

Dr. Matthew A. Taylor

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EDUCATION AND ACADEMIC EMPLOYMENT

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|------------|---|------------------|
| June 2017- | Gemini Observatory, Northern Operations Center <i>Gemini Science Fellow</i> | Hilo, Hawai'i |
| July 2016 | Pontificia Universidad Católica de Chile <i>PhD in Astrophysics</i> Distinción Maxima Dissertation: The Global Globular Cluster System of the Nearby Giant Elliptical Galaxy NGC5128 Advisors: Dr. Thomas H. Puzia, Dr. Steffen Mieske | Santiago, Chile |
| June 2011 | University of Victoria <i>Bachelor of Science in Physics and Astronomy</i> Co-operative Education Distinction | Victoria, Canada |

HONOURS, GRANTS, AND AWARDS

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| 2017 | Postdoctoral Fellowship Grant (declined) <i>National Research Council of Canada</i> | Canada |
| 2014–2016 | Student Fellowship <i>European Southern Observatory</i> | Santiago, Chile |
| 2014–2015 | Instructor Becario Senior Doctoral Scholarship <i>Pontificia Universidad Católica de Chile</i> | Santiago, Chile |
| 2013–2014 | Ayudante Becario Junior Doctoral Scholarship <i>Pontificia Universidad Católica de Chile</i> | Santiago, Chile |
| 2012–2013 | Beca de Excelencia para Alumnos Extranjeros Foreign Doctoral Student Scholarship <i>Pontificia Universidad Católica de Chile</i> | Santiago, Chile |
| 2011 | NSERC-USRA National Research Council of Canada Undergraduate Student Research Award <i>University of Victoria</i> | Victoria, Canada |
| 2008, 2009 | University of Victoria Physics/Astronomy Co-operative Education Award: Best Co-op Work Term Report <i>University of Victoria</i> | Victoria, Canada |

ACCEPTED PI OBSERVING PROGRAMS

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| 2019A | "The Need for Speeds: Using Globular Clusters to Map the Kinematics of NGC5128 and its Surrounding Environment" (6.5 nights awarded in grey/dark time on 2dF/AAOmega/AAT) | Australian National TAC |
| 2018A | "The Need for Speeds: A pilot study to map the velocity field of NGC5128 with ultra-compact dwarf galaxies" | Gemini Fast Turnaround |
| 2018A | (7.5 hours awarded in Band 1 on Gemini South/GMOS) "Dancing in the Dark: GMOS-S imaging of a potential dwarf binary pair" (6.2 hours awarded in Bands ½ on Gemini South/GMOS) | Gemini National and Fast Turnaround TACs |

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| 2016A | "Redder is Better: The Survey of Centaurus A's Baryonic Structures - Near-Infrared Supplement" (37.5 hours awarded on VISTA/VIRCam) | ESO OPC |
| 2015A | "The Dark Side of NGC 5128's Globular Cluster System" (13.2 hours awarded on VLT/XSHOOTER) | ESO OPC |
| 2013/2014B | "Compact Stellar Systems in Hickson Compact Groups: A MultiBand Photometric Survey for their Origins" (36.5 hours awarded on VLT/HAWK-I+VIMOS) | ESO OPC |
| 2014A | "Nowhere Left to Hide: SCABS, The Survey of Centaurus A's Baryonic Structures" (2 nights awarded on Blanco/DECam) | Chilean National TAC |

OBSERVING AND OBSERVATORY EXPERIENCE

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| 2018-- | Queue Observing Coordinator <i>Daily organization and development of nightly queue observing plans</i> | Hilo, USA |
| 2018-- | Seminar Coordinator <i>Helped organize and host visiting speakers to Gemini Northern Operations Center</i> | Hilo, USA |
| 2017-- | Gemini Fast Turnaround Team Member <i>Support for Gemini Fast Turnaround Observing Mode Program</i> | Hilo, USA |
| 2017-- | Gemini North Queue Observer <i>Nighttime queue observing duties at Gemini North</i> | Hilo, USA |
| 2017-- | Member Gemini Near-Infrared Support Team <i>Support for Gemini's Near-Infrared Instrumentation</i> | Hilo, USA |
| 2015 | "Near-UV Spectroscopy of Galactic Globular Clusters: Probing the Self-Enrichment Scenario" <i>2 nights on SOAR/Goodman Spectrograph</i> | Cerro Pachón |
| 2015 | "Mapping the Radial Distribution of the Unusual Globular Cluster System of NGC 4365" <i>0.5 night on Magellan (Baade)/Fourstar Imager</i> | Las Campanas |
| 2014 | "SCABS: The Survey of Centaurus A's Baryonic Structures" <i>2 nights on Blanco/DECam</i> | Cerro Tololo |
| 2013 | "Chemodynamical Characterization of Blue Straggler Stars in Galactic Globular Clusters" <i>3 nights on VLT/FLAMES</i> | Cerro Paranal |

SCIENCE COMMUNITY SERVICE AND OUTREACH

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| June-Aug. 2019 | Mentorship of Akamai Workforce Initiative Intern <i>Supervision of undergraduate Akamai intern carrying out artificial star experiments.</i> | Hilo, USA |
| June-Oct. 2019 | Mentorship of Undergraduate Intern <i>Supervision of undergraduate intern carrying out image reduction and photometry.</i> | Hilo, USA |
| May 2019 | Hilo Astroday <i>Community outreach in the Hawaiian community to inspire children and youth to observatory careers.</i> | Hilo, USA |
| Mar. 2018,19 | Journey Through the Universe <i>Community outreach to share astronomy with Hawaiian children through hands-on classroom activities and "ask-me-anything" sessions.</i> | Hilo, USA |
| Dec. 2018 | TMT Early Career Initiative Workshop <i>Facilitated multi-day instrument design exercise during workshop to develop early-career skills relevant to future operations with the Thirty Meter Telescope.</i> | Pasadena, USA |
| Mar. 2018- | Maunakea Spectroscopic Explorer International Science Team <i>Contributing member of "Galaxy Formation and evolution" science development team for the Maunakea Spectroscopic Explorer project.</i> | Hilo, USA |
| Nov. 2017 | Kona Astroday | Kona, USA |

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| | Community outreach in the Hawaiian community to inspire children and youth to observatory careers. | |
| Feb. 2017- | Thirty Meter Telescope International Science Development Team (ISDT) Contributing member to the “Milky Way and Nearby Galaxies” ISDT for the Thirty Meter Telescope. | |
| Sept. 2015 | Python Plotting Tutorial Provided an introductory tutorial to <i>matplotlib</i> to ESO colleagues. | Santiago, Chile |
| Apr. 2015 | Conference Local Organizing Committee <i>Satellites and Streams in Santiago</i> , 13-17 April 2015 | Santiago, Chile |
| 2009–2010 | University of Victoria Astronomy Open House Assisted in UVic’s Department of Physics and Astronomy weekly open house. | Victoria, Canada |

SELECTED CONFERENCE CONTRIBUTIONS AND INVITED TALKS

(2 invited talks; 6 contributed talks)

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| Jan. 2019 | Dwarf Galaxies, Globular Clusters, and Ultra-compact Dwarfs: Getting to know the outer halo of NGC5128 Contributed talk : AAS 233, Seattle, USA, 6-10 January 2019. | |
| Aug. 2018 | A Newly Discovered Reservoir of Dwarf Galaxies in the Centaurus A Group Contributed talk : IAU-GA Symposium 344, Vienna, Austria, 20-24 August 2018. | |
| May 2018 | Neighbourhood Watch: A survey of baryonic structures in the Local Universe Contributed talk : CASCA 2018, Victoria, Canada, 22-26 May 2018. | |
| Sept. 2016 | The Extended Globular Cluster System of NGC5128 and its Nearby Environment Invited talk : University of Victoria, Victoria, Canada, 22 Sept. 2016. | |
| Sept. 2016 | The Extended Globular Cluster System of NGC5128 and its Nearby Environment Invited talk : Herzberg Institute of Astrophysics, Victoria, Canada, 13 Sept. 2016. | |
| May 2015 | SCABS: The Survey of Centaurus A's Baryonic Structures Contributed talk : <i>Multiwavelength Dissection of Galaxies</i> , Sydney, Australia, 24–29 May 2015. | |
| Mar. 2015 | Observational Evidence for a Dark Side to Centaurus A's Globular Cluster System Contributed talk : <i>Modelling and Observing Dense Stellar Systems 15</i> , Concepción, Chile, 2–6 Mar. 2015. | |
| May 2014 | Observational Evidence for a Bifurcation in the Dynamical Mass Scaling Relations of Compact Stellar Systems in NGC 5128 Contributed talk : <i>Formation and Evolution of Star Clusters</i> , Santiago, Chile, 14–16 May 2014 | |

PUBLICATIONS

Conference Proceedings

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| 2019 | The Gemini Fast Turnaround Program Anderson, M., Chiboucas, K., Geball, T., Salinas, R., Scharwaechter, J., Eckersley, J., Kim, H., Taylor, M.A. , Dupuy, T., & Sanmartin, D. 2019, American Astronomical Society Meeting Abstracts #233, 233, #455.03 |
| 2019 | Dwarf Galaxies, Globular Clusters, and Ultra-compact Dwarfs: Getting to know the outer halo of NGC5128 Taylor, M.A. , Puzia, T.H., Eigenthaler, P., Ribbeck, K.X., Zhang, H.X., Ordenes-Briceño, Y., & Bovill, M.S. 2019, American Astronomical Society Meeting Abstracts #233, 233, #339.01 |
| 2018 | A New Reservoir of Dwarf Galaxy Candidates in the Centaurus A Group Taylor, M.A. , Eigenthaler, P., Puzia, T.H., Muñoz, R.P., Ribbeck, K.X., Zhang, H.X., Ordenes-Briceño, Y., & Bovill, M.S. 2018, in IAU Symp. 344, <i>Dwarfs from the Deep Universe to the Present</i> , ed. Kristen McQuinn, 2018, IAU General Assembly |
| 2017 | Faint Dwarf Galaxies in Hickson Compact Group 90 Ordenes-Briceño, Y., Taylor, M.A. , Puzia, T.H., & Muñoz, R.P., 2017, <i>Revista Mexicana de Astronomía y Astrofísica Conference Series</i> , 49, 130 |
| 2017 | The Extended Globular Cluster System of NGC3923 |

- Ahumada, T., Miller, B., Candlish, G., McGaugh, S.S., Mihos, C., Smith, R., Puzia, T.H., & **Taylor, M.A.**, 2017, American Astronomical Society Meeting Abstracts, 229, 343.22
- 2015 **Forming NGC 5128's High M/L Globular Clusters**
Sauda Bovill, M., Puzia, T.H., Ricotti, M., & **Taylor, M.A.**, 2015, IAU General Assembly, 22, 2258170
- 2015 **SCABS: A Survey of Centaurus A's Baryonic Structures**
Puzia, T.H., & **Taylor, M.A.**, 2015, IAU General Assembly, 22, 2258151
- 2015 **The Dark Side of SCABS: Predictions for Centaurus A's Baryonic Substructure**
Sauda Bovill, M., **Taylor, M.A.**, Puzia, T.H., Padilla, N., & Eigenthaler, P., 2015, IAU General Assembly, 22, 2258133
- 2015 **Evidence for a Dark Side to NGC5128's Globular Cluster System**
Puzia, T.H., & **Taylor, M.A.**, 2015, IAU General Assembly, 22, 2258025
- 2015 **NGC 5128's Globular Cluster System: Is there a dark side?**
Taylor, M.A., Puzia, T.H., Gomez, M., and Woodley, K.A., 2015, in IAU Symp. 309 *Galaxies in 3D Across the Universe*, ed. Ziegler, B.L., Combes, F., Dannerbauer, H., & Verdugo, M., (Cambridge, UK: Cambridge Univ. Press), pp. 348
- 2011 **The Scattered Disk and Hot Belt, Two Sides of the Same Coin?**
Kavelaars, J.J., Petit, J.-M., Gladman, B., Jones, R.L., Parker, J., & **Taylor, M.**, 2011, in EPSC-DPS Joint Meeting 2011, pp. 1318

Peer Reviewed Journal Articles

(Four first-author papers with 79 citations; fifteen co-author papers with 306 citations; H=9)

- 2019 **The Next Generation Fornax Survey (NGFS): VI. The Alignment of Dwarf Galaxies in the Fornax Cluster**
Rong, Y., Puzia, T.H., Ordenes-Briceño, Y., Eigenthaler, P., **Taylor, M.A.**, Muñoz, R.P., Zhang, H.-X., Alamo-Martínez, K., Ribbeck, K.X., Grebel, E., Ángel, S., Côté, P., Ferrarese, L., Hilker, M., Lançon, A., Mieske, S., Miller, B., Sánchez-Janssen, R., and Johnston, E.J., *The Astrophysical Journal*, submitted
- 2019 **The Next Generation Fornax Survey (NGFS): V. Discovery of an isolated dwarf-dwarf galaxy pair at $z=0.30$ and its characterization using deep VLT/MUSE observations**
Johnson, E., Eigenthaler, P., Puzia, T.H., Ordenes-Briceño, Y., **Taylor, M.A.**, Alamo-Martínez, K., Côté, P., Galaz, G., Grebel, E., Hilker, M., Lançon, A., Mieske, S., Sánchez-Janssen, and Rong, Y., *The Astrophysical Journal*, vol. 873, no. 1, 59
- 2019 **How nucleation and luminosity shape faint dwarf galaxies**
Sánchez-Janssen, R., Puzia, T.H., Ferrarese, L., Côté, P., Eigenthaler, P., Miller, B., Ordenes-Briceño, Y., Peng, E., Ribbeck, K.X., Roediger, J., Spengler, C., and **Taylor, M.A.**, *Monthly Notices of the Royal Astronomical Society Letters*, accepted, *arXiv:1901.04509*
- 2018 **A Collection of New Dwarf Galaxies in NGC5128's Western Halo**
Taylor, M.A., Eigenthaler, P., Puzia, T.H., Muñoz, R.P., Ribbeck, K.X., Zhang, H.-X., Ordenes-Briceño, Y., and Bovill, M.S., *The Astrophysical Journal Letters*, vol. 867, no. 1, L15
- 2018 **The Fornax Cluster VLT Spectroscopic Survey. I – VIMOS spectroscopy of compact stellar systems in the Fornax core region**
Pota, V., Napolitano, N.R., Hilker, M., Spavone, M., Schulz, C., Cantiello, M., Tortora, C., Iodice, E., Paolillo, M., D'Abrusco, R., Capaccioli, M., Puzia, T.H., Peletier, R.F., Romanowsky, A.J., van de Ven, G., Spiniello, C., Norris, M., Lisker, T., Muñoz, R.P., Schipani, P., Eigenthaler, P., **Taylor, M.A.**, Sánchez-Janssen, R., and Ordenes-Briceño, Y., *Monthly Notices of the Royal Astronomical Society*, vol. 481, no. 2, pp. 1744-1756
- 2018 **The GEMS/GSAOI Galactic Globular Cluster Survey (G4CS) I: A pilot study of the stellar populations in NGC2298 and NGC3201**
Monty, S., Puzia, T.H., Miller, B.W., Carrasco, E.R., Simunovic, M., Schirmer, M., Stetson, P.B., Venn, K.A., Dotter, A., Goudfrooij, P., Perina, S., Pessev, P., Sarajedini, A., and **Taylor, M.A.**, *The Astrophysical Journal*, vol. 865, no. 2, pp. 160-183
- 2018 **The Next Generation Fornax Survey (NGFS). IV. Mass and Age Bimodality of Nuclear Star Clusters in the Fornax Core Region**
Ordenes-Briceño, Y., Puzia, T.H., Eigenthaler, P., **Taylor, M.A.**, Muñoz, R.P., Zhang, H., Alamo-Martínez, K., Ribbeck, K.X., Grebel, E.K., Ángel, S., Côté, P., Ferrarese, L., Hilker, M., Lançon, A., Mieske, S., Miller, B., Rong, Y., and Sánchez-Janssen, R. *The Astrophysical Journal*, vol. 860, no. 1, 2018, pp. 4-25
- 2018 **The Next Generation Fornax Survey (NGFS). III. Revealing the spatial substructure of the dwarf galaxy population inside half of Fornax's virial radius**

- Ordenes-Briceño, Y., Eigenthaler, P., **Taylor, M.A.**, Puzia, T.H., Alamo-Martínez, K., Ribbeck, K.X., Muñoz, R.P., Zhang, H., Grebel, E.K., Ángel, S., Côté, P., Ferrarese, L., Hilker, M., Lançon, A., Mieske, S., Miller, B., Rong, Y., and Sánchez-Janssen, R. *The Astrophysical Journal*, vol. 859, no. 1, 2018, pp. 52-60
- 2018 **Stellar Population Properties of Ultra-Compact Dwarfs in M87: A mass-metallicity correlation connecting low-metallicity globular clusters and compact ellipticals**
Zhang, H.-X., Puzia, T.H., Peng, E.W., Liu, C., Côté, P., Ferrarese, L., Duc, P.-A., Eigenthaler, P., Lim, S., Lançon, A., Muñoz, R.P., Roediger, J., Sánchez-Janssen, R., **Taylor, M.A.**, and Yu, J., *The Astrophysical Journal*, vol. 858, no. 1, 2018, pp. 37-48
- 2018 **The Next Generation Fornax Survey (NGFS). II. The Central Dwarf Galaxy Population**
Eigenthaler, P., Puzia, T.H., **Taylor, M.A.**, Ordenes-Briceño, Y., Muñoz, R.P., Ribbeck, K.X., Alamo-Martínez, K., Zhang, H., Ángel, S., Capaccioli, M., Côté, P., Ferrarese, L., Galaz, G., Grebel, E.K., Hempel, M., Hilker, M., Lançon, A., Mieske, S., Miller, B., Paolillo, M., Powalka, M., Richtler, T., Roediger, J., Rong, Y., Sánchez-Janssen, R., and Spengler, C., *The Astrophysical Journal*, vol. 855, no. 2, 2018, pp. 142-161
- 2017 **The Extended Baryonic Halo of NGC3923**
Miller, B., Ahumada, T., Puzia, T.H., Candlish, G., McGaugh, S.S., Mihos, C., Sanderson, R., Schirmer, M., Smith, R., & **Taylor, M.A.**, 2017, *Galaxies*, 5, 29
- 2017 **The Survey of Centurus A's Baryonic Structures (SCABS). II. The Extended Globular Cluster System of NGC5128 and its Nearby Environment**
Taylor, M.A., Puzia, T.H., Muñoz, R.P., Mieske, S., Eigenthaler, P., and Bovill, M.S., *Monthly Notices of the Royal Astronomical Society*, vol. 469, no. 3, 2017, pp. 3444-3467
- 2016 **Faint Dwarf Galaxies in Hickson Compact Group 90**
Ordenes-Briceño Y., **Taylor, M.A.**, Puzia, T.H., Muñoz, R.P., Eigenthaler, P., Georgiev, I.Y., Goudfrooij, P., Hilker, M., Lançon, A., Mamon, G., Mieske, S., Miller, B., Peng, E.W., and Sánchez-Janssen, R., *Monthly Notices of the Royal Astronomical Society*, vol. 463, no. 2, 2016, pp. 1284-1290
- 2016 **The Lost Dwarfs of Centaurus A and the Formation of its Dark Globular Clusters**
Mia Sauda Bovill, Puzia T.H., Ricotti, M., and **Taylor, M.A.**, *The Astrophysical Journal*, vol. 832, no. 1, 2016, pp. 88-99
- 2015 **Unveiling a Rich System of Faint Dwarf Galaxies in the Next Generation Fornax Survey**
Muñoz, R.P., Eigenthaler, P., Puzia, T.H., **Taylor, M.A.**, Ordenes-Briceño, Y., Alamo-Martínez, K., Ribbeck, K.X., Ángel, S., Capaccioli, M., Côté, P., Ferrarese, L., Galaz, G., Hempel, M., Hilker, M., Jordán, A., Lançon, A., Mieske, S., Paolillo, M., Richtler, T., Sánchez-Janssen, R., and Zhang, H., *The Astrophysical Journal Letters*, vol. 813, no. 1, 2015, pp. 15-21
- 2015 **Observational Evidence for a Dark Side to NGC 5128's Globular Cluster System**
Taylor, M.A., Puzia, T.P., Gomez, M., and Woodley, K.A., *The Astrophysical Journal*, vol. 805, no. 1, 2015, pp. 65-85
- 2014 **The Next Generation Virgo Survey-Infrared (NGVS-IR). I. A New Near-Ultraviolet, Optical, and Near-Infrared Globular Cluster Selection Tool**
Muñoz, R.P., Puzia, T.H., Lançon, A., Peng, E.W., Côté, P., Ferrarese, L., Blakeslee, J.P., Mei, S., Cuillandre, J.-C., Hudelot, P., Courteau, S., Duc, P.-A., Balogh, M.L., Boselli, A., Bournaud, F., Carlberg, R., Chapman, S.C., Durrell, P., Eigenthaler, P., Emsellem, E., Gavazzi, G., Gwyn, S., Huertas-Company, M., Ilbert, O., Jordán, A., Läsker, R., Licitra, R., Liu, C., MacArthur, L., McConnachie, A., McCracken, H.J., Mellier, Y., Peng, C.Y., Raichoor, A., **Taylor, M.A.**, Tonry, J.L., Tully, B.R., and Zhang, H., *The Astrophysical Journal Supplement*, vol. 210, no. 1, 2014, pp. 4-27
- 2011 **The Canada-France Ecliptic Plane Survey -- Full Data Release: The orbital structure of the Kuiper Belt**
Petit, J.-M., Kavelaars, J.J., Gladman, B.J., Jones, R.L., Parker, J. Wm., Van Laerhoven, C., Nicholson, P., Mars, G., Rousselot, P., Mousis, O., Marsden, B., Bieryla, A., **Taylor, M.**, Ashby, M.L.N., Benavidez, P., Campo Bagatin, A., and Bernabeu, G., *The Astronomical Journal*, vol. 142, no. 4, 2011, pp. 24
- 2010 **Chemodynamics of Compact Stellar Systems in NGC 5128: How similar are globular clusters, ultra-compact dwarfs, and dwarf galaxies?**
Taylor, M.A., Puzia, T.H., Harris, W.E., Harris, G.L.H., Kissler-Patig, M., and Hilker, M., *The Astrophysical Journal*, vol. 712, no. 2, 2010, pp. 1191-1208