

Title: X-ray Study of Galaxy Evolution from Infancy to Mid-Life:

What the Deepest X-ray Stacking of $1 < z < 4$ Star-forming Galaxies Reveals
Abstract: We present early results from the deepest X-ray stacking of >5000 high redshift galaxies from $z=1$ to 8 using the recently acquired Chandra Deep Field South (CDF-S) 4Ms data. The galaxy samples were selected using the Lyman break technique based on recent HST ACS and WFC3 observations. Based on the X-ray stacking analyses for the $1 < z < 4$ LBGs, we find that the mean L_X/SFR ratio remains roughly constant, consistent with X-ray binary population synthesis models. We do not obtain significant X-ray detections from stacking LBGs at $z \sim 6, 7,$ and 8 and obtain upper limits that are inconsistent with recently published results, constraining the SMBH accretion history of the Universe.