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References

- Abell G. O. 1958. *The Distribution of Rich Clusters of Galaxies*, *ApJS*, 3, 211
- Allen S. W. 1995. *Starbursts in cooling flows: blue continua and emission-line nebulae in central cluster galaxies*, *MNRAS*, 276, 947
- . 1998. *Resolving the discrepancy between X-ray and gravitational lensing mass measurements for clusters of galaxies*, *MNRAS*, 296, 392
- Allen S. W., Di Matteo T., & Fabian A. C. 2000. *Hard X-ray emission from elliptical galaxies*, *MNRAS*, 311, 493
- Allen S. W., Edge A. C., Fabian A. C., Böhringer H., Crawford C. S., Ebeling H., Johnstone R. M., Naylor T., & Schwarz R. A. 1992. *Optical spectroscopy of the ROSAT X-ray brightest clusters*, *MNRAS*, 259, 67
- Allen S. W. & Fabian A. C. 1994. *A ROSAT PSPC Investigation of the Centaurus Cluster of Galaxies*, *MNRAS*, 269, 409
- . 1997. *The spatial distributions of cooling gas and intrinsic X-ray-absorbing material in cooling flows*, *MNRAS*, 286, 583
- . 1998. *The relationship between cooling flows and metallicity measurements for X-ray-luminous clusters*, *MNRAS*, 297, L63
- Allen S. W., Fabian A. C., Johnstone R. M., Arnaud K. A., & Nulsen P. E. J. 2001. *ASCA and ROSAT observations of nearby cluster cooling flows*, *MNRAS*, 322, 589

- Allen S. W., Fabian A. C., Johnstone R. M., White D. A., Daines S. J., Edge A. C., & Stewart G. C. 1993. *A ROSAT PSPC observation of Abell 478 - The distribution of X-ray absorbing matter in a massive cooling flow*, MNRAS, 262, 901
- Anders E. & Grevesse N. 1989. *Abundances of the elements - Meteoritic and solar*, Geochim. Cosmochim. Acta, 53, 197
- Arnaud K. & Dorman B. 2001, XSpec User's Guide, 11th edn., HEASARC, <http://legacy.gsfc.nasa.gov/docs/xanadu/xspec/manual/>
- Arnaud K. A. 1996, *Astronomical Data Analysis Software and Systems V*. ASP Conf. Ser. Vol. 101. eds Jacoby, G. and Barnes, J. (Astron. Soc. Pac.), 17
- Arnaud M., Rothenflug R., Boulade O., Vigroux L., & Vangioni-Flam E. 1992. *Some Constraints on the Origin of the Iron Enriched Intracluster Medium*, A&A, 254, 49
- Aschenbach B. 1990. ROSAT Notiz, Tech. rep., MPE
- Ball R., Burns J. O., & Loken C. 1993. *The radio properties of cD galaxies in Abell clusters. II - The VLA sample*, AJ, 105, 53
- Balucinska-Church M. & McCammon D. 1992. *Photoelectric absorption cross sections with variable abundances*, ApJ, 400, 699
- Begelman M. C. & Fabian A. C. 1990. *Turbulent mixing layers in the interstellar and intra-cluster medium*, MNRAS, 244, 26P
- Bevington P. R. & Robinson D. K. 1992, *Data reduction and error analysis for the physical sciences*, 2nd edn. (WCB/McGraw-Hill)
- Bijleveld W. & Valentijn E. A. 1983. *The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. I - New Westerbork observations of 22 cD galaxies and Einstein observations of A1918 and A2317. II - The fuelling of radio sources*, A&A, 125, 217
- Blundell K. M., Kassim N. E., & Perley R. A. 2000. *3C radio sources as they've never been seen before*, ASP Conf. Ser., Astron. Soc. Pac., San Francisco, astro-ph/0004005
- Böhringer H., Nulsen P. E. J., Braun R., & Fabian A. C. 1995. *The interaction of the radio halo of M87 with the cooling intracluster medium of the Virgo cluster*, MNRAS, 274, L67
- Böhringer H., Belsole E., Kennea J., Matsushita K., Molendi S., Worrall D. M., Mushotzky R. F., Ehle M., Guainazzi M., Sakelliou I., Stewart G., Vestrand W. T., & Dos Santos S. 2001. *XMM-Newton observations of M 87 and its X-ray halo*, A&A, 365, L181
- Böhringer H. & Hensler G. 1989. *Metallicity-dependence of radiative cooling in optically thin, hot plasmas*, A&A, 215, 147

- Böhringer H., Voges W., Fabian A. C., Edge A. C., & Neumann D. M. 1993. *A ROSAT HRI study of the interaction of the X-ray-emitting gas and radio lobes of NGC 1275*, MNRAS, 264, L25
- Bowyer S., Berghöfer T. W., & Korpela E. J. 1999. *Extreme-Ultraviolet Emission in Abell 1795, Abell 2199, and the Coma Cluster*, ApJ, 526, 592
- Bradt H., Mayer W., Naranan S., Rappaport S., & Spada G. 1967. *Evidence for X-Radiation from the Radio Galaxy M87*, ApJ, 150, L199
- Branduardi-Raymont G., Fabricant D., Feigelson E., Gorenstein P., Grindlay J., Soltan A., & Zamorani G. 1981. *Soft X-ray images of the central region of the Perseus cluster*, ApJ, 248, 55
- Bregman J. N., McNamara B. R., & O'Connell R. W. 1990. *Infrared emission from central dominant galaxies in X-ray luminous clusters*, ApJ, 351, 406
- Brickhouse N. S., Smith R. K., Raymond J. C., & Liedahl D. A. 2000. *The Astrophysical Plasma Emission Code*, AAS/High Energy Astrophysics Division, 32, 2701
- Bridges T. J. & Irwin J. A. 1998. *Molecular gas in the Perseus cooling flow galaxy, NGC 1275*, MNRAS, 300, 967
- Briel U. G. & Henry J. P. 1996. *An X-Ray Temperature Map of Abell 1795, a Galaxy Cluster in Hydrostatic Equilibrium*, ApJ, 472, 131
- Briggs S. A., Snijders M. A. J., & Boksenberg A. 1982. *Ly- α absorption at a high velocity in NGC1275*, Nature, 300, 336
- Brüggen M. & Kaiser C. R. 2001. *Buoyant radio plasma in clusters of galaxies*, MNRAS, 325, 676
- Buote D. A. 2001. *On the Origin of Radio Halos in Galaxy Clusters*, ApJ, 553, L15
- Buote D. A. & Tsai J. C. 1996. *Quantifying the Morphologies and Dynamical Evolution of Galaxy Clusters. II. Application to a Sample of ROSAT Clusters*, ApJ, 458, 27
- Byram E. T., Chubb T. A., & Friedman H. 1966. *Cosmic X-Ray Sources-Galactic and Extragalactic.*, AJ, 71, 379
- Cardiel N., Gorgas J., & Aragón-Salamanca A. 1998. *Spectral gradients in central cluster galaxies: further evidence of star formation in cooling flows*, MNRAS, 298, 977
- Carlson M. N., Holtzman J. A., Watson A. M., Grillmair C. J., Mould J. R., Ballester G. E., Burrows C. J., Clarke J. T., Crisp D., Evans R. W., Gallagher J. S., Griffiths R. E., Hester J. J., Hoessel J. G., Scowen P. A., & Stapelfeldt K. R. 1998. *Deep Hubble Space Telescope Observations of Star Clusters in NGC 1275*, AJ, 115, 1778

- Cavaliere A., Gursky H., & Tucker W. H. 1971, *Nature*, 231, 437
- Chandra X-ray Center. 2000, *Chandra Proposers' Observatory Guide*, <http://asc.harvard.edu/udocs/docs/POG/MPOG/>
- Chandran B. D. G. & Cowley S. C. 1998. *Thermal Conduction in a Tangled Magnetic Field*, *Physical Review Letters*, 80, 3077
- Churazov E., Brüggén M., Kaiser C. R., Böhringer H., & Forman W. 2001. *Evolution of Buoyant Bubbles in M87*, *ApJ*, 554, 261
- Churazov E., Forman W., Jones C., & Böhringer H. 2000. *Asymmetric, arc minute scale structures around NGC 1275*, *A&A*, 356, 788
- Churazov E., Gilfanov M., Forman W., & Jones C. 1999. *Evidence for Merging in the Centaurus Cluster*, *ApJ*, 520, 105
- Colafrancesco S. 1999, in *Diffuse Thermal and Relativistic Plasma in Galaxy Clusters*, 269
- Conselice C. J., Gallagher J. S., & Wyse R. F. G. 2001. *On the Nature of the NGC 1275 System*, *AJ*, astro-ph/0108019
- Cowie L. L. & Binney J. 1977. *Radiative regulation of gas flow within clusters of galaxies - A model for cluster X-ray sources*, *ApJ*, 215, 723
- Cowie L. L., Hu E. M., Jenkins E. B., & York D. G. 1983. *Two-dimensional spectrophotometry of the cores of X-ray luminous clusters*, *ApJ*, 272, 29
- Crawford C. S., Allen S. W., Ebeling H., Edge A. C., & Fabian A. C. 1999. *The ROSAT Brightest Cluster Sample - III. Optical spectra of the central cluster galaxies*, *MNRAS*, 306, 857
- Crawford C. S., Edge A. C., Fabian A. C., Allen S. W., Böhringer H., Ebeling H., McMahon R. G., & Voges W. 1995. *Optical spectroscopy of the ROSAT X-ray brightest clusters - II*, *MNRAS*, 274, 75
- David L. P., Jones C., & Forman W. 1995. *Cosmological implications of ROSAT observations of groups and clusters of galaxies*, *ApJ*, 445, 578
- David L. P., Jones C., Forman W., & Daines S. 1994. *Mapping the dark matter in the NGC 5044 group with ROSAT: Evidence for a nearly homogeneous cooling flow with a cooling wake*, *ApJ*, 428, 544
- De Grandi S. & Molendi S. 2001. *Metallicity Gradients in X-Ray Clusters of Galaxies*, *ApJ*, 551, 153

- de Jong T., Nørgaard-Nielsen H. U., Jørgensen H. E., & Hansen L. 1990. *IRAS observations of NGC 4696 - Cooling or evaporation flow?*, *A&A*, 232, 317
- De Young D. S., Roberts M. S., & Saslaw W. C. 1973. *Detection of 21-cm Hydrogen Absorption in the High-Velocity Component of the Radio Galaxy Perseus A*, *ApJ*, 185, 809
- den Herder J. W., Brinkman A. C., Kahn S. M., Branduardi-Raymont G., Thomsen K., Aarts H., Audard M., Bixler J. V., den Boggende A. J., Cottam J., Decker T., Dubbeldam L., Erd C., Goulooze H., Güdel M., Guttridge P., Hailey C. J., Janabi K. A., Kaastra J. S., de Korte P. A. J., van Leeuwen B. J., Mauche C., McCalden A. J., Mewe R., Naber A., Paerels F. B., Peterson J. R., Rasmussen A. P., Rees K., Sakelliou I., Sako M., Spodek J., Stern M., Tamura T., Tandy J., de Vries C. P., Welch S., & Zehnder A. 2001. *The Reflection Grating Spectrometer on board XMM-Newton*, *A&A*, 365, L7
- Dickens R. J., Currie M. J., & Lucey J. R. 1986. *The Centaurus cluster of galaxies. I - The data*, *MNRAS*, 220, 679
- Dickey J. M. & Lockman F. J. 1990. *H I in the Galaxy*, *ARA&A*, 28, 215
- Dreher J. W., Carilli C. L., & Perley R. A. 1987. *The Faraday rotation of Cygnus A - Magnetic fields in cluster gas*, *ApJ*, 316, 611
- Dressler A. 1984. *The Evolution of Galaxies in Clusters*, *ARA&A*, 22, 185
- Dupke R. A. & Arnaud K. A. 2001. *Central Elemental Abundance Ratios in the Perseus Cluster: Resonant Scattering or SN IA Enrichment?*, *ApJ*, 548, 141
- Dupke R. A. & White R. E. 2000. *Metallicity Gradients in the Intracluster Gas of Abell 496*, *ApJ*, 537, 123
- Ebeling H., White D. A., & Rangarajan F. V. N. 2002. *ASMOOTH: A simple and efficient algorithm for adaptive kernel smoothing of two-dimensional imaging data*, submitted to *MNRAS*
- Edge A. C. 2001. *The detection of molecular gas in the central galaxies of cooling-flow clusters*, *MNRAS*, in press, astro-ph/0106225
- Edge A. C., Ivison R. J., Smail I., Blain A. W., & Kneib J.-P. 1999. *The detection of dust in the central galaxies of distant cooling-flow clusters*, *MNRAS*, 306, 599
- Edge A. C. & Stewart G. C. 1991. *EXOSAT observations of clusters of galaxies. I - The X-ray data. II - X-ray to optical correlations*, *MNRAS*, 252, 414
- Edge A. C., Stewart G. C., & Fabian A. C. 1992. *Properties of cooling flows in a flux-limited sample of clusters of galaxies*, *MNRAS*, 258, 177

- Edge A. C., Stewart G. C., Fabian A. C., & Arnaud K. A. 1990. *An X-Ray Flux-Limited Sample of Clusters of Galaxies - Evidence for Evolution of the Luminosity Function*, MNRAS, 245, 559
- Ettori S. & Fabian A. C. 1999. *ROSAT PSPC observations of 36 high-luminosity clusters of galaxies: constraints on the gas fraction*, MNRAS, 305, 834
- . 2000. *Chandra constraints on the thermal conduction in the intracluster plasma of A2142*, MNRAS, 317, L57
- Ezawa H., Fukazawa Y., Makishima K., Ohashi T., Takahara F., Xu H., & Yamasaki N. Y. 1997. *Discovery of a Large-Scale Abundance Gradient in the Cluster of Galaxies AWM 7 with ASCA*, ApJ, 490, L33
- Fabian A. C. 1994. *Cooling Flows in Clusters of Galaxies*, ARA&A, 32, 277
- Fabian A. C., Arnaud K. A., Bautz M. W., & Tawara Y. 1994. *ASCA observations of cooling flows in clusters of galaxies*, ApJ, 436, L63
- Fabian A. C. & Barcons X. 1992. *The origin of the X-ray background*, ARA&A, 30, 429
- Fabian A. C., Crawford C. S., Ettori S., & Sanders J. S. 2001a. *Chandra detection of the intracluster medium around 3C 294 at $z=1.786$* , MNRAS, 322, L11
- Fabian A. C. & Daines S. J. 1991. *The X-ray subcluster in A2256 - Cluster mergers, cooling flows and diffuse radio sources*, MNRAS, 252, 17P
- Fabian A. C., Hu E. M., Cowie L. L., & Grindlay J. 1981a. *The distribution and morphology of X-ray-emitting gas in the core of the Perseus cluster*, ApJ, 248, 47
- Fabian A. C., Mushotzky R. F., Nulsen P. E. J., & Peterson J. R. 2001b. *On the soft X-ray spectrum of cooling flows*, MNRAS, 321, L20
- Fabian A. C. & Nulsen P. E. J. 1977. *Subsonic accretion of cooling gas in clusters of galaxies*, MNRAS, 180, 479
- Fabian A. C., Nulsen P. E. J., & Canizares C. R. 1982. *Star formation in a cooling flow*, MNRAS, 201, 933
- . 1984. *Cooling flows in clusters of galaxies*, Nature, 310, 733
- Fabian A. C., Nulsen P. E. J., Stewart G. C., Ku W. H.-M., Malin D. F., & Mushotzky R. F. 1981b. *The discovery of optical filaments surrounding the central galaxy in A496 - Evidence for a cooling flow*, MNRAS, 196, 35P
- Fabian A. C., Sanders J. S., Ettori S., Taylor G. B., Allen S. W., Crawford C. S., Iwasawa K., & Johnstone R. M. 2001c. *Chandra imaging of the X-ray core of Abell 1795*, MNRAS, 321, L33

- Fabian A. C., Sanders J. S., Ettori S., Taylor G. B., Allen S. W., Crawford C. S., Iwasawa K., Johnstone R. M., & Ogle P. M. 2000. *Chandra imaging of the complex X-ray core of the Perseus cluster*, MNRAS, 318, L65
- Falcke H., Rieke M. J., Rieke G. H., Simpson C., & Wilson A. S. 1998. *Molecular Hydrogen and PA- α Emission in Cooling Flow Galaxies*, ApJ, 494, L155
- Ford H. C. & Butcher H. 1979. *The system of filaments in M87 - Evidence for matter falling into an active nucleus*, ApJS, 41, 147
- Forman W. & Jones C. 1982. *X-ray-imaging observations of clusters of galaxies*, ARA&A, 20, 547
- Forman W., Kellogg E., Gursky H., Tananbaum H., & Giacconi R. 1972. *Observations of the Extended X-Ray Sources in the Perseus and Coma Clusters from UHURU*, ApJ, 178, 309
- Forman W., Schwarz J., Jones C., Liller W., & Fabian A. C. 1979. *X-ray observations of galaxies in the Virgo cluster*, ApJ, 234, L27
- Fritz G., Davidsen A., Meekins J. F., & Friedman H. 1971. *Discovery of an X-Ray Source in Perseus*, ApJ, 164, L81
- Fukazawa Y., Ohashi T., Fabian A. C., Canizares C. R., Ikebe Y., Makishima K., Mushotzky R. F., & Yamashita K. 1994. *Metal concentration and X-ray cool spectral component in the central region of the Centaurus cluster of galaxies*, PASJ, 46, L55
- Furusho T., Yamasaki N. Y., Ohashi T. S. R., Kagei T., Ishisaki Y., Kikuchi K., Ezawa H., & Ikebe Y. 2001. *ASCA Temperature Maps of Three Clusters of Galaxies: Abell 1060, AWM 7, and the Centaurus Cluster*, PASJ, 53, 421
- Ge J. P. & Owen F. N. 1993. *Faraday rotation in cooling flow clusters of galaxies. I - Radio and X-ray observations of Abell 1795*, AJ, 105, 778
- Govoni F., Enßlin T. A., Feretti L., & Giovannini G. 2001. *A comparison of radio and X-ray morphologies of four clusters of galaxies containing radio halos*, A&A, 369, 441
- Grabelsky D. A. & Ulmer M. P. 1990. *Search for cold gas in clusters with and without cooling flows*, ApJ, 355, 401
- Grossmann A. & Morlet J. 1984. *Decomposition of Hardy functions in square integrable wavelets of constant shape*, J. Math. Anal., 15, 723
- Gursky H., Kellogg E. M., Leong C., Tananbaum H., & Giacconi R. 1971. *Detection of X-Rays from the Seyfert Galaxies NGC 1275 and NGC 4151 by the UHURU Satellite*, ApJ, 165, L43

- Hasinger G., Altieri B., Arnaud M., Barcons X., Bergeron J., Brunner H., Dadina M., Dennerl K., Ferrando P., Finoguenov A., Griffiths R. E., Hashimoto Y., Jansen F. A., Lumb D. H., Mason K. O., Mateos S., McMahon R. G., Miyaji T., Paerels F., Page M. J., Ptak A. F., Sasseen T. P., Schartel N., Szokoly G. P., Trümper J., Turner M., Warwick R. S., & Watson M. G. 2001. *XMM-Newton observation of the Lockman Hole. I. The X-ray data*, A&A, 365, L45
- Heckman T. M. 1981. *Optical emission-line gas associated with dominant cluster galaxies*, ApJ, 250, L59
- Heckman T. M., Baum S. A., van Breugel W. J. M., & McCarthy P. 1989. *Dynamical, physical, and chemical properties of emission-line nebulae in cooling flows*, ApJ, 338, 48
- Heinz S., Reynolds C. S., & Begelman M. C. 1998. *X-Ray Signatures of Evolving Radio Galaxies*, ApJ, 501, 126
- Hill J. M., Hintzen P., Oegerle W. R., Romanishin W., Lesser M. P., Eisenhamer J. D., & Batuski D. J. 1988. *Peculiar velocities of cD galaxies - MX spectroscopy of Abell 1795*, ApJ, 332, L23
- Hill J. M. & Oegerle W. R. 1993. *Dynamics of cD clusters of galaxies. I - Redshift data for seven clusters*, AJ, 106, 831
- Holtzman J. A., Watson A. M., Mould J. R., Gallagher J. S., Ballester G. E., Burrows C. J., Clarke J. T., Crisp D., Evans R. W., Griffiths R. E., Hester J. J., Hoessel J. G., Scowen P. A., Stapelfeldt K. R., Trauger J. T., & Westphal J. A. 1996. *Star Clusters in Interacting and Cooling Flow Galaxies*, AJ, 112, 416
- Hu E. M., Cowie L. L., & Wang Z. 1985. *Long-slit spectroscopy of gas in the cores of X-ray luminous clusters*, ApJS, 59, 447
- Huang Z. & Sarazin C. L. 1996. *A High-Resolution ROSAT X-Ray Study of the Hercules Cluster*, ApJ, 461, 622
- Ikebe Y., Makishima K., Fukazawa Y., Tamura T., Xu H., Ohashi T., & Matsushita K. 1999. *Two-Phase Intracluster Medium in the Centaurus Cluster of Galaxies*, ApJ, 525, 58
- Johnstone R. M. & Fabian A. C. 1988. *Extended emission-line gas in NGC 1275 and the central galaxy in A1795 - Evidence for a distributed rather than a central source of ionization*, MNRAS, 233, 581
- Johnstone R. M., Fabian A. C., Edge A. C., & Thomas P. A. 1992. *The spectral signature of the cooling flow in Abell 478*, MNRAS, 255, 431
- Johnstone R. M., Fabian A. C., & Nulsen P. E. J. 1987. *The optical spectra of central galaxies in southern clusters Evidence for star formation*, MNRAS, 224, 75

- Jones C., Mandel E., Schwarz J., Forman W., Murray S. S., & Harnden F. R. 1979. *The structure and evolution of X-ray clusters*, ApJ, 234, L21
- Kaastra J. S. & Mewe R. 1993. *Legacy*, 3, Tech. rep., HEASARC, NASA
- Kent S. M. & Sargent W. L. W. 1979. *Ionization and excitation mechanisms in the filaments around NGC 1275*, ApJ, 230, 667
- King I. 1962. *Density Law in Spherical Stellar Systems.*, AJ, 67, 274
- Liedahl D. A., Osterheld A. L., & Goldstein W. H. 1995. *New calculations of Fe L-shell X-ray spectra in high-temperature plasmas*, ApJ, 438, L115
- Lucey J. R., Currie M. J., & Dickens R. J. 1986. *The Centaurus cluster of galaxies. II - The bimodal velocity structure*, MNRAS, 221, 453
- Markevitch M. 2001, <http://hea-www.harvard.edu/~maxim/axaf/acisbg/>
- Markevitch M., Ponman T. J., Nulsen P. E. J., Bautz M. W., Burke D. J., David L. P., Davis D., Donnelly R. H., Forman W. R., Jones C., Kaastra J., Kellogg E., Kim D.-W., Kolodziejczak J., Mazzotta P., Pagliaro A., Patel S., & Van Speybroeck L. 2000. *Chandra Observation of Abell 2142: Survival of Dense Subcluster Cores in a Merger*, ApJ, 541, 542
- Markevitch M., Vikhlinin A., & Mazzotta P. 2001. *Non-hydrostatic gas in the core of the relaxed galaxy cluster A1795*, ApJ, astro-ph/0108520
- Mathews W. G. & Bregman J. N. 1978. *Radiative accretion flow onto giant galaxies in clusters*, ApJ, 224, 308
- Matsumoto H., Koyama K., Awaki H., Tomida H., Tsuru T., Mushotzky R., & Hatsukade I. 1996. *Discovery of an Abundance Gradient in the Central Region of the Virgo Cluster*, PASJ, 48, 201
- Matthews T. A., Morgan W. W., & Schmidt M. 1964. *A Discussion of Galaxies Identified with Radio Sources.*, ApJ, 140, 35
- Mazzotta P., Markevitch M., Forman W. R., Jones C., Vikhlinin A., & van Speybroeck L. 2001a. *Chandra Observation of MS 1455.0+2232: cold fronts in a massive cooling flow cluster?*, ApJ, astro-ph/0108476
- Mazzotta P., Markevitch M., Vikhlinin A., Forman W. R., David L. P., & VanSpeybroeck L. 2001b. *Chandra Observation of RX J1720.1+2638: a Nearly Relaxed Cluster with a Fast-moving Core?*, ApJ, 555, 205
- McNamara B. R., Jannuzi B. T., Elston R., Sarazin C. L., & Wise M. 1996a. *U-Band Polarimetry of the Radio-aligned Optical Continuum in the Abell 1795 Cluster Central Galaxy*, ApJ, 469, 66

- McNamara B. R. & O'Connell R. W. 1993. *Blue lobe galaxies in the cooling flow clusters Abell 1795 and Abell 2597*, *AJ*, 105, 417
- McNamara B. R., Wise M., Nulsen P. E. J., David L. P., Sarazin C. L., Bautz M., Markevitch M., Vikhlinin A., Forman W. R., Jones C., & Harris D. E. 2000. *Chandra X-Ray Observations of the Hydra A Cluster: An Interaction between the Radio Source and the X-Ray-emitting Gas*, *ApJ*, 534, L135
- McNamara B. R., Wise M., Sarazin C. L., Jannuzi B. T., & Elston R. 1996b. *Optical Structure in the Abell 1795 Cluster Central Galaxy: Evidence for Stripping and Deflection of Radio Jets*, *ApJ*, 466, L9
- Mellier Y. 1999. *Probing the Universe with Weak Lensing*, *ARA&A*, 37, 127
- Mewe R., Gronenschild E. H. B. M., & van den Oord G. H. J. 1985. *Calculated X-radiation from optically thin plasmas. V*, *A&AS*, 62, 197
- Mewe R., Lemen J. R., & van den Oord G. H. J. 1986. *Calculated X-radiation from optically thin plasmas. VI - Improved calculations for continuum emission and approximation formulae for nonrelativistic average Gaunt factors*, *A&AS*, 65, 511
- Minkowski R. 1957, in *IAU Symp. 4: Radio astronomy*, Vol. 4, 107
- Mitchell R. J., Culhane J. L., Davison P. J. N., & Ives J. C. 1976. *Ariel 5 observations of the X-ray spectrum of the Perseus Cluster*, *MNRAS*, 175, 29P
- Mittaz J. P. D., Kaastra J. S., Tamura T., Fabian A. C., Mushotzky R. F., Peterson J. R., Ikebe Y., Lumb D. H., Paerels F., Stewart G., & Trudolyubov S. 2001. *UV observations of the galaxy cluster Abell 1795 with the optical monitor on XMM-Newton*, *A&A*, 365, L93
- Mittaz J. P. D., Lieu R., & Lockman F. J. 1998. *Detection of Luminous Intracluster Extreme-Ultraviolet Emission From Abell 1795*, *ApJ*, 498, L17
- Molendi S. & Gastaldello F. 2001. *On the metal abundance in the core of M 87*, *A&A*, 375, L14
- Mushotzky R., Loewenstein M., Arnaud K. A., Tamura T., Fukazawa Y., Matsushita K., Kikuchi K., & Hatsukade I. 1996. *Measurement of the Elemental Abundances in Four Rich Clusters of Galaxies. I. Observations*, *ApJ*, 466, 686
- Mushotzky R. F., Cowie L. L., Barger A. J., & Arnaud K. A. 2000. *Resolving the extragalactic hard X-ray background*, *Nature*, 404, 459
- Mushotzky R. F. & Loewenstein M. 1997. *Lack of Evolution in the Iron Abundance in Clusters of Galaxies and Implications for the Global Star Formation Rate at High Redshift*, *ApJ*, 481, L63

- Navarro J. F., Frenk C. S., & White S. D. M. 1995. *Simulations of X-ray clusters*, MNRAS, 275, 720
- Nulsen P. E. J. 1986. *Thermal instability in cooling flows*, MNRAS, 221, 377
- Oegerle W. R., Cowie L., Davidsen A., Hu E., Hutchings J., Murphy E., Sembach K., & Woodgate B. 2001. *FUSE Observations of Cooling-Flow Gas in the Galaxy Clusters A1795 and A2597*, ApJ, 560, 187
- Oegerle W. R. & Hill J. M. 1994. *Dynamics of cD clusters of galaxies. II: Analysis of seven Abell clusters*, AJ, 107, 857
- Owen F., Eilek J., & Kassim N. 1999, in *Diffuse Thermal and Relativistic Plasma in Galaxy Clusters*, 107
- Pedlar A., Ghataure H. S., Davies R. D., Harrison B. A., Perley R., Crane P. C., & Unger S. W. 1990. *The Radio Structure of NGC1275*, MNRAS, 246, 477
- Peres C. B., Fabian A. C., Edge A. C., Allen S. W., Johnstone R. M., & White D. A. 1998. *A ROSAT study of the cores of clusters of galaxies - I. Cooling flows in an X-ray flux-limited sample*, MNRAS, 298, 416
- Peterson J. R., Paerels F. B. S., Kaastra J. S., Arnaud M., Reiprich T. H., Fabian A. C., Mushotzky R. F., Jernigan J. G., & Sakelliou I. 2001. *X-ray imaging-spectroscopy of Abell 1835*, A&A, 365, L104
- Pfeffermann E. & Briel U. 1983. *Development and performance of a position sensitive proportion counter for the ROSAT project*, Adv. Space Res., 2, 255
- Pinkney J., Holtzman J., Garasi C., Watson A. M., Gallagher J. S., Ballester G. E., Burrows C. J., Casertano S., Clarke J. T., Crisp D., Evans R. W., Griffiths R. E., Hester J. J., Hoessel J. G., Mould J. R., Scowen P. A., Stapelfeldt K. R., Trauger J. T., & Westphal J. A. 1996. *WFPC2 Observations of the Cooling Flow Elliptical in Abell 1795*, ApJ, 468, L13
- Pistinner S., Levinson A., & Eichler D. 1996. *Can Electromagnetic Instabilities Driven by Temperature Gradients Inhibit Thermal Conduction in Cluster Cooling Flows?*, ApJ, 467, 162
- Pistinner S. & Shaviv G. 1996. *Can Tangled Magnetic Fields Suppress Thermal Conduction in Cluster Cooling Flows?*, ApJ, 459, 147
- Plucinsky P. P., Snowden S. L., Briel U. G., Hasinger G., & Pfeffermann E. 1993. *An Updated Calibration of the ROSAT PSPC Particle Background for the Analysis of Diffuse and Extended Sources*, ApJ, 418, 519

- Press H. P., Flannery B. P., Teukolsky S. A., & Vetterling W. T. 1989, *Numerical Recipes: The art of scientific computing* (CUP)
- Raymond J. C. & Smith B. W. 1977. *Soft X-ray spectrum of a hot plasma*, *ApJS*, 35, 419
- Reisenegger A., Miralda-Escudé J., & Waxman E. 1996. *Cooling Flows and Metallicity Gradients in Clusters of Galaxies*, *ApJ*, 457, L11
- Rubin V. C., Oort J. H., Ford W. K., & Peterson C. J. 1977. *New observations of the NGC 1275 phenomenon*, *ApJ*, 211, 693
- Rugge H. R. & McKenzie D. L. 1985. *X-ray line ratios for Fe-XVII observed in the solar corona*, *ApJ*, 297, 338
- Sabra B. M., Shields J. C., & Filippenko A. V. 2000. *Emission-Line Properties of the Optical Filaments of NGC 1275*, *ApJ*, 545, 157
- Sakelliou I., Merrifield M. R., & McHardy I. M. 1996. *What bent the jets in 4C 34.16?*, *MNRAS*, 283, 673
- Sanders J. S. & Fabian A. C. 2001. *Adaptive binning of X-ray galaxy cluster images*, *MNRAS*, 325, 178
- . 2002. *Spatially-resolved X-ray spectroscopy of the core of the Centaurus cluster*, *MNRAS*, in press, astro-ph/0109336
- Sanders J. S., Fabian A. C., & Allen S. W. 2000. *X-ray colour maps of the cores of galaxy clusters*, *MNRAS*, 318, 733
- Sarazin C. L. 1998, *X-ray emissions from clusters of galaxies* (Cambridge University Press)
- Schwarz R. A., Edge A. C., Voges W., Boehringer H., Ebeling H., & Briel U. G. 1992. *The structure of the intracluster medium of the Perseus cluster*, *A&A*, 256, L11
- Shobbrook R. R. 1963. *A note on a radio source identification in Centaurus*, *The Observatory*, 83, 36
- Slezak E., Durret F., & Gerbal D. 1994. *A wavelet analysis search for substructures in eleven X-ray clusters of galaxies*, *AJ*, 108, 1996
- Smith E. P., Bohlin R. C., Bothun G. D., O'Connell R. W., Roberts M. S., Neff S. G., Smith A. M., & Stecher T. P. 1997. *Ultraviolet Imaging Observations of the cD Galaxy in Abell 1795: Further Evidence for Massive Star Formation in a Cooling Flow*, *ApJ*, 478, 516
- Snowden S. L. & Kuntz K. D. 1998. *Cookbook for ROSAT observations of extended objects*, <ftp://legacy.gsfc.nasa.gov/rosat/software/fortran/sxrb/esas.ps.gz>

- Snowden S. L., McCammon D., Burrows D. N., & Mendenhall J. A. 1994. *Analysis procedures for ROSAT XRT/PSPC observations of extended objects and the diffuse background*, ApJ, 424, 714
- Sparks W. B., Jedrzejewski R. I., & Macchetto F. 1993, in AIP Conf. Proc., Vol. 313, *The Soft X-ray Cosmos*, ed. E. M. Schlegel & R. Petre (AIP, Woodbury), 389
- Sparks W. B., Macchetto F., & Golombek D. 1989. *Imaging observations of gas and dust in NGC 4696 and implications for cooling flow models*, ApJ, 345, 153
- Spitzer L. 1956, *Physics of Fully Ionized Gases* (Physics of Fully Ionized Gases, New York: Interscience Publishers, 1956)
- Starck J. & Pierre M. 1998. *Structure detection in low intensity X-ray images*, A&AS, 128, 397
- Stewart G. C., Fabian A. C., Jones C., & Forman W. 1984a. *The prevalence of cooling flows in clusters of galaxies*, ApJ, 285, 1
- Stewart G. C., Fabian A. C., Nulsen P. E. J., & Canizares C. R. 1984b. *The mass profile and gas content of M87*, ApJ, 278, 536
- Takeda H., Nulsen P. E. J., & Fabian A. C. 1984. *Ram pressure stripping in a changing environment*, MNRAS, 208, 261
- Tamura T., Day C. S., Fukazawa Y., Hatsukade I., Ikebe Y., Makishima K., Mushotzky R. F., Ohashi T., Takenaka K., & Yamashita K. 1996. *Uniformity in the Temperature and Metallicity of the X-Ray Emitting Gas in the Abell 1060 Cluster of Galaxies*, PASJ, 48, 671
- Tamura T., Kaastra J. S., Peterson J. R., Paerels F. B. S., Mittaz J. P. D., Trudolyubov S. P., Stewart G., Fabian A. C., Mushotzky R. F., Lumb D. H., & Ikebe Y. 2001. *X-ray spectroscopy of the cluster of galaxies Abell 1795 with XMM-Newton*, A&A, 365, L87
- Taylor G. B., Allen S. W., & Fabian A. C. 1999, in *Diffuse Thermal and Relativistic Plasma in Galaxy Clusters*, 77
- Taylor G. B., Barton E. J., & Ge J. 1994. *Searching for cluster magnetic fields in the cooling flows of 0745-191, A2029, and A4059*, AJ, 107, 1942
- Taylor G. B., Fabian A. C., & Allen S. W. 2002. *Magnetic fields in the Centaurus cluster*, submitted to MNRAS, astro-ph/0109337
- Thomas P. A., Fabian A. C., & Nulsen P. E. J. 1987. *Mass deposition in cooling flows - Analysis of the X-ray data*, MNRAS, 228, 973
- Trimble V. 1987. *Existence and nature of dark matter in the universe*, ARA&A, 25, 425

- Trümper J. 1983. *The ROSAT mission*, Adv. Space Res., 2, 241
- Unger S. W., Taylor K., Pedlar A., Ghataure H. S., Penston M. V., & Robinson A. 1990. *The nature of the high-velocity gas in NGC 1275 - First results with TAURUS-2 on the William Herschel telescope*, MNRAS, 242, 33P
- van Breugel W., Heckman T., & Miley G. 1984. *Optical line emission associated with the radio galaxy 4C 26.42 in the cluster of galaxies Abell 1795*, ApJ, 276, 79
- van Speybroeck L. P., Jerius D., Edgar R. J., Gaetz T. J., Zhao P., & Reid P. B. 1997. *Performance expectation versus reality*, Proc. SPIE, 3113, 89
- Vikhlinin A., Markevitch M., Forman W., & Jones C. 2001a. *Zooming in on the Coma Cluster with Chandra: Compressed Warm Gas in the Brightest Cluster Galaxies*, ApJ, 555, L87
- Vikhlinin A., Markevitch M., & Murray S. S. 2001b. *Chandra Estimate of the Magnetic Field Strength near the Cold Front in A3667*, ApJ, 549, L47
- Voges et al. W. 1996, MPE Report, 263, 637
- Weisskopf M. C., Tananbaum H. D., Van Speybroeck L. P., & O'Dell S. 2000, in X-Ray Optics, Instruments, and Missions, ed. J. Trümper & B. Aschenbach, Proc. SPIE No. 4012, astro-ph/000412
- White D. A. 2000. *Deconvolution of ASCA X-ray data - II. Radial temperature and metallicity profiles for 106 galaxy clusters*, MNRAS, 312, 663
- White D. A. & Fabian A. C. 1995. *Einstein Observatory evidence for the widespread baryon overdensity in clusters of galaxies*, MNRAS, 273, 72
- White D. A., Fabian A. C., Forman W., Jones C., & Stern C. 1991a. *Ram-pressure stripping of the multiphase interstellar medium of the Virgo cluster elliptical galaxy M86 (NGC 4406)*, ApJ, 375, 35
- White D. A., Fabian A. C., Johnstone R. M., Mushotzky R. F., & Arnaud K. A. 1991b. *The discovery of large amounts of cold, X-ray absorbing matter in cooling flows*, MNRAS, 252, 72
- Wilman R. J., Edge A. C., Johnstone R. M., Crawford C. S., & Fabian A. C. 2000. *Molecular hydrogen emission in Cygnus A*, MNRAS, 318, 1232
- Xu H., Makishima K., Fukazawa Y., Ikebe Y., Kikuchi K., Ohashi T., & Tamura T. 1998. *Discovery of the Central Excess Brightness in Hard X-Rays in the Cluster of Galaxies Abell 1795*, ApJ, 500, 738
- Zwicky F. 1933, Helv. Phys. Acta, 6, 110

Zwicky F., Herzog E., Wild P., Karpowicz M., & Kowal C. T. 1961, in California Inst. Techn. (1961)