

First-Author Refereed Publications

Melbourne, J., Williams, B., Dalcanton, J., Rosenfield, P., Girardi, L., Marigo, P., Weisz, D., Dolphin A., Boyer, M., Olsen, K., Skillman E., Seth, A. 2011. **“The Contribution of TP-AGB and RHeB Stars to the Near-IR Luminosity of Local Galaxies: Implications for Stellar Mass Measurements of High Redshift Galaxies.”** *The Astrophysical Journal*. (submitted).

Melbourne, J., Peng, Chien Y, Soifer, B.T., Desai, V., Armus, L., Bussmann, R.S., Dey A., Matthews, K. 2011. **“The Black Hole Masses and Star Formation Rates of $z > 1$ Dust Obscured Galaxies (DOGs): Results from Keck OSIRIS Integral Field Spectroscopy.”** *The Astronomical Journal*, Volume 141, Issue 4, pp. 141-152.

Melbourne, J., Williams, B., Dalcanton, J., Ammons, S.M., Max, C., Koo, D.C., Girardi, L., Dolphin, A. 2010. **“The Asymptotic Giant Branch and the Tip of the Red Giant Branch as Probes of Star Formation History: The Nearby Dwarf Irregular Galaxy KKH 98”.** *The Astrophysical Journal*, Volume 712, Issue 1, pp. 469-483.

Melbourne, J., Bussman, S., Brand, K., Desai, V., Armus, L., Dey, A., Jannuzi, B. T., Houck, J. R., Soifer, B. T., Matthews, K. 2008. **“High Redshift Dust Obscured Galaxies, a Morphology-SED Connection Revealed by Keck Adaptive Optics”.** *The Astronomical Journal*, Volume 137, Issue 6, pp. 4854-4866

Melbourne, J., Desai, V., Armus, Lee, Dey, Arjun, Brand, K., Thompson, D., Soifer, B. T., Matthews, K., Jannuzi, B. T., Houck, J. R., 2008. **“Morphologies of High-Redshift Dust-Obscured Galaxies from Keck Laser Guide Star Adaptive Optics”.** *The Astronomical Journal*, Volume 136, Issue 3, pp. 1110-1117

Melbourne, J., Ammons, M., Wright, S. A., Metevier, A., Steinbring, E., Max, C., Koo, D. C., Larkin, J. E., Barczys, M., 2008. **“Triggered or Self-Regulated Star Formation Within Intermediate Redshift Luminous Infrared Galaxies. I. Morphologies and Spectral Energy Distributions”.** *The Astronomical Journal*, Volume 135, Issue 4, pp. 1207-1224

Melbourne, J., Dawson K., Koo D. C., Max C., Larkin J. Wright S., Steinbring E., Barczys, M., Aldering, G., Barbary, K., Doi, M., Fadeyev, V., Goldhaber, G., Hattori, T., Ihara Y., Kashikawa N., Konishi K., Kowalski M., Kuznetsova, N., Lidman, C., Morokuma, T., Perlmutter, S., Rubin D., Schlegel D., Spadafora, A. L., Takanashi, N., Yasuda, N. 2007. **“Rest-Frame R-band Lightcurve of a $z \sim 1.3$ Supernova Obtained with Keck Laser Adaptive Optics”.** *The Astronomical Journal*. Volume 133, Issue 6, pp. 2709-2715

Melbourne, J., Phillips, A., Harker, J., Novak, G., Koo, D. C., Faber, S. M., 2007. **“Radius Dependent Luminosity Evolution of Blue Galaxies in GOODS-N”.** *The Astrophysical Journal*. Volume 660, Issue 1, pp. 81-96

Melbourne, J., Koo, D. C., Le Floch, E., 2005. **“Optical Morphology Evolution of Infrared Luminous Galaxies in GOODS-N”**. *The Astrophysical Journal*. Volume 632, Issue 2, pp. L65—L68

Melbourne, J., Wright, S. A., Barczys, M., Bouchez, A. H., Chin, J., van Dam, M. A., Hartman, S., Johansson, E., Koo, D. C., Lafon, R., Larkin, J., Le Mignant, D., Lotz, J., Max, C. E., Pennington, D. M., Stomski, P. J., Summers, D., Wizinowich, P. L., 2005. **“Merging Galaxies in GOODS-S: First Extragalactic Results from Keck Laser Adaptive Optics”**. *The Astrophysical Journal*. Volume 625, Issue 1, pp. L27-L30

Melbourne, J., Guhathakurta, P., 2004. **“Measuring the Slope of the Dust Extinction Law and the Power Spectrum of Dust Clouds Using Differentially Reddened Globular Clusters”**. *The Astronomical Journal*. Volume 128, Issue 1, pp. 271-286

Melbourne, Jason, Phillips, Andrew, Salzer, John J., Gronwall, Caryl, Sarajedini, Vicki L., 2004. **“Metal Abundances of KISS Galaxies. II. Nebular Abundances of 12 Low-Luminosity Emission-Line Galaxies”**. *The Astronomical Journal*. Volume 127, Issue 2, pp. 686-703

Melbourne, Jason, Salzer, John J., 2002 **“Metal Abundances of KISS Galaxies. I. Coarse Metal Abundances and the Metallicity-Luminosity Relation”**. *The Astronomical Journal*. Volume 123, Issue 5, pp. 2302-2311

Melbourne, Jason, Sarajedini, Ata, Layden, Andrew, Martins, Donald H., 2000 **“CCD Photometry of the Globular Cluster NGC 4833 and Extinction Near the Galactic Plane”**. *The Astronomical Journal*. Volume 120, Issue 6, pp. 3127-3138

Additional Refereed Publications

Ammons, S. Mark; Rosario, David J. V.; Koo, David C.; Dutton, Aaron A.; Melbourne, Jason; Max, Claire E.; Mozena, Mark; Kocevski, Dale D.; McGrath, Elizabeth J.; Bouwens, Rychard J.; Magee, Daniel K. 2011. **“AGN Unification at $z \sim 1$: $u - R$ Colors and Gradients in X-Ray AGN Hosts.”** *The Astrophysical Journal*, Volume 740, Issue 1, article id. 3

Bussmann, R. S.; Dey, Arjun; Lotz, J.; Armus, L.; Brown, M. J. I.; Desai, V.; Eisenhardt, P.; Higdon, J.; Higdon, S.; Jannuzi, B. T.; Le Floch, E.; Melbourne, J.; Soifer, B. T.; Weedman, D. 2011. **“Hubble Space Telescope Morphologies of $z \sim 2$ Dust-obscured Galaxies. II. Bump Sources.”** *The Astrophysical Journal*, Volume 733, Issue 1, article id. 21

Haan, S.; Surace, J. A.; Armus, L.; Evans, A. S.; Howell, J. H.; Mazzarella, J. M.; Kim, D. C.; Vavilkin, T.; Inami, H.; Sanders, D. B.; Petric, A.; Bridge, C. R.; Melbourne, J. L.; Charmandaris, V.; Diaz-Santos, T.; Murphy, E. J.; U, V.; Stierwalt, S.; Marshall, J. A. 2011. **“The Nuclear Structure in Nearby Luminous Infrared Galaxies: Hubble Space Telescope NICMOS Imaging of the GOALS Sample.”** *The Astronomical Journal*, Volume 141, Issue 3, article id. 100

Cluver, M. E.; Jarrett, T. H.; Kraan-Korteweg, R. C.; Koribalski, B. S.; Appleton, P. N.; Melbourne, J.; Emonts, B.; Woudt, P. A. 2010. “*Active Disk Building in a Local H I-massive LIRG: The Synergy Between Gas, Dust, and Star Formation*”. **The Astrophysical Journal**, Volume 725, Issue 2, pp. 1550-1562

Girardi, Léo; Williams, Benjamin F.; Gilbert, Karoline M.; Rosenfield, Philip; Dalcanton, Julianne J.; Marigo, Paola; Boyer, Martha L.; Dolphin, Andrew; Weisz, Daniel R.; Melbourne, Jason; Olsen, Knut A. G.; Seth, Anil C.; Skillman, Evan. 2010. “*The ACS Nearby Galaxy Survey Treasury. IX. Constraining Asymptotic Giant Branch Evolution with Old Metal-poor Galaxies*”. **The Astrophysical Journal**, Volume 724, Issue 2, pp. 1030-1043

Inami, H.; Armus, L.; Surace, J. A.; Mazzarella, J. M.; Evans, A. S.; Sanders, D. B.; Howell, J. H.; Petric, A.; Vavilkin, T.; Iwasawa, K.; Haan, S.; Murphy, E. J.; Stierwalt, S.; Appleton, P. N.; Barnes, J. E.; Bothun, G.; Bridge, C. R.; Chan, B.; Charmandaris, V.; Frayer, D. T.; Kewley, L. J.; Kim, D. C.; Lord, S.; Madore, B. F.; Marshall, J. A.; Matsuhara, H.; Melbourne, J. E.; Rich, J.; Schulz, B.; Spoon, H. W. W.; Sturm, E.; U, V.; Veilleux, S.; Xu, K. 2010. “*The Buried Starburst in the Interacting Galaxy II Zw 096 as Revealed by the Spitzer Space Telescope*”. **The Astronomical Journal**, Volume 140, Issue 1, pp. 63-74

Howell, Justin H.; Armus, Lee; Mazzarella, Joseph M.; Evans, Aaron S.; Surace, Jason A.; Sanders, David B.; Petric, Andreea; Appleton, Phil; Bothun, Greg; Bridge, Carrie; Chan, Ben H. P.; Charmandaris, Vassilis; Frayer, David T.; Haan, Sebastian; Inami, Hanae; Kim, Dong-Chan; Lord, Steven; Madore, Barry F.; Melbourne, Jason; Schulz, Bernhard; U, Vivian; Vavilkin, Tatjana; Veilleux, Sylvain; Xu, Kevin. 2010. “*The Great Observatories All-sky LIRG Survey: Comparison of Ultraviolet and Far-infrared Properties*”. **The Astrophysical Journal**, Volume 715, Issue 1, pp. 572-588

Bussmann, R. S.; Dey, Arjun; Borys, C.; Desai, V.; Jannuzi, B. T.; Le Floch, E.; Melbourne, J.; Sheth, K.; Soifer, B. T. 2009. “*Infrared Luminosities and Dust Properties of $z \approx 2$ Dust-obscured Galaxies*”. **The Astrophysical Journal**, Volume 705, Issue 1, pp. 184-198

Desai, Vandana; Soifer, B. T.; Dey, Arjun; LeFloch, Emeric; Armus, Lee; Brand, Kate; Brown, Michael J. I.; Brodwin, Mark; Jannuzi, Buell T.; Houck, James R.; Weedman, Daniel W.; Ashby, Matthew L. N.; Gonzalez, Anthony; Huang, Jiasheng; Smith, Howard A.; Teplitz, Harry; Willner, Steve P.; Melbourne, Jason. 2009. “**Strong Polycyclic Aromatic Hydrocarbon Emission from $z \approx 2$ ULIRGs**”. *The Astrophysical Journal*, Volume 700, Issue 2, pp. 1190-1204

Armus, L.; Mazzarella, J. M.; Evans, A. S.; Surace, J. A.; Sanders, D. B.; Iwasawa, K.; Frayer, D. T.; Howell, J. H.; Chan, B.; Petric, A.; Vavilkin, T.; Kim, D. C.; Haan, S.; Inami, H.; Murphy, E. J.; Appleton, P. N.; Barnes, J. E.; Bothun, G.; Bridge, C. R.;

Charmandaris, V.; Jensen, J. B.; Kewley, L. J.; Lord, S.; Madore, B. F.; Marshall, J. A.; Melbourne, J. E.; Rich, J.; Satyapal, S.; Schulz, B.; Spoon, H. W. W.; Sturm, E.; U, V.; Veilleux, S.; Xu, K. 2009. **“GOALS: The Great Observatories All-Sky LIRG Survey”**. *Publications of the Astronomical Society of the Pacific*, Volume 121, issue 880, pp.559-576

Bussmann, R. S.; Dey, Arjun; Lotz, J.; Armus, L.; Brand, K.; Brown, M. J. I.; Desai, V.; Eisenhardt, P.; Higdon, J.; Higdon, S.; Jannuzi, B. T.; LeFloc'h, E.; Melbourne, J.; Soifer, B. T.; Weedman, D. **“Hubble Space Telescope Morphologies of $z \sim 2$ Dust Obscured Galaxies. I. Power-Law Sources”**. *The Astrophysical Journal*, Volume 693, Issue 1, pp. 750-770

Brand, Kate; Moustakas, John; Armus, Lee; Assef, Roberto J.; Brown, Michael J. I.; Cool, Richard R.; Desai, Vandana; Dey, Arjun; LeFloc'h, Emeric; Jannuzi, Buell T.; Kochanek, Christopher S.; Melbourne, Jason; Papovich, Casey J.; Soifer, B. T. 2009. **“The Origin of the $24 \mu\text{m}$ Excess in Red Galaxies”**. *The Astrophysical Journal*, Volume 693, Issue 1, pp. 340-346

Ammons, M., Melbourne, J., Max, C., Koo, D., Rosario, D., 2009. **“Spatially Resolved Stellar Populations of Eight GOODS-South AGN at $z \sim 1$ ”**. *The Astronomical Journal*. Volume 137, Issue 1, pp. 470-497

Steinbring, E., Melbourne, J., Metevier, A. J., Koo, D. C., Chun, M. R., Simard, L., Larkin, J. E., Max, C. E., 2008. **“Cats: Optical to Near-Infrared Colors of the Bulge and Disk of Two $z = 0.7$ Galaxies Using Hubble Space Telescope and Keck Laser Adaptive Optics Imaging”**. *The Astronomical Journal*, Volume 136, Issue 4, pp. 1523-1532

Marshall, Philip J., Treu, Tommaso, Melbourne, Jason, Gavazzi, Raphaël, Bundy, Kevin, Ammons, S. Mark, Bolton, Adam S., Burles, Scott, Larkin, James E., Le Mignant, David, Koo, David C., Koopmans, Léon V. E., Max, Claire E., Moustakas, Leonidas A., Steinbring, Eric, Wright, Shelley A., 2007. **“Superresolving Distant Galaxies with Gravitational Telescopes: Keck Laser Guide Star Adaptive Optics and Hubble Space Telescope Imaging of the Lens System SDSS J0737+3216”**. *The Astrophysical Journal*, Volume 671, Issue 2, pp. 1196-1211

Weiner, Benjamin J., Willmer, Christopher N. A., Faber, S. M., Harker, Justin, Kassin, Susan A., Phillips, Andrew C., Melbourne, Jason, Metevier, A. J., Vogt, N. P., Koo, D. C., 2006. **“A Survey of Galaxy Kinematics to $z \sim 1$ in the TKRS/GOODS-N Field. II. Evolution in the Tully-Fisher Relation”**. *The Astrophysical Journal*, Volume 653, Issue 2, pp. 1049-1069

Weiner, Benjamin J., Willmer, Christopher N. A., Faber, S. M., Melbourne, Jason, Kassin, Susan A., Phillips, Andrew C., Harker, Justin, Metevier, A. J., Vogt, N. P., Koo, D. C., 2006. **“A Survey of Galaxy Kinematics to $z \sim 1$ in the TKRS/GOODS-N**

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Noeske, K. G., Koo, D. C., Phillips, A. C., Willmer, C. N. A., Melbourne, J., Gil de Paz, A., Papaderos, P., 2006. "**Luminous Compact Blue Galaxies up to $z \sim 1$ in the Hubble Space Telescope Ultra Deep Field. I. Small Galaxies or Blue Centers of Massive Disks?**" *The Astrophysical Journal*. Volume 640, Issue 2, pp. L143-L146

Salzer, John J., Lee, Janice C., Melbourne, Jason, Hinz, Joannah L., Alonso-Herrero, Almudena, Jangren, Anna., 2005. "**Metal Abundances of KISS Galaxies. IV. Galaxian Luminosity-Metallicity Relations in the Optical and Near-Infrared**". *The Astrophysical Journal*. Volume 624, Issue 2, pp. 661-679

Lee, Janice C., Salzer, John J., Melbourne, Jason., 2004. "**Metal Abundances of KISS Galaxies. III. Nebular Abundances for Fourteen Galaxies and the Luminosity-Metallicity Relationship for H II Galaxies**". *The Astrophysical Journal*. Volume 616, Issue 2, pp. 752-767

Prochaska, Jason X., Bloom, Joshua S., Chen, Hsiao-Wen, Hurley, Kevin C., Melbourne, Jason, Dressler, Alan, Graham, James R., Osip, David J., Vacca, W. D., 2004. "**The Host Galaxy of GRB 031203: Implications of Its Low Metallicity, Low Redshift, and Starburst Nature**". *The Astrophysical Journal*. Volume 611, Issue 1, pp. 200-207

Wegner, Gary, Salzer, John J., Jangren, Anna, Gronwall, Caryl, Melbourne, Jason., 2003. "**Spectroscopy of KISS Emission-Line Galaxy Candidates. I. MDM Observations**". *The Astronomical Journal*. Volume 125, Issue 5, pp. 2373-2392