# Dr. Matthew A. Taylor

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#### **EDUCATION AND ACADEMIC EMPLOYMENT**

Dec. 2019	Herzberg Astronomy & Astrophysics Research Centre NRC Postdoctoral Fellow	Victoria, BC
June 2017	Gemini Observatory, Northern Operations Center	Hilo, Hawai'i
July 2016	Gemini Science Fellow  Pontificia Universidad Católica de Chile	Santiago, Chile
	PhD in Astrophysics Distinción Maxima	
	Dissertation: The Global Globular Cluster System of the Nearby Giant Ellip NGC5128	tical Galaxy
1 0044	Advisors: Dr. Thomas H. Puzia, Dr. Steffen Mieske	W
June 2011	University of Victoria Bachelor of Science in Physics and Astronomy	Victoria, Canada
	Co-operative Education Distinction	

#### HONOURS, GRANTS, AND AWARDS

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

#### ACCEPTED PI OBSERVING PROGRAMS

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

Gemini National and Fast Turnaround TACs (6.2 hours awarded in Bands ½ on Gemini South/GMOS) 2016A "Redder is Better: The Survey of Centaurus A's Baryonic Structures - Near-Infrared Supplement" **ESO OPC** (37.5 hours awarded on VISTA/VIRCam) "The Dark Side of NGC 5128's Globular Cluster System" 2015A **ESO OPC** (13.2 hours awarded on VLT/XSHOOTER) "Compact Stellar Systems in Hickson Compact Groups: A MultiBand Photometric 2013/2014B Survey for their Origins" **ESO OPC** (36.5 hours awarded on VLT/HAWK-I+VIMOS) "Nowhere Left to Hide: SCABS, The Survey of Centaurus A's Baryonic Structures" 2014A Chilean National TAC

(2 nights awarded on Blanco/DECam)

#### **OBSERVING AND OBSERVATORY EXPERIENCE**

2020	Colloquia Coordinator	Hilo, USA
	Helped organize and host visiting speakers to NRC's Herzberg Astronomy and Ass Research Centre	trophysics
20182019	Queue Observing Coordinator	Hilo, USA
	Daily organization and development of nightly queue observing plans	
20182019	Seminar Coordinator	Hilo, USA
	Helped organize and host visiting speakers to Gemini Northern Operations Cente	r
20172019	Gemini Fast Turnaround Team Member	Hilo, USA
	Support for Gemini Fast Turnaround Observing Mode Program	
20172019	Gemini North Queue Observer	Hilo, USA
	Nighttime queue observing duties at Gemini North	
20172019	Member Gemini Near-Infrared Support Team	Hilo, USA
	Support for Gemini's Near-Infrared Instrumentation	
2015	"Near-UV Spectroscopy of Galactic Globular Clusters: Probing the Self-Enr	richment
	Scenario"	Cerro Pachón
	2 nights on SOAR/Goodman Spectrograph	
2015	"Mapping the Radial Distribution of the Unusual Globular Cluster System	of NGC 4365"
		Las Campanas
	0.5 night on Magellan (Baade)/Fourstar Imager	
2014	"SCABS: The Survey of Centaurus A's Baryonic Structures"	Cerro Tololo
	2 nights on Blanco/DECam	
2013	"Chemodynamical Characterization of Blue Straggler Stars in Galactic Glo	bular
	Clusters"	Cerro Paranal
	3 nights on VLT/FLAMES	

#### SCIENCE COMMUNITY SERVICE AND OUTREACH

Jan. 2021—	Co-supervision of Undergraduate Intern	Victoria, Canada
	Co-supervision of undergraduate intern performing imaging data reduction	and analysis.
Oct. 2020—	Mentorship of Plaskett Scholar Student	Victoria, Canada
	Supervision of inaugural Plaskett Scholar pre-undergraduate research stude	ent.
Jan. 2021	Royal Astronomical Society of Canada Public Talk	Victoria, Canada
	"Judge Me By My Size Do You? Tales of the littlest galaxies that could."	
	Virtual public outreach talk	
Dec. 2020	University of Victoria Astronomy Open House Public Talk	Victoria, Canada
	"So You Think You Can Galaxy: The Life and Times of the Littlest Star System	ns that Could"
	Virtual public outreach talk	
SeptDec. 2020	Co-supervision of Undergraduate Intern	Victoria, Canada
	Co-supervision of undergraduate student performing large-scale galaxy mod	delling.

Mar. 2018— Feb. 2017—	Maunakea Spectroscopic Explorer International Science Team Contributing member of "Galaxy Formation and evolution" science developme for the Maunakea Spectroscopic Explorer project. Thirty Meter Telescope International Science Development Team (ISDT) Contributing member to the "Milky Way and Nearby Galaxies" ISDT for the Th	
I A 2010	Telescope	IIII- IICA
June-Aug. 2019	Mentorship of Akamai Workforce Initiative Intern Supervision of undergraduate Akamai intern carrying out artificial star experi	Hilo, USA
June-Oct 2019	Mentorship of Undergraduate Intern	Hilo, USA
june 0ct. 2017	Supervision of undergraduate intern carrying out image reduction and photon	
May 2019	Hilo Astroday	Hilo, USA
•	Community outreach in the Hawaiian community to inspire children and yout	h to
	observatory careers.	
Mar. 2018,19	Journey Through the Universe	Hilo, USA
	Community outreach to share astronomy with Hawaiian children through han	ds-on
	classroom activities and "ask-me-anything" sessions.	_
Dec. 2018	TMT Early Career Initiative Workshop	Pasadena, USA
	Facilitated multi-day instrument design exercise during workshop to develop	early-career
	skills relevant to future operations with the Thirty Meter Telescope.	
Dec. 2017	Astronomy on Tap Public Talk	Hilo, USA
	"So You Think You Can Galaxy: Tales of the Littlest Star Systems that Could" putalk	iblic outreach
Nov. 2017	Kona Astroday	Kona, USA
	Community outreach in the Hawaiian community to inspire children and yout	
	observatory careers.	
Sept. 2015	Python Plotting Tutorial	Santiago, Chile
•	Provided an introductory tutorial to <i>matplotlib</i> to ESO colleagues.	
Apr. 2015	Conference Local Organizing Committee	Santiago, Chile
	Satellites and Streams in Santiago, 13-17 April 2015	
2009-2010		ictoria, Canada
	Assisted in UVic's Department of Physics and Astronomy weekly open house.	
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## SELECTED CONFERENCE CONTRIBUTIONS AND INVITED TALKS

(2 invited talk	ts; 6 contributed talks)	
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 <b>talk</b> : IAU-GA Symposium 344, Vienna, Austira, 20-24 August 2018.	
May 2018	Neighbourhood Watch: A survey of baryonic structures in the Local Universe	
	Contributed <b>talk</b> : CASCA 2018, Victoria, Canada, 22-26 May 2018.	
Sept. 2016	The Extended Globular Cluster System of NGC5128 and its Nearby Environment	
	Invited <b>talk</b> : University of Victoria, Victoria, Canada, 22 Sept. 2016.	
Sept. 2016	The Extended Globular Cluster System of NGC5128 and its Nearby Environment	
	Invited <b>talk</b> : Herzberg Institute of Astrophysics, Victoria, Canada, 13 Sept. 2016.	
May 2015	SCABS: The Survey of Centaurus A's Baryonic Structures	
	Contributed talk: Multiwavelength Dissection of Galaxies, Sydney, Australia,	
	24-29 May 2015.	
Mar. 2015	Observational Evidence for a Dark Side to Centaurus A's Globular Cluster System	
	Contributed talk: Modelling and Observing Dense Stellar Systems 15, 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: Formation and Evolution of Star Clusters, Santiago, Chile, 14-16 May 2014	

### **PUBLICATIONS**

Conference Pro	oceedings
2019	The Gemini Fast Turnaround Program
	Anderson, M., Chiboucas, K., Geball, T., Salinas, R., Scharwaechter, J., Eckersley, J., Kim, H., <b>Taylor, M.A.</b> , Dupuy, T., & Sanmartim, 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
2019	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. 2019, Dwarfs from the Deep Universe to the Present, 344, 353. doi:10.1017/S1743921318006634
2017	Faint Dwarf Galaxies in Hickson Compact Group 90
	Ordenes-Briceño, Y., <b>Taylor, M.A.</b> , Puzia, T.H., & Muñoz, R.P., 2017, Revista Mexicana de Astronomia y
	Astrofisica Conference Series, 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., & <b>Taylor, M.A.</b> , 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., & <b>Taylor, M.A.</b> , 2015, IAU General Assembly, 22, 2258151
2015	The Dark Side of SCABS: Predictions for Centaurus A's Baryonic Substructure
	Sauda Bovill, M., <b>Taylor, M.A</b> ., 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., & <b>Taylor, M.A.</b> , 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, JM., Gladman, B., Jones, R.L., Parker, J., & <b>Taylor, M.</b> ,2011,
	in EPSC-DPS Joint Meeting 2011, pp. 1318
	Journal Articles
	or papers with 99 citations; sixteen co-author papers with 456 citations; H=10)
2020	Star Clusters on the Half-Shell: a fresh look at the kinematics of M49's globular cluster
	system
	<u>Taylor, M.A.</u> , Ko, Y., Côté, P., Ferrarese, L., Peng, E.W., Zabludoff, A., Sánchez-Janssen, Hendel, D., Chilingarian, I., Liu, C., Roedigger, J., Spengler, C., and Zhang, HX. <i>Astrophysical Journal Letters</i> ,
2020	submitted  The Next Congretion Former Courses (NCFS), VII. A MUSE view of the nuclear star.
2020	The Next Generation Fornax Survey (NGFS): VII. A MUSE view of the nuclear star
	clusters in Fornax dwarf galaxies
	Johnson, E., Puzia, T.H., D'Ago, G., Eigenthaler, P., Galaz, G., Häußler, Mora, M.D., Ordenes-Briceño, Y., Rong, Y., Spengler, C., Vogt, F., Côté, P., Grebel, E., Hilker, M., Mieske, S., Miller, B., Sánchez-Janssen, R.,
	Taylor, M.A., and Zhang, HX. Monthly Notices of the Royal Astronomical Society, accepted, arXiv:
	2005.01532
2019	The Next Generation Fornax Survey (NGFS): VI. The Alignment of Dwarf Galaxies in the
2017	Fornax Cluster
	Rong, Y., Puzia, T.H., Ordenes-Briceño, Y., Eigenthaler, P., <b>Taylor, M.A.</b> , Muñoz, R.P., Zhang, HX., 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., <i>The Astrophysical Journal, submitted</i>
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
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	Johnson, E., Eigenthaler, P., Puzia, T.H., Ordenes-Briceño, Y., <b>Taylor, M.A.</b> , Alamo-Martínez, K., Côté, P., Galaz, G., Grebel, E., Hilker, M., Lançon, A., Mieske, S., Sánchez-Janssen, and Rong, Y., <i>The Astrophysical Journal</i> , 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 <u>Taylor, M.A.</u> , Monthly Notices of the Royal
2210	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, HX., Ordenes-Briceño, Y., and Bovill, M.S., <i>The Astrophysical Journal Letters</i> , vol. 867, no. 1, L15
2018	The Fornax Cluster VLT Spectroscopic Survey. I – VIMOS spectroscopy of compact
2010	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., <u>Taylor, M.A.</u> , 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 <b>Taylor, M.A.</b> , <i>The Astrophysical Journal</i> ,
	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., <u>Taylor, M.A.</u> , 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.,
2210	Rong, Y., and Sánchez-Janssen, R. <i>The Astrophysical Journal</i> , 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., <u>Tavlor, M.A.</u> , 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. <i>The Astrophysical Journal</i> , 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, HX., Puzia, T.H., Peng, E.W., Liu, C., Côté, P., Ferrarese, L., Duc, PA., Eigenthaler, P., Lim, S.,
	Lançon, A., Muñoz, R.P., Roediger, J., Sánchez-Jannsen, R., <u>Taylor, M.A.</u> , and Yu, J., <i>The Astrophysical</i>
2018	Journal, vol. 858, no. 1, 2018, pp. 37-48  The Next Generation Fornax Survey (NGFS). II. The Central Dwarf Galaxy Population
2010	Eigenthaler, P., Puzia, T.H., <u>Taylor, M.A.</u> , 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., <i>The Astrophysical Journal</i> , 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,
2017	R., & <u>Taylor, M.A.</u> , 2017, Galaxies, 5, 29  The Survey of Conturus A's Parwonic Structures (SCAPS). II. The Extended Clobular
2017	The Survey of Centurus A's Baryonic Structures (SCABS). II. The Extended Globular Cluster System of NGC5128 and its Nearby Environment
	<b>Taylor, M.A.</b> , Puzia, T.H., Muñoz, R.P., Mieske, S., Eigenthaler, P., and Bovill, M.S., <i>Monthly Notices of the</i>
	Royal Astronomical Society, vol. 469, no. 3, 2017, pp. 3444-3467
2016	Faint Dwarf Galaxies in Hickson Compact Group 90
	Ordenes-Briceño Y., <u>Taylor, M.A.</u> , 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
2016	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 <u>Taylor, M.A.</u> , <i>The Astrophysical Journal</i> , 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., <u>Taylor, M.A.</u> , 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 Observational Evidence for a Dark Side to NGC 5128's Globular Cluster System 2015 Taylor, M.A., Puzia, T.P., Gomez, M., and Woodley, K.A., The Astrophysical Journal, vol. 805, no. 1, 2015, 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., Mc-Connachie, 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 Chemodynamics of Compact Stellar Systems in NGC 5128: How similar are globular 2010 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