

POSTER

Il numero tra parentesi dopo il nome indica la posizione in cui collocare il poster. Le dimensioni massime consentite sono 65X170cm.

Ilaria De Angelis (1)

Università Roma Tre

CAIXA-A: high resolution spectroscopy of obscured AGN

High energy and high resolution in the spatial and energy domains are crucial to derive the geometrical distribution and the physical properties of gas and dust surrounding Active Galactic Nuclei (AGN). We present CAIXA-A, a catalogue of 171 obscured AGN. It consists of all the radio-quiet X-ray obscured ($N_{\mathrm{H}} > 2 \times 10^{22} \text{ cm}^{-2}$) AGN observed with the reflection grating spectrometer (RGS) onboard XMM-Newton, whose data are public as of November 2011, with at least 200 counts in both the 0.5-2 keV and 2-10 keV EPIC pn spectra. All the RGS spectra of the sources in CAIXA-A were extracted homogeneously, and fitted automatically with phenomenological and self-consistent models. We present in this poster the preliminary results of this project.

Giorgio Calderone (2)

Università di Milano - Bicocca

The WISE view of the disc-torus connection in $z \sim 0.6$ Active Galactic Nuclei

We selected all radio-quiet AGN in the latest release of the Sloan digital sky survey quasar catalog, with redshift in the range 0.56-0.73. About 4000 (~80%) of these have been detected in all four IR-bands of WISE (Wide-field Infrared Survey Explorer). This is the largest sample suitable to study the disc-torus connection. We find that the torus reprocesses on average $\sim 1/3-1/2$ of the accretion disc luminosity.

Rossella Fanali (3)

Inaf-Osservatorio Astronomico di Brera

The relationship between X-ray emission and accretion in AGNs.

We study the link between the properties of the X-ray emission in radio-quiet AGNs and the accretion rate using a well-defined and statistically complete sample of 150 type1 AGNs extracted from the XMM-Newton Bright Serendipitous Survey (XBS). We measure the statistical correlations between the main parameters that characterize the X-ray emission (i. e. the X-ray spectral slope and the X-ray "loudness", K_{bol}), and the accretion rate, either absolute (dM/dt) or relative to the Eddington limit (Eddington ratio). The X-ray Spectral indices in the 0.5-10 and 2-10 keV energy bands have been derived from a systematic spectral analysis (Corral et al. 2011), and the bolometric luminosities have been computed by fitting the optical/UV Spectral Energy Distributions (SEDs, Marchese et al. 2012). The black-hole masses have been obtained from spectral data using the single-epoch method (Caccianiga et al. 2012 in prep). Here we summarize and discuss the main statistical correlations found and their possible implications on disk/corona models.

Fabio La Franca (4)

Università Roma Tre

On the AGN radio luminosity distribution and the black hole fundamental plane

We have studied the dependence of the AGN nuclear radio luminosity on both the AGN X-ray and the host-galaxy K-band luminosity. A complete sample of about 1268 (radio observed) X-ray selected AGNs has been used. At variance with previous studies, radio upper limits have been taken into account. The intrinsic AGN radio luminosity distribution, and its dependence on X-ray and K-band luminosities, has been derived. Using scale relations between the BH masses and the host galaxy K-band luminosity, we have been able to derive a new estimate of the BH fundamental plane (in the $L_{1.4 \text{ GHz}}-L_X-M_{\text{BH}}$ space). Our analysis shows that previous measures of the BH fundamental plane are biased by ~ 0.8 dex in favor of the most luminous radio sources and, therefore, many AGN/galaxy co-evolution models, where radio-feedback is assumed, should revise their predictions.

Elisabetta Liuzzo (5)

Istituto di Radioastronomia - INAF- Bo

The sharpest view of PKS2155-304: the brightest BL Lac in the sky

PKS 2155-304 was studied in J and K in Sept. 2007 with the innovative MAD system at ESO VLT. Since the source was never observed with HST, ours are the best existing images in term of spatial resolution (0.12 arcsec). We extend the results of Falomo et al. 1991, 1993 finding two new galaxies at projected distance < 20 kpc. There are therefore 4 low luminosity (low mass) galaxies which are probably satellites of PKS 2155-304. We then consider archived VLA data of the source. In particular it is apparent a NW feature at 10 kpc already noted by Ulvestadt et al. 1986 disappearing at higher radio frequencies, which is possibly the residual of an old jet. A SE feature of 0.5 kpc, so far unnoticed, is of interest because it is aligned with the pc structure found by Piner et al. 2010 with VLBA, and it may represent an active jet. The galaxies found by MAD have no radio counterparts. Viceversa the jet like radio structures are unnoticed in the NIR. Finally we consider an archived Chandra X-ray map of the field, which is point like, with no counterparts of the radio jets.

Alessandro Maselli (6)

IASF Palermo

WISE gamma-ray blazar candidates in the 3rd Palermo BAT Catalogue

The use of data from the recent all-sky survey performed by the Wide-Field Infrared Survey Explorer (WISE) has recently shown that blazars can be well separated from other Galactic and extragalactic sources due to their infrared colors. On the basis of these results a procedure to associate a low-energy counterpart to the unidentified gamma-ray sources in the Second Fermi Large Area Telescope (2FGL) Catalog has been developed. We applied this association method to search for WISE gamma-ray blazar candidates for the unidentified hard X-ray sources in the 3rd Palermo BAT Catalogue (3PBC-66 months) and established correspondences for $\sim 38\%$ of the unidentified 3PBC sources. In order to consolidate some of the obtained WISE candidates we increased the information on their multifrequency emission properties by analysing all the available data from the Swift mission in the optical-UV and in the soft X-ray bands, and we searched for all the relevant information in the literature, particularly the optical spectrum.

Marco Mignoli (7)

INAF-OA Bologna

High- z , obscured AGN from the zCOSMOS-Bright Survey

A sample of narrow-line AGN have been selected by detection of the high-ionization [Ne v] λ 3426 line. We carried out a systematic search for high- z ($0.65 < z$)

Pietro Parisi (8)

INAF-IAPS Roma

Optical classification of hard X-ray sources detected with Swift/BAT

Through an optical campaign performed at telescopes located in the northern and the southern hemispheres, we have obtained optical spectroscopy for 72 counterparts of unclassified or poorly studied hard X-ray emitting objects detected with Swift/BAT and listed in the 54 months Palermo Swift/BAT hard X-ray catalogue. All these objects have observations taken also with Swift/XRT or XMM which allow us to pinpoint the X-ray counterpart thanks to the precise (2-6 arcsec) soft X-ray positional information afforded by these instruments to select the most likely associations. We find that 33 sources in our sample are Type 1 AGN while 32 are Type 2 AGN; the redshifts lie between 0.008 and 1.137. The remaining 7 objects are X-ray binaries. Here we want to present our preliminary results on identification of these newly-discovered sources.

Guido Risaliti (9)

INAF – Arcetri

AGN structure from X-ray occultations

I present the recent studies of my group aimed at understanding the physical and geometrical structure of the X-ray source and the circumnuclear medium in AGNs, based on time-resolved X-ray spectroscopy. I show recent results on X-ray occultations in local AGNs, and the observational evidence for a compact X-ray sources (a few gravitational radii) and a multi-component circumnuclear obscurer/reflector, consisting of three distinct components: Broad line region clouds, a parsec-scale component, and a galactic-scale component.

Francesco Gabriele Saturni (10)

Università di Roma "La Sapienza"

A multi-epoch analysis of CIV BAL variability in APM 08279+5255

Broad Absorption Line (BAL) variability potentially represents a powerful tool to investigate the physical nature and the structure of gas outflows in active galactic nuclei. Most existing BAL variability studies rely on observations taken at few epochs for samples of tens of BAL QSOs. In this study we present the first spectrophotometric "monitoring" of a single object, APM 08279+5255, which has been observed with the 1.8 m telescope at the Asiago Observatory more than 20 times since 2003. All the optical spectra of the object available in the literature have also been analysed, including two high resolution spectra, from Keck and HST respectively, thus extending the time interval from 1998 to 2012. A correlation between the BAL equivalent width and the QSO luminosity is found for the first time, suggesting changes of the gas ionization state as the main cause of BAL variations.

Paola Severgnini (11)

INAF-Osservatorio Astronomico di Brera

Volume density of local Compton-thick AGN

We present a new efficient diagnostic method, based on mid-infrared and X-ray data, to select local ($z < 0.1$) Compton-thick (CT) AGN with the aim of estimating their surface and space density. We define a region in the X-ray/IR vs. HR plane associated to CT AGN. We build up a sample of 43 CT AGN candidates using data from IRAS-PSC and 2XMM catalogue. In order to test the efficiency of the proposed method in selecting CT AGN we use the results of the X-ray spectral analysis performed on all the sources of our sample. After taking into account the different selection effects, we have estimated the number of CT AGN in the local Universe and their density down to the IRAS flux limit. We find that the diagnostic plot proposed here is an efficient method to select Compton-thick AGN in the nearby Universe. We find a large number of newly-discovered CT AGN. Finally, we estimated the co-moving space density of CT AGN with intrinsic $L_X > 1e43 \text{ erg s}^{-1}$ ($0.004 < z < 0.06$). The prediction for CT AGN based on the synthesis model of XRB in Gilli et al. (2007) is consistent with this value.

Andrea Tramacere (12)

ISDC

Constraining acceleration and emission processes in blazars with X-ray data above 10 keV: a study of the LOFT/LAD impact

The precise knowledge of the X-ray spectral shapes allows to find interesting fingerprints of both acceleration and radiative processes. In particular the intrinsic spectral curvature at the peak of the synchrotron SED, has been successfully used as a signature of stochastic acceleration processes. Self consistent stochastic models are able to reproduce X-ray spectral trends, both on short and long time scales (up to years), for BL Lac objects, with the peak energy of the synchrotron emission above the UV frequencies. Due to the poor statistics in the band above 10 keV, the present data are not able to fully constrain this scenario. We show that thanks to the unprecedented statistics of the LOFT/LAD instrument, we can distinguish spectra described by a pure log-parabolic shape, hinting for an acceleration dominated scenario, from models showing even mild exponential cut-off, that hint for cooling dominance, or a transition of the system toward the equilibrium. These observational features will allow to constrain both the acceleration time scales, and the magnetic fields, with an unprecedented precision. The potentiality of these data, will be even more effective due to possible joint observational campaigns with the CTA.

Edoardo Trussoni (13)

INAF - Osservatorio Astron. di Torino

Accretion and jet powers in unobscured radio galaxies

A correlation between the accretion and jet powers has been found in a selected sample of unobscured radio galaxies showing a flattening of the optical brightness profile in the central regions ('core' galaxies). The fraction of the accreting power converted into kinetic jet energy is almost constant over 5 decades. We present the results of a similar analysis for a small sample of radio quiet objects showing a cusped ('power law') brightness profile. We discuss the possible correlation between the accretion and jet powers exploiting the multifrequency data available for these objects. The different properties between the 'core' and 'power law' samples are shortly discussed.

Fausto Vagnetti (14)

Università di Roma Tor Vergata

Variable α_{ox} in a Swift AGN sample

Variability, both in X-ray and optical/UV, affects the well-known anti-correlation between the α_{ox} spectral index and the UV luminosity of active galactic nuclei, contributing part of the dispersion around the average correlation (intra-source dispersion), in addition to the intrinsic differences in the average α_{ox} values from source to source (inter-source dispersion). Samples with simultaneous X-ray and UV measurements allow to evaluate such contributions, and to characterise the intrinsic α_{ox} variability. I present the ensemble structure function analysis of a sample of low redshift active galactic nuclei, observed by Swift and previously studied by Grupe et al 2010.