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Bibliography

- Acke, B. & van den Ancker, M. E. 2004, *A&A*, 426, 151
- Adams, F. C., Lada, C. J., & Shu, F. H. 1987, *ApJ*, 312, 788
- Aikawa, Y., Momose, M., Thi, W.-F., et al. 2003, *PASJ*, 55, 11
- Aikawa, Y., van Zadelhoff, G. J., van Dishoeck, E. F., & Herbst, E. 2002, *A&A*, 386, 622
- Akimkin, V., Zhukovska, S., Wiebe, D., et al. 2013, *ApJ*, 766, 8
- Alcala, J. M., Krautter, J., Schmitt, J. H. M. M., et al. 1995, *A&AS*, 114, 109
- Alcalá, J. M., Natta, A., Manara, C. F., et al. 2014, *A&A*, 561, A2
- Alcalá, J. M., Spezzi, L., Chapman, N., et al. 2008, *ApJ*, 676, 427
- Alexander, R., Pascucci, I., Andrews, S., Armitage, P., & Cieza, L. 2014, *Protostars and Planets VI*, 475, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Alexander, R. D. & Armitage, P. J. 2007, *MNRAS*, 375, 500
- Alexander, R. D., Clarke, C. J., & Pringle, J. E. 2006a, *MNRAS*, 369, 216
- Alexander, R. D., Clarke, C. J., & Pringle, J. E. 2006b, *MNRAS*, 369, 229
- André, P., Di Francesco, J., Ward-Thompson, D., et al. 2014, *Protostars and Planets VI*, 27, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Andrews, S. M., Rosenfeld, K. A., Kraus, A. L., & Wilner, D. J. 2013, *ApJ*, 771, 129
- Andrews, S. M. & Williams, J. P. 2005, *ApJ*, 631, 1134
- Andrews, S. M. & Williams, J. P. 2007a, *ApJ*, 671, 1800
- Andrews, S. M. & Williams, J. P. 2007b, *ApJ*, 659, 705
- Andrews, S. M., Wilner, D. J., Espaillat, C., et al. 2011, *ApJ*, 732, 42
- Andrews, S. M., Wilner, D. J., Hughes, A. M., Qi, C., & Dullemond, C. P. 2009, *ApJ*, 700, 1502
- Andrews, S. M., Wilner, D. J., Hughes, A. M., Qi, C., & Dullemond, C. P. 2010, *ApJ*, 723, 1241
- Andrews, S. M., Wilner, D. J., Hughes, A. M., et al. 2012, *ApJ*, 744, 162
- Armitage, P. J. 2011, *ARAA*, 49, 195
- Artymowicz, P. & Lubow, S. H. 1996, *ApJ*, 467, L77
- Ataiee, S. & Pinilla, P. 2015, *subm. to MNRAS*
- Ataiee, S., Pinilla, P., Zsom, A., et al. 2013, *A&A*, 553, L3
- Baraffe, I., Chabrier, G., Allard, F., & Hauschildt, P. H. 1998, *A&A*, 337, 403
- Barge, P. & Sommeria, J. 1995, *A&A*, 295, L1
- Barranco, J. A. & Marcus, P. S. 2005, *ApJ*, 623, 1157
- Baryshev, A. M., Hesper, R., Mena, F. P., et al. 2015, *A&A*, 577, A129
- Bast, J. E., Brown, J. M., Herczeg, G. J., van Dishoeck, E. F., & Pontoppidan, K. M. 2011, *A&A*, 527, A119
- Batalha, N. M. 2014, *Proceedings of the National Academy of Science*, 111, 12647
- Batalha, N. M., Rowe, J. F., Bryson, S. T., et al. 2013, *ApJS*, 204, 24
- Beckwith, S. V. W. & Sargent, A. I. 1991, *ApJ*, 381, 250
- Bergin, E., Calvet, N., D'Alessio, P., & Herczeg, G. J. 2003, *ApJ*, 591, L159
- Bergin, E. A., Aikawa, Y., Blake, G. A., & van Dishoeck, E. F. 2007, *Protostars and Planets V*, 751, eds. B. Reipurth, D. Jewitt, and K. Keil (University of Arizona Press)
- Bertout, C. 1989, *ARA&A*, 27, 351
- Biller, B., Allers, K., Liu, M., Close, L. M., & Dupuy, T. 2011, *ApJ*, 730, 39
- Biller, B., Lacour, S., Juhász, A., et al. 2012, *ApJ*, 753, L38
- Birnstiel, T. & Andrews, S. M. 2014, *ApJ*, 780, 153
- Birnstiel, T., Andrews, S. M., & Ercolano, B. 2012, *A&A*, 544, A79

- Birnstiel, T., Dullemond, C. P., & Brauer, F. 2010, *A&A*, 513, A79
- Birnstiel, T., Dullemond, C. P., & Pinilla, P. 2013, *A&A*, 550, L8
- Bisschop, S. E., Fraser, H. J., Öberg, K. I., van Dishoeck, E. F., & Schlemmer, S. 2006, *A&A*, 449, 1297
- Bisschop, S. E., Jørgensen, J. K., van Dishoeck, E. F., & de Wachter, E. B. M. 2007, *A&A*, 465, 913
- Blum, J. & Wurm, G. 2008, *ARA&A*, 46, 21
- Boogert, A. C. A., Hogerheijde, M. R., Ceccarelli, C., et al. 2002, *ApJ*, 570, 708
- Boss, A. P. 1997, *Science*, 276, 1836
- Bouwman, J., Lawson, W. A., Juhász, A., et al. 2010, *ApJ*, 723, L243
- Brauer, F., Dullemond, C. P., & Henning, T. 2008, *A&A*, 480, 859
- Brinch, C. & Hogerheijde, M. R. 2010, *A&A*, 523, A25
- Brittain, S. D., Najita, J. R., & Carr, J. S. 2009, *ApJ*, 702, 85
- Broekhoven-Fiene, H., Matthews, B. C., Harvey, P. M., et al. 2014, *ApJ*, 786, 37
- Brown, J. M., Blake, G. A., Dullemond, C. P., et al. 2007, *ApJ*, 664, L107
- Brown, J. M., Blake, G. A., Qi, C., Dullemond, C. P., & Wilner, D. J. 2008, *ApJ*, 675, L109
- Brown, J. M., Blake, G. A., Qi, C., et al. 2009, *ApJ*, 704, 496
- Brown, J. M., Herczeg, G. J., Pontoppidan, K. M., & van Dishoeck, E. F. 2012a, *ApJ*, 744, 116
- Brown, J. M., Pontoppidan, K. M., van Dishoeck, E. F., et al. 2013, *ApJ*, 770, 94
- Brown, J. M., Rosenfeld, K. A., Andrews, S. M., Wilner, D. J., & van Dishoeck, E. F. 2012b, *ApJ*, 758, L30
- Bruderer, S. 2013, *A&A*, 559, A46
- Bruderer, S., van der Marel, N., van Dishoeck, E. F., & van Kempen, T. A. 2014, *A&A*, 562, A26
- Bruderer, S., van Dishoeck, E. F., Doty, S. D., & Herczeg, G. J. 2012, *A&A*, 541, A91
- Bustamante, I., Merín, B., Ribas, Á., et al. 2015, *A&A*, 578, A23
- Calvet, N., D'Alessio, P., Hartmann, L., et al. 2002, *ApJ*, 568, 1008
- Calvet, N., D'Alessio, P., Watson, D. M., et al. 2005, *ApJ*, 630, L185
- Calvet, N., Muzerolle, J., Briceño, C., et al. 2004, *AJ*, 128, 1294
- Canovas, H., Schreiber, M. R., Cáceres, C., et al. 2015, *ApJ*, 805, 21
- Carmona, A., Pinte, C., Thi, W. F., et al. 2014, *A&A*, 567, A51
- Carpenter, J. M., Bouwman, J., Silverstone, M. D., et al. 2008, *ApJS*, 179, 423
- Carpenter, J. M., Ricci, L., & Isella, A. 2014, *ApJ*, 787, 42
- Casassus, S., van der Plas, G., M, S. P., et al. 2013, *Nature*, 493, 191
- Casassus, S., Wright, C., Marino, S., et al. 2015, *ArXiv e-prints*
- Castelli, F. & Kurucz, R. L. 2004, *ArXiv Astrophysics e-prints*
- Ceccarelli, C., Loinard, L., Castets, A., Tielens, A. G. G. M., & Caux, E. 2000, *A&A*, 357, L9
- Chiang, E. I. & Goldreich, P. 1997, *ApJ*, 490, 368
- Cieza, L., Padgett, D. L., Stapelfeldt, K. R., et al. 2007, *ApJ*, 667, 308
- Cieza, L. A., Mathews, G. S., Williams, J. P., et al. 2012a, *ApJ*, 752, 75
- Cieza, L. A., Schreiber, M. R., Romero, G. A., et al. 2010, *ApJ*, 712, 925
- Cieza, L. A., Schreiber, M. R., Romero, G. A., et al. 2012b, *ApJ*, 750, 157
- Cieza, L. A., Swift, J. J., Mathews, G. S., & Williams, J. P. 2008, *ApJ*, 686, L115
- Clarke, C. J., Gendrin, A., & Sotomayor, M. 2001, *MNRAS*, 328, 485
- Cleeves, L. I., Adams, F. C., & Bergin, E. A. 2013, *ApJ*, 772, 5
- Cleeves, L. I., Bergin, E. A., Bethell, T. J., et al. 2011, *ApJ*, 743, L2
- Collings, M. P., Anderson, M. A., Chen, R., et al. 2004, *MNRAS*, 354, 1133
- Comerón, F. 2008, *The Lupus Clouds*, 295, ed. B. Reipurth
- Comerón, F. 2012, *A&A*, 537, A97
- Comerón, F., Reipurth, B., Henry, A., & Fernández, M. 2004, *A&A*, 417, 583
- Comerón, F., Spezzi, L., & López Martí, B. 2009, *A&A*, 500, 1045
- Cortés, S. R., Meyer, M. R., Carpenter, J. M., et al. 2009, *ApJ*, 697, 1305

- Crida, A. & Morbidelli, A. 2007, *MNRAS*, 377, 1324
- Crida, A., Morbidelli, A., & Masset, F. 2006, *Icarus*, 181, 587
- Cuppen, H. M., van Dishoeck, E. F., Herbst, E., & Tielens, A. G. G. M. 2009, *A&A*, 508, 275
- Currie, T. & Kenyon, S. J. 2009, *AJ*, 138, 703
- Cutri, R. M., Skrutskie, M. F., van Dyk, S., et al. 2003, *VizieR Online Data Catalog*, 2246, 0
- Dahm, S. E. 2008, *AJ*, 136, 521
- D'Alessio, P., Hartmann, L., Calvet, N., et al. 2005, *ApJ*, 621, 461
- de Juan Ovelar, M., Min, M., Dominik, C., et al. 2013, *A&A*, 560, A111
- de Val-Borro, M., Artymowicz, P., D'Angelo, G., & Peplinski, A. 2007, *A&A*, 471, 1043
- Dent, W. R. F., Greaves, J. S., & Coulson, I. M. 2005, *MNRAS*, 359, 663
- Dent, W. R. F., Wyatt, M. C., Roberge, A., et al. 2014, *Science*, 343, 1490
- Dipierro, G., Pinilla, P., Lodato, G., & Testi, L. 2015, *MNRAS*, 451, 5493
- Dodson-Robinson, S. E. & Salyk, C. 2011, *ApJ*, 738, 131
- Dong, R., Rafikov, R., Zhu, Z., et al. 2012, *ApJ*, 750, 161
- Draine, B. T. 1978, *ApJS*, 36, 595
- Draine, B. T. 2006, *ApJ*, 636, 1114
- Draine, B. T. & Li, A. 2007, *ApJ*, 657, 810
- Dullemond, C. P. & Dominik, C. 2004, *A&A*, 417, 159
- Dullemond, C. P. & Dominik, C. 2005, *A&A*, 434, 971
- Dullemond, C. P., Dominik, C., & Natta, A. 2001, *ApJ*, 560, 957
- Dullemond, C. P. & Monnier, J. D. 2010, *ARA&A*, 48, 205
- Dunham, M. M., Allen, L. E., Evans, II, N. J., et al. 2015, *ArXiv e-prints*
- Dunham, M. M., Stutz, A. M., Allen, L. E., et al. 2014, *Protostars and Planets VI*, 195, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Dunkin, S. K., Barlow, M. J., & Ryan, S. G. 1997, *MNRAS*, 290, 165
- Dutrey, A., Guilloteau, S., & Guelin, M. 1997, *A&A*, 317, L55
- Dutrey, A., Guilloteau, S., Piétu, V., et al. 2008, *A&A*, 490, L15
- Dzib, S., Loinard, L., Mioduszewski, A. J., et al. 2010, *ApJ*, 718, 610
- Dzib, S., Loinard, L., Rodríguez, L. F., Mioduszewski, A. J., & Torres, R. M. 2011, *ApJ*, 733, 71
- Dzyurkevich, N., Flock, M., Turner, N. J., Klahr, H., & Henning, T. 2010, *A&A*, 515, A70
- Edwards, S., Cabrit, S., Strom, S. E., et al. 1987, *ApJ*, 321, 473
- Ehrenfreund, P. & Charnley, S. B. 2000, *ARA&A*, 38, 427
- Emprechtinger, M., Caselli, P., Volgenau, N. H., Stutzki, J., & Wiedner, M. C. 2009, *A&A*, 493, 89
- Enoch, M. L., Young, K. E., Glenn, J., et al. 2006, *ApJ*, 638, 293
- Erickson, K. L., Wilking, B. A., Meyer, M. R., et al. 2015, *AJ*, 149, 103
- Espaillet, C., Calvet, N., D'Alessio, P., et al. 2007, *ApJ*, 670, L135
- Espaillet, C., D'Alessio, P., Hernández, J., et al. 2010, *ApJ*, 717, 441
- Espaillet, C., Furlan, E., D'Alessio, P., et al. 2011, *ApJ*, 728, 49
- Espaillet, C., Muzerolle, J., Najita, J., et al. 2014, *Protostars and Planets VI*, 497, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Evans, II, N. J., Dunham, M. M., Jørgensen, J. K., et al. 2009, *ApJS*, 181, 321
- Fedele, D., Bruderer, S., van Dishoeck, E. F., et al. 2013, *A&A*, 559, A77
- Finkbeiner, D. P., Davis, M., & Schlegel, D. J. 1999, *ApJ*, 524, 867
- Flaherty, K. M. & Muzerolle, J. 2010, *ApJ*, 719, 1733
- Flaherty, K. M., Muzerolle, J., Rieke, G., et al. 2012, *ApJ*, 748, 71
- Flock, M., Ruge, J. P., Dzyurkevich, N., et al. 2015, *A&A*, 574, A68
- Flower, D. R. 1999, *MNRAS*, 305, 651
- Follette, K. B., Grady, C. A., Swearingen, J. R., et al. 2015, *ApJ*, 798, 132
- Follette, K. B., Tamura, M., Hashimoto, J., et al. 2013, *ApJ*, 767, 10

- Forrest, W. J., Sargent, B., Furlan, E., et al. 2004, *ApJS*, 154, 443
- Fuchs, G. W., Cuppen, H. M., Ioppolo, S., et al. 2009, *A&A*, 505, 629
- Fukagawa, M., Tsukagoshi, T., Momose, M., et al. 2013, *PASJ*, 65, L14
- Fung, J., Shi, J.-M., & Chiang, E. 2014, *ApJ*, 782, 88
- Furlan, E., Hartmann, L., Calvet, N., et al. 2006, *ApJS*, 165, 568
- Furlan, E., Luhman, K. L., Espaillat, C., et al. 2011, *ApJS*, 195, 3
- Gammie, C. F. 1996, *ApJ*, 457, 355
- Gammie, C. F. 2001, *ApJ*, 553, 174
- Garaud, P. 2007, *ApJ*, 671, 2091
- Garcia Lopez, R., Natta, A., Testi, L., & Habart, E. 2006, *A&A*, 459, 837
- Garrod, R., Park, I. H., Caselli, P., & Herbst, E. 2006, *Faraday Discussions*, 133, 51
- Garufi, A., Quanz, S. P., Avenhaus, H., et al. 2013, *A&A*, 560, A105
- Geers, V. C., Augereau, J.-C., Pontoppidan, K. M., et al. 2006, *A&A*, 459, 545
- Geers, V. C., Pontoppidan, K. M., van Dishoeck, E. F., et al. 2007, *A&A*, 469, L35
- Geppert, W. D., Hamberg, M., Thomas, R. D., et al. 2006, *Faraday Discussions*, 133, 177
- Ghez, A. M., McCarthy, D. W., Patience, J. L., & Beck, T. L. 1997, *ApJ*, 481, 378
- Gorti, U., Dullemond, C. P., & Hollenbach, D. 2009, *ApJ*, 705, 1237
- Gorti, U. & Hollenbach, D. 2004, *ApJ*, 613, 424
- Gorti, U. & Hollenbach, D. 2008, *ApJ*, 683, 287
- Goto, M., Usuda, T., Dullemond, C. P., et al. 2006, *ApJ*, 652, 758
- Grady, C. A., Schneider, G., Sitko, M. L., et al. 2009, *ApJ*, 699, 1822
- Gräfe, C. & Wolf, S. 2013, *A&A*, 552, A88
- Guenther, E. W., Esposito, M., Mundt, R., et al. 2007, *A&A*, 467, 1147
- Guilloteau, S., Dutrey, A., Piétu, V., & Boehler, Y. 2011, *A&A*, 529, A105
- Guzmán, V. V., Goicoechea, J. R., Pety, J., et al. 2013, *A&A*, 560, A73
- Hartmann, L., Calvet, N., Gullbring, E., & D'Alessio, P. 1998, *ApJ*, 495, 385
- Harvey, P., Merín, B., Huard, T. L., et al. 2007, *ApJ*, 663, 1149
- Harvey, P. M., Huard, T. L., Jørgensen, J. K., et al. 2008, *ApJ*, 680, 495
- Hatchell, J., Terebey, S., Huard, T., et al. 2012, *ApJ*, 754, 104
- Helled, R., Bodenheimer, P., Podolak, M., et al. 2014, *Protostars and Planets VI*, 643, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Helou, G. & Walker, D. W., eds. 1988, *Infrared astronomical satellite (IRAS) catalogs and atlases.*, Vol. 7
- Henning, T., Il'In, V. B., Krivova, N. A., Michel, B., & Voshchinnikov, N. V. 1999, *A&AS*, 136, 405
- Henning, T., Pfau, W., Zinnecker, H., & Prusti, T. 1993, *A&A*, 276, 129
- Henning, T. & Semenov, D. 2013, *Chemical Reviews*, 113, 9016
- Herbig, G. H. 1957, in *IAU Symposium*, Vol. 3, Non-stable stars, 3, ed. G. H. Herbig
- Herbig, G. H. 1960, *ApJS*, 4, 337
- Herbst, E. & van Dishoeck, E. F. 2009, *ARA&A*, 47, 427
- Herczeg, G. J. & Hillenbrand, L. A. 2014, *ApJ*, 786, 97
- Hernández, J., Hartmann, L., Megeath, T., et al. 2007, *ApJ*, 662, 1067
- Hernández, J., Morales-Calderon, M., Calvet, N., et al. 2010, *ApJ*, 722, 1226
- Hidaka, H., Watanabe, N., Shiraki, T., Nagaoka, A., & Kouchi, A. 2004, *ApJ*, 614, 1124
- Hiraoka, K., Sato, T., Sato, S., et al. 2002, *ApJ*, 577, 265
- Høg, E., Fabricius, C., Makarov, V. V., et al. 2000, *A&A*, 355, L27
- Hogerheijde, M. R., Bergin, E. A., Brinch, C., et al. 2011, *Science*, 334, 338
- Holland, W. S., Bintley, D., Chapin, E. L., et al. 2013, *MNRAS*, 430, 2513
- Hollenbach, D. J., Yorke, H. W., & Johnstone, D. 2000, *Protostars and Planets IV*, 401, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Huélamo, N., de Gregorio-Monsalvo, I., Macías, E., et al. 2015, *A&A*, 575, L5

- Huélamo, N., Lacour, S., Tuthill, P., et al. 2011, *A&A*, 528, L7
- Hughes, A. M., Andrews, S. M., Espaillat, C., et al. 2009, *ApJ*, 698, 131
- Hughes, A. M., Andrews, S. M., Wilner, D. J., et al. 2010, *AJ*, 140, 887
- Hughes, A. M., Wilner, D. J., Andrews, S. M., Qi, C., & Hogerheijde, M. R. 2011, *ApJ*, 727, 85
- Hughes, A. M., Wilner, D. J., Qi, C., & Hogerheijde, M. R. 2008, *ApJ*, 678, 1119
- Ilgner, M. & Nelson, R. P. 2006, *A&A*, 445, 205
- Indebetouw, R., Mathis, J. S., Babler, B. L., et al. 2005, *ApJ*, 619, 931
- Ingleby, L., Calvet, N., Bergin, E., et al. 2009, *ApJ*, 703, L137
- Ioppolo, S., van Boheemen, Y., Cuppen, H. M., van Dishoeck, E. F., & Linnartz, H. 2011, *MNRAS*, 413, 2281
- Ireland, M. J. & Kraus, A. L. 2008, *ApJ*, 678, L59
- Isella, A., Carpenter, J. M., & Sargent, A. I. 2009, *ApJ*, 701, 260
- Isella, A., Carpenter, J. M., & Sargent, A. I. 2010a, *ApJ*, 714, 1746
- Isella, A., Natta, A., Wilner, D., Carpenter, J. M., & Testi, L. 2010b, *ApJ*, 725, 1735
- Isella, A., Pérez, L. M., & Carpenter, J. M. 2012, *ApJ*, 747, 136
- Isella, A., Pérez, L. M., Carpenter, J. M., et al. 2013, *ApJ*, 775, 30
- Jensen, E. L. N., Mathieu, R. D., & Fuller, G. A. 1996, *ApJ*, 458, 312
- Jewitt, D. C. & Luu, J. X. 2000, *Protostars and Planets IV*, 1201, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Johansen, A., Oishi, J. S., Mac Low, M.-M., et al. 2007, *Nature*, 448, 1022
- Johansen, A., Youdin, A., & Klahr, H. 2009, *ApJ*, 697, 1269
- Jonkheid, B., Dullemond, C. P., Hogerheijde, M. R., & van Dishoeck, E. F. 2007, *A&A*, 463, 203
- Jonkheid, B., Faas, F. G. A., van Zadelhoff, G.-J., & van Dishoeck, E. F. 2004, *A&A*, 428, 511
- Jonkheid, B., Kamp, I., Augereau, J.-C., & van Dishoeck, E. F. 2006, *A&A*, 453, 163
- Jørgensen, J. K., Harvey, P. M., Evans, II, N. J., et al. 2006, *ApJ*, 645, 1246
- Jørgensen, J. K., Schöier, F. L., & van Dishoeck, E. F. 2004, *A&A*, 416, 603
- Joy, A. H. 1945, *ApJ*, 102, 168
- Kamp, I. & Dullemond, C. P. 2004, *ApJ*, 615, 991
- Kanagawa, K. D., Muto, T., Tanaka, H., et al. 2015, *ApJ*, 806, L15
- Kastner, J. H., Zuckerman, B., Hily-Blant, P., & Forveille, T. 2008, *A&A*, 492, 469
- Kenyon, S. J., Gómez, M., & Whitney, B. A. 2008, *Low Mass Star Formation in the Taurus-Auriga Clouds*, 405, ed. B. Reipurth
- Kenyon, S. J. & Hartmann, L. 1987, *ApJ*, 323, 714
- Kenyon, S. J. & Hartmann, L. 1995, *ApJS*, 101, 117
- Kessler-Silacci, J., Augereau, J.-C., Dullemond, C. P., et al. 2006, *ApJ*, 639, 275
- Kim, K. H., Watson, D. M., Manoj, P., et al. 2009, *ApJ*, 700, 1017
- Kirk, J. M., Ward-Thompson, D., Di Francesco, J., et al. 2009, *ApJS*, 185, 198
- Klahr, H. H. & Bodenheimer, P. 2003, *ApJ*, 582, 869
- Klahr, H. H. & Henning, T. 1997, *Icarus*, 128, 213
- Kley, W. & Nelson, R. P. 2012, *ARA&A*, 50, 211
- Kohler, R. & Leinert, C. 1998, *A&A*, 331, 977
- Kóspál, Á., Moór, A., Juhász, A., et al. 2013, *ApJ*, 776, 77
- Kovács, A. 2008, in *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, Vol. 7020, 1
- Kraus, A. L. & Hillenbrand, L. A. 2009, *ApJ*, 703, 1511
- Kraus, A. L. & Ireland, M. J. 2012, *ApJ*, 745, 5
- Kraus, A. L., Ireland, M. J., Martinache, F., & Lloyd, J. P. 2008, *ApJ*, 679, 762
- Kretke, K. A. & Lin, D. N. C. 2007, *ApJ*, 664, L55
- Lafrenière, D., Jayawardhana, R., Brandeker, A., Ahmic, M., & van Kerkwijk, M. H. 2008, *ApJ*, 683,

844

- Lagrange, A.-M., Bonnefoy, M., Chauvin, G., et al. 2010, *Science*, 329, 57
- Lahuis, F., van Dishoeck, E. F., Blake, G. A., et al. 2007, *ApJ*, 665, 492
- Lawson, W. A., Lyo, A.-R., & Muzerolle, J. 2004, *MNRAS*, 351, L39
- Lazzaro, D., Sicardy, B., Roques, F., & Greenberg, R. 1994, *Icarus*, 108, 59
- Lebouteiller, V., Barry, D. J., Spoon, H. W. W., et al. 2011, *ApJS*, 196, 8
- Leinert, C., Henry, T., Glindemann, A., & McCarthy, Jr., D. W. 1997, *A&A*, 325, 159
- Lesur, G. & Papaloizou, J. C. B. 2009, *A&A*, 498, 1
- Lin, D. N. C. & Papaloizou, J. 1979, *MNRAS*, 188, 191
- Lique, F., Spielfiedel, A., Feautrier, N., et al. 2010, *J. Chem. Phys.*, 132, 024303
- Loinard, L., Torres, R. M., Mioduszewski, A. J., & Rodríguez, L. F. 2008, *ApJ*, 675, L29
- Lommen, D., Maddison, S. T., Wright, C. M., et al. 2009, *A&A*, 495, 869
- Lommen, D., Wright, C. M., Maddison, S. T., et al. 2007, *A&A*, 462, 211
- Lommen, D. J. P., van Dishoeck, E. F., Wright, C. M., et al. 2010, *A&A*, 515, A77
- Loren, R. B. 1989, *ApJ*, 338, 902
- Lovelace, R. V. E., Li, H., Colgate, S. A., & Nelson, A. F. 1999, *ApJ*, 513, 805
- Lubow, S. H. & D'Angelo, G. 2006, *ApJ*, 641, 526
- Luhman, K. L. 2004, *ApJ*, 602, 816
- Luhman, K. L. 2007, *ApJS*, 173, 104
- Luhman, K. L., Allen, L. E., Allen, P. R., et al. 2008, *ApJ*, 675, 1375
- Luhman, K. L., Allen, P. R., Espaillat, C., Hartmann, L., & Calvet, N. 2010, *ApJS*, 186, 111
- Luhman, K. L. & Muench, A. A. 2008, *ApJ*, 684, 654
- Luhman, K. L. & Rieke, G. H. 1999, *ApJ*, 525, 440
- Lynden-Bell, D. & Pringle, J. E. 1974, *MNRAS*, 168, 603
- Lyo, A.-R., Ohashi, N., Qi, C., Wilner, D. J., & Su, Y.-N. 2011, *AJ*, 142, 151
- Lyra, W., Johansen, A., Klahr, H., & Piskunov, N. 2009, *A&A*, 493, 1125
- Lyra, W. & Lin, M.-K. 2013, *ApJ*, 775, 17
- Lyra, W., Turner, N. J., & McNally, C. P. 2015, *A&A*, 574, A10
- Maaskant, K. M., Honda, M., Waters, L. B. F. M., et al. 2013, *A&A*, 555, A64
- Makarov, V. V. 2007, *ApJ*, 670, 1225
- Mamajek, E. E., Lawson, W. A., & Feigelson, E. D. 1999, *ApJ*, 516, L77
- Manara, C., Fedele, D., & Herczeg, G. 2015, *subm. to A&A*
- Manara, C. F., Testi, L., Natta, A., et al. 2014, *A&A*, 568, A18
- Marino, S., Perez, S., & Casassus, S. 2015, *ApJ*, 798, L44
- Marois, C., Macintosh, B., Barman, T., et al. 2008, *Science*, 322, 1348
- Masset, F. 2000, *A&AS*, 141, 165
- Mathews, G. S., Williams, J. P., & Ménard, F. 2012, *ApJ*, 753, 59
- Mayama, S., Tamura, M., Hanawa, T., et al. 2010, *Science*, 327, 306
- McClure, M. K., Furlan, E., Manoj, P., et al. 2010, *ApJS*, 188, 75
- McElroy, D., Walsh, C., Markwick, A. J., et al. 2013, *A&A*, 550, A36
- Meeus, G., Montesinos, B., Mendigutía, I., et al. 2012, *A&A*, 544, A78
- Megeath, S. T., Gutermuth, R., Muzerolle, J., et al. 2012, *AJ*, 144, 192
- Megeath, S. T., Hartmann, L., Luhman, K. L., & Fazio, G. G. 2005, *ApJ*, 634, L113
- Meheut, H., Keppens, R., Casse, F., & Benz, W. 2012, *A&A*, 542, A9
- Meheut, H., Lovelace, R. V. E., & Lai, D. 2013, *MNRAS*, 1, 698
- Mendigutía, I., Mora, A., Montesinos, B., et al. 2012, *A&A*, 543, A59
- Mendoza V., E. E. 1966, *ApJ*, 143, 1010
- Merín, B., Brown, J. M., Oliveira, I., et al. 2010, *ApJ*, 718, 1200
- Merín, B., Jørgensen, J., Spezzi, L., et al. 2008, *ApJS*, 177, 551

- Min, M., Dullemond, C. P., Dominik, C., de Koter, A., & Hovenier, J. W. 2009, *A&A*, 497, 155
- Miotello, A., Bruderer, S., & van Dishoeck, E. F. 2014, *A&A*, 572, A96
- Monnier, J. D., Tannirkulam, A., Tuthill, P. G., et al. 2008, *ApJ*, 681, L97
- Mooley, K., Hillenbrand, L., Rebull, L., Padgett, D., & Knapp, G. 2013, *ApJ*, 771, 110
- Mulders, G. D., Paardekooper, S.-J., Panić, O., et al. 2013, *A&A*, 557, A68
- Müller, H. S. P., Schlöder, F., Stutzki, J., & Winnewisser, G. 2005, *Journal of Molecular Structure*, 742, 215
- Müller, H. S. P., Thorwirth, S., Roth, D. A., & Winnewisser, G. 2001, *A&A*, 370, L49
- Mumma, M. J. & Charnley, S. B. 2011, *ARA&A*, 49, 471
- Murillo, N. M., Lai, S.-P., Bruderer, S., Harsono, D., & van Dishoeck, E. F. 2013, *A&A*, 560, A103
- Muto, T., Grady, C. A., Hashimoto, J., et al. 2012, *ApJ*, 748, L22
- Muzerolle, J., Allen, L. E., Megeath, S. T., Hernández, J., & Gutermuth, R. A. 2010, *ApJ*, 708, 1107
- Muzerolle, J., Flaherty, K., Balog, Z., et al. 2009, *ApJ*, 704, L15
- Najita, J., Carr, J. S., & Mathieu, R. D. 2003, *ApJ*, 589, 931
- Najita, J. R., Carr, J. S., Strom, S. E., et al. 2010, *ApJ*, 712, 274
- Najita, J. R., Strom, S. E., & Muzerolle, J. 2007, *MNRAS*, 378, 369
- Natta, A., Testi, L., Muzerolle, J., et al. 2004, *A&A*, 424, 603
- Natta, A., Testi, L., & Randich, S. 2006, *A&A*, 452, 245
- Nguyen, D. C., Brandeker, A., van Kerkwijk, M. H., & Jayawardhana, R. 2012, *ApJ*, 745, 119
- Nuernberger, D., Chini, R., & Zinnecker, H. 1997, *A&A*, 324, 1036
- Öberg, K. I., Guzmán, V. V., Furuya, K., et al. 2015, *Nature*, 520, 198
- Öberg, K. I., Qi, C., Fogel, J. K. J., et al. 2010, *ApJ*, 720, 480
- Öberg, K. I., Qi, C., Fogel, J. K. J., et al. 2011, *ApJ*, 734, 98
- O'Dell, C. R., Wen, Z., & Hu, X. 1993, *ApJ*, 410, 696
- Ohashi, N. 2008, *Ap&SS*, 313, 101
- Oke, J. B. 1990, *AJ*, 99, 1621
- Oliveira, I., Merín, B., Pontoppidan, K. M., & van Dishoeck, E. F. 2013, *ApJ*, 762, 128
- Oliveira, I., Merín, B., Pontoppidan, K. M., et al. 2009, *ApJ*, 691, 672
- Oliveira, I., Pontoppidan, K. M., Merín, B., et al. 2010, *ApJ*, 714, 778
- Olofsson, J., Benisty, M., Augereau, J.-C., et al. 2011, *A&A*, 528, L6
- Olofsson, J., Szűcs, L., Henning, T., et al. 2013, *A&A*, 560, A100
- Ortiz-León, G. N., Loinard, L., Mioduszewski, A. J., et al. 2015, *ApJ*, 805, 9
- Owen, J. E. & Clarke, C. J. 2012, *MNRAS*, 426, L96
- Owen, J. E., Ercolano, B., & Clarke, C. J. 2011, *MNRAS*, 412, 13
- Padgett, D. L., Cieza, L., Stapelfeldt, K. R., et al. 2006, *ApJ*, 645, 1283
- Padgett, D. L., Rebull, L. M., Stapelfeldt, K. R., et al. 2008, *ApJ*, 672, 1013
- Partnership, A., Brogan, C. L., Pérez, L. M., et al. 2015, *ApJ*, 808, L3
- Pascucci, I., Hollenbach, D., Najita, J., et al. 2007, *ApJ*, 663, 383
- Pérez, L. M., Carpenter, J. M., Chandler, C. J., et al. 2012, *ApJ*, 760, L17
- Pérez, L. M., Isella, A., Carpenter, J. M., & Chandler, C. J. 2014, *ApJ*, 783, L13
- Perez, S., Casassus, S., Ménard, F., et al. 2015, *ApJ*, 798, 85
- Persson, M. V., Jørgensen, J. K., & van Dishoeck, E. F. 2012, *A&A*, 541, A39
- Peterson, D. E., Caratti o Garatti, A., Bourke, T. L., et al. 2011, *ApJS*, 194, 43
- Pickles, A. J. 1998, *PASP*, 110, 863
- Piétu, V., Dutrey, A., & Guilloteau, S. 2007, *A&A*, 467, 163
- Piétu, V., Dutrey, A., Guilloteau, S., Chapillon, E., & Pety, J. 2006, *A&A*, 460, L43
- Piétu, V., Guilloteau, S., & Dutrey, A. 2005, *A&A*, 443, 945
- Pilbratt, G. L., Riedinger, J. R., Passvogel, T., et al. 2010, *A&A*, 518, L1
- Pinilla, P., Benisty, M., & Birnstiel, T. 2012a, *A&A*, 545, A81

- Pinilla, P., Benisty, M., Birnstiel, T., et al. 2014, *A&A*, 564, A51
- Pinilla, P., Birnstiel, T., Ricci, L., et al. 2012b, *A&A*, 538, A114
- Pinilla, P., de Juan Ovelar, M., Ataiee, S., et al. 2015a, *A&A*, 573, A9
- Pinilla, P., van der Marel, N., Perez, L., et al. 2015b, *A&A*, in rev.
- Pinte, C., Ménard, F., Duchêne, G., & Bastien, P. 2006, *A&A*, 459, 797
- Poglitsch, A., Waelkens, C., Geis, N., et al. 2010, *A&A*, 518, L2
- Pontoppidan, K. M., Blake, G. A., van Dishoeck, E. F., et al. 2008, *ApJ*, 684, 1323
- Pott, J.-U., Perrin, M. D., Furlan, E., et al. 2010, *ApJ*, 710, 265
- Prato, L., Greene, T. P., & Simon, M. 2003, *ApJ*, 584, 853
- Qi, C., Öberg, K. I., & Wilner, D. J. 2013a, *ApJ*, 765, 34
- Qi, C., Öberg, K. I., Wilner, D. J., & Rosenfeld, K. A. 2013b, *ApJ*, 765, L14
- Quanz, S. P. 2015, *Ap&SS*, 357, 148
- Quanz, S. P., Amara, A., Meyer, M. R., et al. 2015, *ApJ*, 807, 64
- Quanz, S. P., Amara, A., Meyer, M. R., et al. 2013, *ApJ*, 766, L1
- Quanz, S. P., Schmid, H. M., Geissler, K., et al. 2011, *ApJ*, 738, 23
- Rabli, D. & Flower, D. R. 2010, *MNRAS*, 406, 95
- Raettig, N., Klahr, H., & Lyra, W. 2015, *ApJ*, 804, 35
- Raettig, N., Lyra, W., & Klahr, H. 2013, *ApJ*, 765, 115
- Ratzka, T., Köhler, R., & Leinert, C. 2005, *A&A*, 437, 611
- Raymond, S. N., Kokubo, E., Morbidelli, A., Morishima, R., & Walsh, K. J. 2014, *Protostars and Planets VI*, 595, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Rebollido, I., Merín, B., Ribas, Á., et al. 2015, *ArXiv e-prints*
- Rebull, L. M., Padgett, D. L., McCabe, C.-E., et al. 2010, *ApJS*, 186, 259
- Regály, Z., Juhász, A., Sándor, Z., & Dullemond, C. P. 2012, *MNRAS*, 419, 1701
- Reggiani, M., Quanz, S. P., Meyer, M. R., et al. 2014, *ApJ*, 792, L23
- Revéret, V., André, P., Le Pennec, J., et al. 2014, in *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, Vol. 9153, 5
- Ribas, Á., Merín, B., Bouy, H., et al. 2013, *A&A*, 552, A115
- Ricci, L., Testi, L., Natta, A., & Brooks, K. J. 2010a, *A&A*, 521, A66
- Ricci, L., Testi, L., Natta, A., et al. 2010b, *A&A*, 512, A15
- Rice, W. K. M., Armitage, P. J., Wood, K., & Lodato, G. 2006, *MNRAS*, 373, 1619
- Rigliaco, E., Pascucci, I., Duchene, G., et al. 2015, *ApJ*, 801, 31
- Rodmann, J., Henning, T., Chandler, C. J., Mundy, L. G., & Wilner, D. J. 2006, *A&A*, 446, 211
- Romero, G. A., Schreiber, M. R., Cieza, L. A., et al. 2012, *ApJ*, 749, 79
- Rosenfeld, K. A., Andrews, S. M., Wilner, D. J., Kastner, J. H., & McClure, M. K. 2013, *ApJ*, 775, 136
- Rosenfeld, K. A., Chiang, E., & Andrews, S. M. 2014, *ApJ*, 782, 62
- Rosotti, G. P., Ercolano, B., Owen, J. E., & Armitage, P. J. 2013, *MNRAS*, 430, 1392
- Salyk, C., Blake, G. A., Boogert, A. C. A., & Brown, J. M. 2007, *ApJ*, 655, L105
- Salyk, C., Blake, G. A., Boogert, A. C. A., & Brown, J. M. 2009, *ApJ*, 699, 330
- Salyk, C., Herczeg, G. J., Brown, J. M., et al. 2013, *ApJ*, 769, 21
- Sargent, A. I. & Beckwith, S. 1987, *ApJ*, 323, 294
- Schisano, E., Covino, E., Alcalá, J. M., et al. 2009, *A&A*, 501, 1013
- Schöier, F. L., van der Tak, F. F. S., van Dishoeck, E. F., & Black, J. H. 2005, *A&A*, 432, 369
- Schuller, F. 2012, in *Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series*, Vol. 8452, 1
- Semenov, D. & Wiebe, D. 2011, *ApJS*, 196, 25
- Shakura, N. I. & Sunyaev, R. A. 1973, *A&A*, 24, 337
- Shu, F. H., Adams, F. C., & Lizano, S. 1987, *ARA&A*, 25, 23
- Sicilia-Aguilar, A., Bouwman, J., Juhász, A., et al. 2009, *ApJ*, 701, 1188

- Sicilia-Aguilar, A., Henning, T., Juhász, A., et al. 2008, *ApJ*, 687, 1145
- Siess, L., Dufour, E., & Forestini, M. 2000, *A&A*, 358, 593
- Silverstone, M. D., Meyer, M. R., Mamajek, E. E., et al. 2006, *ApJ*, 639, 1138
- Sirango, G., Kreysa, E., De Breuck, C., et al. 2010, *The Messenger*, 139, 20
- Sirango, G., Kreysa, E., Kovács, A., et al. 2009, *A&A*, 497, 945
- Smith, B. A. & Terrile, R. J. 1984, *Science*, 226, 1421
- Spezzi, L., Alcalá, J. M., Covino, E., et al. 2008, *ApJ*, 680, 1295
- Spezzi, L., Vernazza, P., Merín, B., et al. 2011, *ApJ*, 730, 65
- Strom, K. M., Strom, S. E., Edwards, S., Cabrit, S., & Skrutskie, M. F. 1989, *AJ*, 97, 1451
- Tang, Y.-W., Guilloteau, S., Piétu, V., et al. 2012, *A&A*, 547, A84
- Testi, L., Birnstiel, T., Ricci, L., et al. 2014, *Protostars and Planets VI*, 339, eds. H. Beuther, R.S. Klessen, C.P. Dullemond, and T. Henning (University of Arizona Press)
- Thalmann, C., Grady, C. A., Goto, M., et al. 2010, *ApJ*, 718, L87
- Thalmann, C., Mulders, G. D., Hodapp, K., et al. 2014, *A&A*, 566, A51
- Thi, W. F., Ménard, F., Meeus, G., et al. 2013, *A&A*, 557, A111
- Thi, W.-F., van Zadelhoff, G.-J., & van Dishoeck, E. F. 2004, *A&A*, 425, 955
- Tielens, A. G. G. M. & Hagen, W. 1982, *A&A*, 114, 245
- Toomre, A. 1964, *ApJ*, 139, 1217
- Torres, C. A. O., Quast, G. R., Melo, C. H. F., & Sterzik, M. F. 2008, *Young Nearby Loose Associations*, 757, ed. B. Reipurth
- Troscompt, N., Faure, A., Wiesenfeld, L., Ceccarelli, C., & Valiron, P. 2009, *A&A*, 493, 687
- Ubach, C., Maddison, S. T., Wright, C. M., et al. 2012, *MNRAS*, 425, 3137
- Valenti, J. A., Basri, G., & Johns, C. M. 1993, *AJ*, 106, 2024
- van Boekel, R., Dullemond, C. P., & Dominik, C. 2005, *A&A*, 441, 563
- van der Marel, N., Pinilla, P., Tobin, J., et al. 2015a, *ApJL*, in press
- van der Marel, N., van Dishoeck, E., Bruderer, S., et al. 2015b, *subm. to A&A*
- van der Marel, N., van Dishoeck, E. F., Bruderer, S., et al. 2013, *Science*, 340, 1199
- van der Marel, N., van Dishoeck, E. F., Bruderer, S., Pérez, L., & Isella, A. 2015c, *A&A*, 579, A106
- van der Marel, N., van Dishoeck, E. F., Bruderer, S., & van Kempen, T. A. 2014, *A&A*, 563, A113
- van der Plas, G., van den Ancker, M. E., Acke, B., et al. 2009, *A&A*, 500, 1137
- van der Tak, F. F. S., van Dishoeck, E. F., & Caselli, P. 2000, *A&A*, 361, 327
- van Dishoeck, E. F. & Black, J. H. 1988, *ApJ*, 334, 771
- van Dishoeck, E. F., Jonkheid, B., & van Hemert, M. C. 2006, *Faraday Discussions*, 133, 231
- van Kempen, T. A., van Dishoeck, E. F., Salter, D. M., et al. 2009, *A&A*, 498, 167
- van Zadelhoff, G.-J., van Dishoeck, E. F., Thi, W.-F., & Blake, G. A. 2001, *A&A*, 377, 566
- Varnière, P. & Tagger, M. 2006, *A&A*, 446, L13
- Vasyunin, A. I., Wiebe, D. S., Birnstiel, T., et al. 2011, *ApJ*, 727, 76
- Verhoeff, A. P., Min, M., Pantin, E., et al. 2011, *A&A*, 528, A91
- Vicente, S., Merín, B., Hartung, M., et al. 2011, *A&A*, 533, A135
- Visser, R., van Dishoeck, E. F., & Black, J. H. 2009, *A&A*, 503, 323
- Vorobyov, E. I. & Basu, S. 2008, *ApJ*, 676, L139
- Wahhaj, Z., Cieza, L., Koerner, D. W., et al. 2010, *ApJ*, 724, 835
- Walsh, C., Juhász, A., Pinilla, P., et al. 2014, *ApJ*, 791, L6
- Walsh, C., Millar, T. J., & Nomura, H. 2013, *ApJ*, 766, L23
- Walsh, C., Nomura, H., Millar, T. J., & Aikawa, Y. 2012, *ApJ*, 747, 114
- Walter, F. M. & Kuhl, L. V. 1981, *ApJ*, 250, 254
- Watanabe, N. & Kouchi, A. 2002, *ApJ*, 571, L173
- Watanabe, N., Nagaoka, A., Shiraki, T., & Kouchi, A. 2004, *ApJ*, 616, 638
- Weidenschilling, S. J. 1977, *MNRAS*, 180, 57

- Weingartner, J. C. & Draine, B. T. 2001, *ApJ*, 548, 296
- Whipple, F. L. 1972, in *From Plasma to Planet*, 211, ed. A. Elvius, (Interscience)
- White, R. J. & Basri, G. 2003, *ApJ*, 582, 1109
- White, R. J. & Ghez, A. M. 2001, *ApJ*, 556, 265
- Wichmann, R., Krautter, J., Covino, E., et al. 1997, *A&A*, 320, 185
- Wilking, B. A., Meyer, M. R., Robinson, J. G., & Greene, T. P. 2005, *AJ*, 130, 1733
- Williams, J. P. & Cieza, L. A. 2011, *ARA&A*, 49, 67
- Wilson, T. L. & Rood, R. 1994, *ARA&A*, 32, 191
- Windmark, F., Birnstiel, T., Güttler, C., et al. 2012, *A&A*, 540, A73
- Winston, E., Megeath, S. T., Wolk, S. J., et al. 2009, *AJ*, 137, 4777
- Woitke, P., Kamp, I., & Thi, W.-F. 2009, *A&A*, 501, 383
- Wolf, S. & Klahr, H. 2002, *ApJ*, 578, L79
- Woodall, J., Agúndez, M., Markwick-Kemper, A. J., & Millar, T. J. 2007, *A&A*, 466, 1197
- Wright, E. L., Eisenhardt, P. R. M., Mainzer, A. K., et al. 2010, *AJ*, 140, 1868
- Wyatt, M. C. 2003, *ApJ*, 598, 1321
- Xie, J.-W., Payne, M. J., Thébault, P., Zhou, J.-L., & Ge, J. 2010, *ApJ*, 724, 1153
- Yamamura, I., Makiuti, S., Ikeda, N., et al. 2010, *VizieR Online Data Catalog*, 2298, 0
- Young, K. E., Young, C. H., Lai, S.-P., Dunham, M. M., & Evans, II, N. J. 2015, *AJ*, 150, 40
- Zacharias, N., Monet, D. G., Levine, S. E., et al. 2005, *VizieR Online Data Catalog*, 1297, 0
- Zhang, K., Isella, A., Carpenter, J. M., & Blake, G. A. 2014, *ApJ*, 791, 42
- Zhu, Z., Nelson, R. P., Dong, R., Espaillat, C., & Hartmann, L. 2012, *ApJ*, 755, 6
- Zhu, Z., Nelson, R. P., Hartmann, L., Espaillat, C., & Calvet, N. 2011, *ApJ*, 729, 47
- Zhu, Z. & Stone, J. M. 2014, *ApJ*, 795, 53