLT Survey Telescope, Grado, A.; Cappellaro, E.;

Covino, S. *and 30 more*

31. 2020MNRAS.492..843G 2

Constraining the fraction of core-collapse supernovae harboring choked jets with high-energy neutrinos Guetta, Dafne; Rahin, Roi; Bartos, Imre and Della Valle, Massimo.

32. 2020MmSAI..91...52I

Observations of ${}^7\text{Be}$ and ${}^7\text{Li}$ in classical novae
Izzo, L.; Molaro, P.; Bonifacio, P. *and 2 more*

