The Chandra Source Catalog 2.0: The Galactic Center Region

Francesca Civano\(^1\), Christopher Allen\(^1\), Craig S. Anderson\(^1\), Jamie A. Budynkiewicz\(^1\), Douglas Burke\(^1\), Judy C. Chen\(^1\), Raffaele D’Abrusco\(^1\), Stephen M. Doe\(^2\), Ian N. Evans\(^1\), Janet D. Evans\(^1\), Giuseppina Fabbiano\(^1\), Danny G. Gibbs II\(^1\), Kenny J. Giottefhy\(^1\), Dale E. Graessle\(^1\), John D. Grier\(^1\), Roger M. Hain\(^1\), Diane M. Hall\(^1\), Peter N. Harbo\(^1\), John C. Houck\(^1\), Jennifer Laufer\(^1\), Omar Laurino\(^1\), Nicholas Lee\(^1\), J. Rafael Martinez-Galarza\(^1\), Michael L. McCollough\(^1\), Jonathan C. McDowell\(^1\), Warren McLaughlin\(^1\), Joseph B. Miller\(^1\), Douglas L. Morgan\(^1\), Amy E. Mossman\(^1\), Dan T. Nguyen\(^1\), Joy S. Nichols\(^1\), Michael A. Nowak\(^4\), Charles Paxson\(^1\), David A. Plummer\(^1\), Francis A. Primini\(^1\), Arnold H. Rots\(^1\), Aneta Siemiginowska\(^1\), Beth A. Sundheim\(^1\), Michael S. Tibbetts\(^1\), David W. Van Stone\(^1\), Panagoula Zografou\(^1\)

\(^1\)Smithsonian Astrophysical Observatory; \(^2\)formerly Smithsonian Astrophysical Observatory; \(^3\)Northrop Grumman Mission Systems

\(^4\)MIT Kavli Institute for Astrophysics and Space Research

Galactic Center area coverage

- 1 ensemble*
- 379 stacks** (36 HRC and 343 ACIS)
- 534 single Chandra observations
- Total area covered ~ 19 deg\(^2\)
- Total exposure time ~ 9 Megaseconds

*Ensemble: overlapping stacks
**Stacks: overlapping observations whose aimpoint is within 60" of each other See poster #238.06

Zoom in the Galaxy core: the central 0.1 deg\(^2\)

- 1 stack: 71 merged Chandra ACIS observations
- ~ 5000 sources

Source density distribution

- ~16,500 master sources
- 73% (~12,000) sources with likelihood classification TRUE

This work has been supported by NASA under contract NAS 8-03060 to the Smithsonian Astrophysical Observatory for operation of the Chandra X-ray Center.