

REFERENCES

Bibliography

- Aalto, S., Hüttemeister, S., Scoville, N. Z., & Thaddeus, P. 1999, *ApJ*, 522, 165
- Adler, D. S., & Westpfahl, D. J. 1996, *AJ*, 111, 735
- Alcock, C., & The MACHO collaboration 2000, *ApJ*, 542, 281
- Athanassoula, E. 1978, *A&A*, 69, 395
- Athanassoula, E. 1984, in *Physics Reports (Review Section of Physics Letters)* 114, Nos. 5 & 6, (Amsterdam: North-Holland Phys. Publ.), 319
- Athanassoula, E., Bosma, A., & Papaioannou, S. 1987, *A&A*, 179, 23
- Avila-Reese, V., Colín, P., Valenzuela, O., D'Onghia, E., & Firmani, C. 2001, *ApJ*, 559, 516
- Bacon, D. J., Refregier, A. R., & Ellis, R. S. 2000, *MNRAS*, 318, 625
- Beauvais, C., & Bothun, G. 1999, *ApJS*, 125, 99
- Beckman, J. E., & Cepa, J. 1990, *A&A*, 229, 37
- Bell, E. F., & de Jong, R. S. 2001, *ApJ*, 550, 212
- Bernabei, R., & The DAMA Collaboration 1999, *Phys. Lett.*, B450, 448
- Bertin, G. 1993, *PASP*, 105, 640
- Bertin, G., Lin, C., Lowe, S., & Thurstans, R. 1989a, *ApJ*, 338, 78
- Bertin, G., Lin, C., Lowe, S., & Thurstans, R. 1989b, *ApJ*, 338, 104
- Bizenberger, P., McCaughrean, M., Birk, C., Thompson, D., & Storz, C. 1998, *SPIE*, 3354, 825
- Bhatnagar, P. L., Gross, E. P., & Krook, M. 1954, *Phys. Rev.*, 94, 511

BIBLIOGRAPHY

- Blais-Ouellette, S., Carignan, C., Amram, Ph., & Côté, S. 1999, *AJ*, 118, 2123
- Blumenthal, G. R., Faber, S. M., Flores, R., & Primack, J. R. 1986, *ApJ*, 301, 27
- Borriello, A., & Salucci, P. 2001, *MNRAS*, 323, 285
- Bottema, R. 1997, *A&A*, 328, 517
- Braine, J., Combes, F., Casoli, F., Dupraz, C., Gerin, M., Klein, U., Wielebinski, R., & Brouillet, N. 1993, *A&AS*, 97, 887
- Broeils, A. H., & Courteau, S. 1997, in 'Dark and Visible Matter in Galaxies and Cosmological Implications', ASP Conf. Ser. 117, ed. M. Persic, & P. Salucci, (San Francisco: ASP), 74
- Bruzual, A. G., & Charlot, S. 2002, in preparation
- Caldwell, D. 1999, in 'The Identification of Dark Matter, Proceedings of the Second International Workshop', Eds. N. J. Spooner & V. Kudryavtsev (Singapore: World Scientific), 527
- Cannon, D. B., Ponman, T. J., & Hobbs, I. S. 1999, *MNRAS*, 302, 9
- Canzian, B., Allen, R. J., & Tilanus, R. P. J. 1993, *ApJ*, 406, 457
- Canzian, B., & Allen, R. J. 1997, *ApJ*, 479, 723
- Carlberg, R., Yee, H., Ellingson, E., Abraham, R., Gravel, P., Morris, S., & Pritchet, C. 1996, *ApJ*, 462, 32
- Carroll, B. W., & Ostlie, D. A. 1996, *An Introduction to Modern Astrophysics* (Reading: Addison-Wesley)
- Cen, R., & Ostriker, J. P. 1999, *ApJ*, 514, 1
- Cirimele, G., Nesci, R., & Trevese, D. 1997, *ApJ*, 475, 11
- Cole, S., Lacey, C. G., Baugh, C. M., & Frenk, C. S. 2000, *MNRAS*, 319, 168
- Contopoulos, G., & Grosbøl, P. 1986, *A&A*, 155, 11
- Contopoulos, G., & Grosbøl, P. 1988, *A&A*, 197, 83
- Courteau S., & Rix H.-W. 1999, *ApJ*, 513, 561
- David, L. P., Jones, C., & Forman, W. 1995, *ApJ*, 445, 578
- Debattista V. P., & Sellwood J. A. 1998, *ApJ*, 493, L5
- Debattista V. P., & Sellwood J. A. 2000, *ApJ*, 543, 704
- de Bernardis, P. et al. 2000, *Nature*, 404, 955
- de Blok, W., McGaugh, S., Bosma, A., & Rubin, V. 2001, *ApJ*, 552, L23

BIBLIOGRAPHY

- Dehnen, W., & Binney, J. 1998, MNRAS, 294, 429
- Donner, K. J., & Thomasson, M. 1994, A&A, 290, 785
- Elmegreen, B. G., Elmegreen, D. M., & Montenegro, L. 1992, ApJS, 79, 37
- Elmegreen, D. M. 1980, ApJ, 242, 528
- Elmegreen, D. M., Chromey, F. C., Bissell, B. A., & Corrado, K. 1999, ApJ, 118, 2618
- Englmaier, P., & Gerhard, O. 1997, MNRAS, 287, 57
- Englmaier, P., & Gerhard, O. 1999, MNRAS, 304, 512
- Erickson, L. K., Gottesman, S. T., & Hunter, J. H. Jr. 1999, ApJ, 515, 153
- Eskridge, Paul B., Frogel, Jay A., Pogge, Richard W., et al. 2000, AJ, 119, 536
- Evans, Rh. 1993, AAS, 182, 3120
- Federspiel, M., Tammann, G. A., & Sandage, A. 1998, ApJ, 495, 115
- Fields, B. D., Freese, K., & Graff, D. S. 2000, ApJ, 534, 265
- Flores, R. A., & Primack, J. R. 1994, ApJ, 427, L1
- Frei, Z., Guhathakurta, P., Gunn, J. E. , & Tyson, J. A. 1996, AJ, 111, 174
- Frogel, J., Quillen, A., & Pogge, R. 1996, in 'Cold Dust and Galaxy Morphology, Proceedings of the international conference', held in Johannesburg, South Africa, Eds. D. L. Block and J. M. Greenberg (Dordrecht: Kluwer) 1996, 65
- Fukugita, M., Hogan, C. J., & Peebles, P. J. E. 1998, ApJ, 503, 518
- Fukushige, T., & Makino, J. 1997, ApJ, 477, L9
- Gadotti, D. A., & dos Anjos, S. 2001, AJ, 122, 1298
- Garcia, A. M. 1993, A&AS, 100, 47
- Garcia-Burillo, S., Combes, F., & Gerin, M. 1993, A&A, 274, 148
- Garcia-Burillo, S., Sempere, M. J., & Combes, F. 1994, A&A, 287, 419
- Gavazzi, G., Pierini, D., & Boselli, A. 1996, A&A, 312, 397
- Gerola, H., & Seiden, P. E. 1978 ApJ, 223, 129
- Giraud, E. 1998, AJ, 116, 1125
- Gnedin, O. Y., Goodman, J., & Frei Z. 1995, AJ, 110, 1105
- González, R. A., & Graham, J. R. 1996, ApJ, 460, 651
- Graff, D. S., & Freese, K. 1996, ApJ, 456, L49

BIBLIOGRAPHY

- Gray, M., Taylor, A., Meisenheimer, K., Dye, S., Wolf, C., & Thommes E. 2002 *ApJ*, in press (astro-ph/0111288)
- Griffiths, R. E., Casertano, S., Im, M., & Ratnatunga, K. U. 1996, *MNRAS*, 282, 1159
- Grosbøl, P. J., Block, D. L., & Patsis, P. A. 2000, in 'Dynamics of Galaxies', ASP Conf. Ser. 197, eds. F. Combes, G. A. Mamon, & V. Charmandaris, (San Francisco: ASP), 191
- Helfer, T., Regan, M., Thornley, M., Wong, T., Sheth, K., Vogel, S., Bock, D., Blitz, L., & Harris, A. 2001, *Ap&SS*, 276, 1131
- Héraudeau, P., & Simien, F. 1996, *A&AS*, 118, 111
- Howard, S., Keel, W. C., Byrd, G., & Burkey J. 1993, *ApJ*, 417, 502
- Ibata, R., Irwin, M., Bienaymé, O., Scholz, R., & Guibert, J. 2000, *ApJ*, 532, L41
- Ibata, R., Richer, H., Gilliland, R. I., & Scott, D. 1999, *ApJ*, 524, L95
- Jedamzik, K., 2001, in 'Dark Matter in Astro- and Particle Physics, Proceedings of the International Conference, Dark 2000', ed. H. V. Klapdor-Kleingrothaus (Berlin: Springer), 289
- Jones, C., Stern, C., Forman, W., Breen, J., David, L., Tucker, W., & Franx, M. 1997, *ApJ*, 482, 143
- Jungman, G., Kamionkowski, M., & Griest, K., 1996, *Phys. Rep.* 267, 195
- Kamionkowski, M. 1998, in 'High Energy Physics and Cosmology, Proceedings of 1997 ITCF Summer School', eds. E. Gava, A. Masiero, K. Narain, S. Randjbar-Daemi, G. Senjanovic, A. Smirnov, Q. Shafi (Singapore: World Scientific), 394
- Kauffmann G., Colberg J., Diaferio A., & White S. D. M. 1999, *MNRAS*, 303, 188
- Kent, S. M. 1986, *AJ*, 91, 1301
- Knapen, J. H., & Beckman, J. E. 1996, *MNRAS*, 283, 251
- Kneib, J. P., Mellier, Y., Pello, R., Miralda-Escude, J., Le Borgne, J.-F., Böhringer, H., & Picat, J.-P. 1995, *A&A*, 303, 27
- Kranz, T., Slyz, A., & Rix, H.-W. 2001, *ApJ*, 562, 164
- Kuijken, K. 1995, in 'Stellar Populations', IAU Symp. Proc. 164, eds. P. C. van der Kruit, & G. Gilmore, (Dordrecht: Kluwer), 195
- Lasserre, T., & The EROS collaboration 2000, *A&A*, 355, L39
- Lin, C. C., & Shu, F. H. 1964, *ApJ*, 140, 646
- Lin, C. C., & Shu, F. H. 1966, *Proc. Nat. Acad. Sci.*, 55, 229

BIBLIOGRAPHY

- Lin, C. C., Yuan, C., & Shu, F. H. 1969, *ApJ*, 155, 721
- Loewenstein, M., & White, R. E., 1999, *ApJ*, 518, 50
- Lubow, S. H., Balbus, S. A., & Cowie, L. L. 1986, *ApJ*, 309, 496
- Maller, A., Simard, L., Guhathakurta, P., et al. 2000, *ApJ*, 533, 194
- Massey, P. 1997, 'A User's Guide to CCD Reductions with IRAF', available from <http://iraf.noao.edu/docs/recommend.html>
- Massey, P., Valdes, F., & Barnes, J. 1992, 'A User's Guide to Reducing Slit Spectra with IRAF', available from <http://iraf.noao.edu/docs/recommend.html>
- McGaugh, S. S. 2000, *ApJ*, 541, L33
- McGaugh, S. S., & de Blok, W. J. G. 1998, *ApJ*, 499, 66
- Mellier, Y. 1999, *ARA&A*, 37, 127
- Meneghetti, M., Yoshida, N., Bartelmann, M., Moscardini, L., Springel, V., Tormen, G., & White, S. D. M. 2001, *MNRAS*, 325, 435
- Milgrom, M. 1983, *ApJ*, 270, 365
- Milgrom, M. 1998, *ApJ*, 496, L89
- Miralda-Escude, J. 2002, *ApJ*, 564, 60
- Moore, B. 1994, *Nature*, 370, 629
- Moore, B., Ghigna, S., Governato, F., et al. 1999a, *ApJ*, 524, L19
- Moore, B., Quinn, T., Governato, F., Stadel, J., & Lake, G. 1999b, *MNRAS*, 310, 1147
- Mulder, P. S., & Combes, F. 1996, *A&A*, 313, 723
- Navarro J., Frenk C., & White S. D. 1996, *ApJ*, 462, 563
- Navarro J., Frenk C., & White S. D. 1997, *ApJ*, 490, 493
- Ostriker, J. P. 2000, *Phys. Rev. Lett.*, 84, 5258
- Palunas, P., & Williams, T. B. 2000, *AJ*, 120, 2884
- Patsis, P. A., Contopoulos, G., & Grosbøl, P. J. 1991, *A&A*, 243, 373
- Patsis, P. A., Grosbøl, P. J., & Hiotelis, N. 1997, *A&A*, 323, 762
- Patsis, P. A., & Kaufmann, D. E. 1999, *A&A*, 352, 469
- Pearce, F. R., Jenkins, A., Frenk, C. S., White, S. D. M., Thomas, P. A., Couchman, H. M., Peacock, J. A., & Efstathiou, G. 2001, *MNRAS*, 326, 649
- Peccei, R. D. & Quinn, H. R. 1977, *Phys. Rev. D*, 16, 1791

BIBLIOGRAPHY

- Peebles, P. J. E. 2000, *ApJ*, 534, L127
- Perlmutter, S. et al. 1999, *ApJ*, 517, 565
- Persson, S., Murphy, D., Krzeminiski, W., Roth, M., & Rieke, M. 1998, *AJ*, 116, 2475
- Phookun, B., Vogel, S. N., & Mundy, L. G. 1993, *ApJ*, 418, 113
- Pierce, M. J., & Tully, R. B. 1988, *ApJ*, 330, 579
- Pignatelli, E., Corsini, E. M., Vega Beltrán, J. C., Scarlata, C., Pizzella, A., Funes, J. G., Zeilinger, W. W., Beckman, J. E., & Bertola, F. 2001, *MNRAS*, 323, 188
- Prendergast, K. H., & Xu, K. 1993, *J. Comput. Phys.*, 109, 53
- Primack, J., & Gross, M. 2001, in 'Current aspects of neutrino physics', ed. David O. Caldwell (Berlin: Springer), 287
- Quillen, A. C., & Pickering, T. E. 1997, *AJ*, 113, 2075
- Quillen, A. C. 1999, in *ASP Conf. Ser. 182, Galaxy Dynamics*, ed. by D. Merritt, M. Valluri, & J. Sellwood, (San Francisco: ASP), 251
- Ratnam, C., & Salucci, P. 2000, *New Astronomy*, 5, 427
- Regan, M. W., Teuben, P. J., Vogel, S. N., & van der Hulst, T. 1996, *AJ*, 112, 2549
- Rix, H.-W., de Zeeuw, P. T., Cretton, N., van der Marel, R. P., & Carollo, C. M. 1997, *ApJ*, 488, 702
- Rix, H.-W., & Rieke, M. 1993, *ApJ*, 418, 123
- Rix, H.-W., & Zaritsky, D. 1995, *ApJ*, 447
- Roberts, W. W. 1969, *ApJ* 158, 123
- Sackett P. 1997, *ApJ*, 483, 103
- Sakamoto, K., Okumura, S. K., Ishizuki, S., & Scoville, N. Z. 1999, *ApJS*, 124, 403
- Salpeter, E. E. 1955, *ApJ*, 121, 61
- Salucci, P. 2001, *MNRAS*, 320, L1
- Salucci, P., & Burkert, A. 2000, *ApJ*, 537, L9
- Salucci, P., & Persic, M. 1999, *A&A*, 351, 442
- Sandage A., & Tammann, G. A. 1976, *ApJ*, 210, 7
- Sanders, R. H. 2000, *MNRAS*, 313, 767
- Sanders, R. H., & Huntley, J. M. 1976, *ApJ*, 209, 53

BIBLIOGRAPHY

- Sarazin, C. L. 1988, 'X-Ray Emissions from Clusters of Galaxies', (Cambridge: Cambridge University Press)
- Schindler, S., Binggeli, B., & Böhringer, H. 1999, *A&A*, 343, 420
- Schweizer, F. 1976, *ApJS*, 31, 313
- Scott, D., White, M., Cohn, J. D., & Pierpaoli, E. 2001, *MNRAS* submitted (astro-ph/0104435)
- Sellwood, J. A. 2000, *ApJ*, 540, L1
- Sempere, M. J., Combes, F., & Casoli, F. 1995, *A&A*, 299, 371
- Shapiro, P. R., & Iliev, I. T. 2000, *ApJ*, 542, L1
- Silva, L., Granato, G. L., Bressan, A., & Danese, L. 1998, *ApJ*, 509, 103
- Slyz, A., 1998, PhD thesis, Columbia University, New York
- Slyz, A., Devriendt, J., Silk, J., & Burkert, A. 2002, *MNRAS*, in press
- Slyz, A., & Prendergast, K. H. 1999, *A&AS*, 139, 199
- Sorensen, S.-A., & Matsuda, T. 1982, *MNRAS*, 198, 865
- Spergel, D. N., & Steinhardt, P. J. 2000, *Phys. Rev. Lett.*, 84, 3760
- Squires, G., Kaiser, N., Babul, A., Fahlman, G., Woods, D., Neumann, D., & Böhringer, H. 1996, *ApJ*, 461, 572
- Steinmetz, M., & Müller, E. 1995, *MNRAS*, 276, 549
- Stompor, R. et al. 2001, *ApJ*, 561, L7
- Thuan, T. X., & Gunn, J. E. 1976, *PASP*, 88, 543
- Toomre, A. 1974, in 'The Formation and Dynamics of Galaxies', ed. J. Shakeshaft (Dordrecht: Reidel Pub.), 347
- Toomre, A. 1981, in 'The Structure and Evolution of Normal Galaxies', eds. S. M. Fall, & D. Lynden-Bell (Cambridge: Cambridge University Press), 111
- Tully, R. B., Verheijen, M. A. W., Pierce, M. J., Huang, J.-S., & Wainscoat, R. J. 1996, *AJ*, 112, 2471
- Tytler, D., O'Meara, J. M., Suzuki, N., & Lubin, D. 2000, *Physics Reports*, 333-334 (1-6), 409
- Udalski, A., Szymański, M., Kałużny, J., Kubiak, M., & Mateo, M. 1992, *Acta Astronomica*, 42, 253
- Valageas, P., Silk, J., & Schaeffer, R. 2001, *A&A*, 366, 363

BIBLIOGRAPHY

- van Albada, T. S., Bahcall, J. N., Begeman, K., & Sancisi, R. 1985, *ApJ*, 295, 305
- van Albada, T. S., & Sancisi, R. 1986, *Phil. Trans. of the Roy. Soc. (London)*, Ser. A 320, no. 1556, 447
- van den Bosch, F. C., & Swaters, R. A. 2001, *MNRAS*, 325, 1017
- Verheijen, M. A. W. 1997, PhD thesis, University of Groningen
- Verheijen, M. A. W., & Sancisi, R. 2001, *A&A*, 370, 765
- Visser, H. C. D. 1980, *A&A*, 88, 159
- Weiner, B. J., Sellwood, J. A., & Williams, T. B. 2001a, *ApJ*, 546, 931
- Weiner, B. J., Williams, T. B., van Gorkom, J. H., & Sellwood, J. A. 2001b, *ApJ*, 546, 916
- Wilson, G., Kaiser, N., & Luppino, G. A. 2001, *ApJ*, 556, 601
- Wray, J. D. 1988, 'The Color Atlas of Galaxies', (Cambridge: Cambridge University Press)
- Xu, K. 1998, Gas-Kinetic Schemes for Unsteady Compressible Flow Simulations, VKI report 1998-03 von Karmann Institute Lecture Series
- Xu, K., & Prendergast K. H. 1994, *J. Comput. Phys.*, 114, 9
- Yoshida, N., Springel, V., White, S. D. M., & Tormen, G. 2000, *ApJ*, 544, L87
- Yuan, C., & Kuo, C.-L. 1997, *ApJ*, 486, 750
- Zwicky, F. 1937, *ApJ*, 86, 217

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