Diffuse X-ray Emission Within the *Chandra* Deep Field North

F. E. Bauer(*The Pennsylvania State University*) and the *Chandra* Deep Field North Team

Abstract

The *Chandra* Deep Field North observation is used to study the diffuse X-ray emission in the vicinity of the Hubble Deep Field North. A total of seven diffuse sources are detected, the majority of which align with apparent groups of optically bright galaxies. We describe the nature of these sources and compare and contrast them with various cosmological predictions. Surprisingly, two regions of considerable distinction at other wavelengths, one around an optically detected cluster of galaxies at $z \approx 0.89$ and the other around a wide-angle-tail radio galaxy at $z \sim 1$, are not formally detected, placing strong constraints on the mass and temperature of any hot intercluster gas near these objects.

CATEGORY: CLUSTERS OF GALAXIES