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Authors	YANG, LILAN, TOZZI, Paolo, Yu, Heng, LUSO, ELISABETA, GASPARI, MASSIMO, GILLI, Roberto, NARDINI, EMANUELE, RISALITI, Guido
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Lilan Yang¹ , Paolo Tozzi^{2,1} , Heng Yu¹ , Elisabeta Lusso³ , Massimo Gaspari^{4,7} , Roberto Gilli⁵ , Emanuele Nardini² , and Guido Risaliti^{2,6}

¹ Department of Astronomy, Beijing Normal University, Beijing, 100875, People’s Republic of China; yang_lilan@mail.bnu.edu.cn, yuheng@bnu.edu.cn

² INAF—Osservatorio Astrofisico di Arcetri, Largo E. Fermi, I-50122 Firenze, Italy

³ Centre for Extragalactic Astronomy, Department of Physics, Durham University, South Road, Durham, DH1 3LE, UK

⁴ Department of Astrophysical Sciences, 4 Ivy Lane, Princeton University, Princeton, NJ 08544, USA

⁵ INAF—Osservatorio di Astrofisica e Scienza dello Spazio di Bologna, via Gobetti 93/3-40129 Bologna, Italy

⁶ Università di Firenze, Dip. di Fisica e Astronomia, via G. Sansone, I-50019 Sesto Fiorentino, Firenze, Italy

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There was an error in the published article. The abstract of the published article was incomplete due to an mistake. We present the full abstract here.

We present a search for nuclear X-ray emission in the brightest cluster galaxies (BCGs) of a sample of groups and clusters of galaxies extracted from the *Chandra* archive. The exquisite angular resolution of *Chandra* allows us to obtain robust photometry at the position of the BCG, and to firmly identify unresolved X-ray emission when present, thanks to an accurate characterization of the extended emission at the BCG position. We consider two redshift bins ($0.2 < z < 0.3$ and $0.55 < z < 0.75$) and analyze all the clusters observed by *Chandra* with exposure time larger than 20 ks. Our samples have 81 BCGs in 73 clusters and 51 BCGs in 49 clusters in the low- and high-redshift bin, respectively. X-ray emission in the soft (0.5–2 keV) or hard (2–7 keV) band is detected only in 14 and 9 BCGs ($\sim 18\%$ of the total samples), respectively. The X-ray photometry shows that at least half of the BCGs have a high hardness ratio, compatible with significant intrinsic absorption. This is confirmed by the spectral analysis with a power-law model plus intrinsic absorption. We compute the fraction of X-ray bright BCGs above a given hard X-ray luminosity, considering only sources with positive photometry in the hard band (12/5 sources in the low-/high- z sample). In the $0.2 < z < 0.3$ interval, the hard X-ray luminosity ranges from 10^{42} to 7×10^{43} erg s^{−1}, with most sources found below 10^{43} erg s^{−1}. In the $0.55 < z < 0.75$ range, we find a similar distribution of luminosities below $\sim 10^{44}$ erg s^{−1}, plus two very bright sources of a few 10^{45} erg s^{−1} associated with two radio galaxies. We also find that X-ray luminous BCGs tend to be hosted by cool-core clusters, even though the majority of cool cores do not host nuclear X-ray emission. This work shows that our analysis, when extended to the entire *Chandra* archive, can provide a sizable number of sources, allowing us to probe the evolution of X-ray active galactic nuclei in BCGs as a function of the cosmic epochs.

ORCID iDs

Lilan Yang <https://orcid.org/0000-0002-8434-880X>
 Paolo Tozzi <https://orcid.org/0000-0003-3096-9966>
 Heng Yu <https://orcid.org/0000-0001-8051-1465>
 Elisabeta Lusso <https://orcid.org/0000-0003-0083-1157>

Massimo Gaspari <https://orcid.org/0000-0003-2754-9258>
 Roberto Gilli <https://orcid.org/0000-0001-8121-6177>
 Emanuele Nardini <https://orcid.org/0000-0001-9226-8992>
 Guido Risaliti <https://orcid.org/0000-0002-3556-977X>

⁷ Einstein and Spitzer Fellow.