

X-ray Astronomy: towards the next 50 years!

First announcement

Dear colleagues,

on the occasion of the 50th anniversary of the discovery of the first extrasolar X-ray source and of the X-ray background by Giacconi, Gursky, Paolini, and Rossi, the Astronomical Observatory of Brera (www.brera.inaf.it) and the Istituto di Astrofisica Spaziale e Fisica Cosmica (www.iasf-milano.inaf.it) of INAF (www.inaf.it) are organizing the conference "X-ray Astronomy: towards the next 50 years!" in Milan, the town where Riccardo Giacconi got his degree in Physics.

The conference will be held at the Museum of Science and Technology (<http://www.museoscienza.org/>) in Milano from Oct 1st to Oct 5th, 2012 .

The meeting aims at providing an overall review of X-ray astronomy today, focusing on the most challenging open problems and stimulating future perspectives.

SOC: M. Arnaud , X. Barcons , S. Bowyer , C. Canizares, R. Giacconi; F. Harrison, S. Holt, T. Maccacaro, K. Makishima, L. Maraschi; K. Pounds; M. Rees; G. Setti; R. Sunayev; Y. Tanaka; H. Tananbaum; J. Truemper, C. M. Urry

LOC: G. Pareschi , P. Caraveo, V. Braitto, R. Della Ceca, A. De Luca, P. Esposito; F. Gastaldello, R. Millul, A. Tiengo, F. Tavecchio, G. Trinchieri

Foreword

In its first 50 years, X-ray astronomy has provided a new vision of the universe, with unsuspected high-energy activities at all scales. In our Galaxy, a wide variety of systems, from rapidly rotating Neutron Stars sometimes surrounded by the remnants of the original Supernova explosions, to compact objects accreting matter in binary systems to a Super Massive Black Hole lurking at the Galaxy's centre emit X-ray radiation carrying fundamental information on their nature and origin. On cosmological scales the intergalactic gas in clusters of galaxies shines at X-ray energies allowing to probe the gravitational field binding these systems which are related to original seeds of structure in the Universe. Moreover Supermassive Black Holes at the centers of galaxies, fed by infall of gas, unleash extreme luminosities, so that they can be traced to very large distances, carrying information on the Universe evolution. To make a step forward in our understanding of the physics of the X-ray Universe we need to extend our observing capabilities to fainter fluxes across large portions of sky but also, among others, to spectroscopy on a spectral range as wide as attainable and, possibly, time resolved. The challenge for going "towards the next 50 years" should be at the heart of the meeting. The conference will allow a discussion on the present knowledge of cosmic X-ray sources in order to envisage the most promising directions for future advances.

Topics :

- Compact Objects
- Galactic sources
- Active Galactic Nuclei
- Diffuse Emission from Galaxies and Clusters
- Large Sky Surveys
- The High Energy X-Ray Background
- Future Missions.

The abstract submission deadline for consideration by the SOC: 15 May 2012.

Registration fee (including lunches) : 350 Euro until 30 June 2012; late registration 450 Euro.

The application of special reduced fees will be possible for PhD students on specific request.

More information about registration, abstract submission, program and logistic are available at the conference website:

http://www.brera.inaf.it/xrayastronomy_anniversary

For any request of information please contact the helpdesk e-mail:

loc-xastro50@brera.inaf.it

Giovanni Pareschi & Patrizia Caraveo on behalf of the LOC.