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Erratum: "X-Ray Properties of AGN in Brightest Cluster Galaxies. I. A Systematic Study of the *Chandra* Archive in the $0.2 < z < 0.3$ and $0.55 < z < 0.75$ Redshift Range" (2018, ApJ, 859, 65)

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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 (∼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 galatic nuclei in BCGs as a function of the cosmic epochs.

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