

## Evan Santos Scannapieco

October 22, 2020

School of Earth and Space Exploration  
Arizona State University  
PO Box 871404  
Tempe, AZ 85287-1404

Phone: (510) 260-4326  
Fax: (480) 965-8102  
email: [evan.scannapieco@asu.edu](mailto:evan.scannapieco@asu.edu)  
URL: <http://scannapieco.asu.edu>

### Education

1996-2001 UC Berkeley Physics MS (adv. Joseph Silk) & Ph.D. (adv. Marc Davis)  
Dissertation: The Role of Heating and Enrichment Structure Formation  
1992-96 Harvard Univ. Physics A.B., *magna cum laude*

### Academic Appointments

2018-present Professor ASU School of Earth and Space Exploration (SESE)  
2013-2018 Associate Professor ASU School of Earth and Space Exploration  
2007-13 Assistant Professor ASU School of Earth and Space Exploration  
2003-07 Postdoctoral Member UCSB Kavli Institute for Theoretical Physics  
2001-03 NSF Distinguished International Postdoctoral Research Fellow  
Arcetri Observatory, Italy, and Paris Institute of Astrophysics, France

### Federal Grants

2017-20 NSF-AAG: Following the Turbulent Enrichment of the High-Redshift Universe  
Awarded Amount: \$503,163 (100% Credit)  
2017-20 NASA Theory: Making Galaxy Formation Simulations Great Again  
Awarded Amount: \$472,397.00 (20% Credit)  
2015-19 NASA Theory: The Next Generation of Tools for Simulating Galaxy Outflows  
Awarded Amount: \$497,228 (100% Credit)  
2015-18 NSF-IRES: Measuring Cosmic Magnetism with the Low Frequency Radio Array  
Awarded Amount: \$248,212 (100% Credit)  
2014-17 NSF-AAG: Using the Sunyaev-Zel'dovich Effect to Measure AGN Feedback  
Awarded Amount: \$498,199 (100% Credit)  
2011-14 NSF-AAG: Simulating Galaxy Formation with Fewer than a Trillion Zones  
Awarded Amount: \$486,798 (100% Credit)  
2011-14 NASA Theory: Colliding And Merging White Dwarfs  
Awarded Amount: \$366,000 (50% Credit)  
2010-14 NSF-IRES: Studying Galactic and Intergalactic Magnetism with LOFAR  
Awarded Amount: \$149,408 (100% Credit)  
2009-2012 NASA Theory: Self-Enrichment of Primordial and Present-day Star Clusters  
Awarded Amount: \$474,437 (50% Credit)  
2008-11 NSF-AAG: Constraining Double Degenerate Mergers  
Awarded Amount: \$501,260 (50% Credit)

## **Courses Taught**

AST 111: Introduction to Astronomy I: Discovering the Solar System (2008, 2009, 2013)  
AST 112: Introduction to Astronomy II: Stars, Galaxies, and Cosmology (2011, 2012, 2015)  
AST 421: Upper Division Astrophysics I: Stars and Stellar Systems (2012, 2016)  
AST 422: Upper Division Astrophysics II: Stars and Stellar Systems (2009, 2014, 2016)  
AST 521: Graduate Level Radiative Processes in Astrophysics (2010)  
AST 531: Graduate Level Galactic Dynamics (2007, 2009, 2011, 2015, 2017)  
GLG 591: High-Performance Computation for Space and Environmental Flows (2010)  
SESE 122/124: Earth, Solar System and Universe II (2017)  
SES 598: Introduction to Radio Astronomy (2018)

## **Administrative Appointments**

2018-pres Program Scientist for NASA Astrophysics Theory (ATP) and Theoretical and Computational Astrophysics Networks (TCAN) Program  
2018-pres Project Scientist for NASA Neal Gehrels Swift Observatory  
2018-pres Astrophysics Program Scientist for Future Investigators in NASA Earth and Space Science and Technology (FINESST)  
2020-pres Chair of NASA Astrophysics Division Research & Analysis (R&A) Diversity, Equity, and Inclusion (DEI) Task Force  
2020-pres Astrophysics Program Scientist for NASA Artificial Intelligence / Machine Learning Task Force  
2018-pres Astrophysics Lead of NASA High-End Computing Allocation Board  
2018-pres Laura Rendón Scholarship Committee  
2018-2019 Faculty Liaison and Board Member, ASU Chicano/Latino Faculty & Staff Association (CLFSA)  
2017-20 Online Bachelor of Science in Astronomical and Planetary Sciences Development Team  
2017-18 Astrophysics Lead for ASU School of Earth and Space Exploration (SESE) Heptennial Review Committee  
2016-18 SESE Promotion and Tenure Committee  
2009-18 ASU Advanced Computing Center Steering Committee  
2015-17 Chair of SESE Awards Committee  
2008-11 SESE Graduate Recruitment Committee  
2008-11 SESE Committee to Establish the ASU Earth and Space Exploration Bachelor of Science Degree

## **National and International Service**

2018-pres Associate Editor, Science Advances  
2013-pres Reviewer for Nature  
1997-pres Reviewer for The ApJ  
1997-pres Reviewer for The MNRAS  
1997-pres Reviewer for Physical Review D  
2018 External Reviewer, NSF International Research Experience for Students (IRES)  
2017 National Science Bowl Question Reviewer  
2016 Chair, NASA Theory Grant Panel  
2016 Grand Award Judge, Intel International Science and Engineering Fair  
2016 Panelist, NSF Astronomy and Astrophysics Grants Program

2015	Panelist, NSF International Research Experience for Students (IRES) Program
2014	Panelist, NSF Mid-Scale Innovations Program (MSIP) Panelist
2014	External Reviewer, UK Royal Society University Research Fellowships
2013	Panelist, NSF, Astronomy and Astrophysics Grants Program
2012	Chair, NASA Theory Grant Panel
2011-17	External Reviewer, Korean Ministry of Ed., Sci., & Tech. Grants
2011	Panelist, NSF Astronomy and Astrophysics Grants Program
2009-12	Judge, Student Cluster High-Performance Computation Competition
2010	Panelist, NSF Astronomy and Astrophysics Grants Program
2009	Chair, NSF Astronomy and Astrophysics Grants Program
2009-pres	External Reviewer for Israel Science Foundation Science Grants
2008-12	External Reviewer for Dutch National Vidi Research Incentives
2008	Chair, NSF Astronomy and Astrophysics Grants Program
2007	Panelist, NSF Astronomy and Astrophysics Grants Program
2005	Panelist, NSF Astronomy and Astrophysics Grants Program
2004-pres	External Reviewer for US-Israeli Binational Science Foundation

### **Professional Memberships and & Community Involvement**

2019-pres	Board Member, Harvard Club of Washington D. C.
2017-19	Board Member, Harvard Club of Phoenix
2016-pres	Member, ASU Chicano/Latino Faculty & Staff Association
2011-prea	Member, Joint Institute for Nuclear Astrophysics
1998-pres	Member, American Astronomical Society

### **Awards & Fellowships**

2019	Dr. Manuel Servín Faculty Award Awarded yearly to and ASU faculty member who exemplifies achievement in research, mentorship of Hispanic students, leadership at ASU, and community service and involvement.
2019	NASA HQ Honor Award Awarded for successfully executing the 2019 Astrophysics Research Program on schedule and meeting all metrics following the government shutdown.
2007	Ontario Research and Innovation Optical Network (ORION), Discovery Award of Merit Awarded for carrying out the largest cosmological simulation containing gas ever carried out.
2006	Aspen Center for Physics, Martin & Beate Block Award Awarded to the most promising young physicists to attending a winter conference at the Aspen Center for Physics
2001	NSF-Distinguished International Postdoctoral Research Fellowship
2001	UC Berkeley, Elizabeth Uhl Award Awarded for outstanding scholarly achievement by a graduate student close to finishing his/her dissertation in Astronomy or Physics.
1999	UC Berkeley, Chancellors Opportunity Predoctoral Fellowship
1996	National Science Foundation Graduate Fellowship
1996	UC Berkeley, Roy L. Frank Fellowship

### **Postdoctoral Advisees**

Mohammad Safarzadeh 2016-2019  
Sharanya Sur 2012-15  
Liubin Pan 2009-12  
Themis Athanassiadou 2009-12

### **Current Position**

Postdoctoral Scholar at UC Santa Cruz  
Asst. Professor, Indian Institute of Astrophysics,  
Asst. Professor, Sun Yat Sen University  
Support Engineer, Atlassian

### **Graduate Advisees**

Edward Buie 5th year PhD Student  
J'Neil Cottle 5th year PhD Student  
Richard Sarmento PhD in 2018  
Alexander Spacek PhD in 2017  
Mark Richardson PhD in 2014  
William Gray PhD in 2012  
Cody Raskin PhD in 2011

Instructor at US Naval Academy  
Postdoc at Los Alamos National Laboratory  
Education and Outreach Officer, Queens Univ.  
Scientist at 3M Corporation  
Staff Scientist at Lawrence Livermore Nat. Lab

### **Graduate Student Awards**

Edward Buie	2020	College Student Leader Recognition Award
	2017-2021	NSF Graduate Fellowship
	2016	ASU Doctoral Enrichment Fellowship
Mark Richardson	2013	Balzan Visiting Junior Research Fellowship
	2011-14	National Sciences and Engineering Research Council of Canada Grant
Cody Raskin	2010	NASA Earth and Space Science (NESSF) Fellowship
	2010	Annual Meeting of Nobel Laureates, Invitee

### **Recent Undergraduate Advisees**

Lilly Whitler	Grad 2020	University of Arizona, PhD Student
Victoria Jones	Grad 2020	University of Arizona, PhD Student
Thomas Tyburczy	Grad 2020	ASU Lunar Recon Orbiter Research Technician
Cameron White	Grad 2019	University of Arizona, PhD Student
Cierra Huff	Grad 2020	ASU PhD Student
Gabriella Huckabee	Grad 2019	UC Santa Cruz PhD Student
Jacob Woosley	Grad 2018	Failure Analysis R&D Engineer at Intel
Kezman Saboi	Grad 2018	ASU PhD Student
Stephanie Stawinski	Grad 2017	University of San Diego PhD Student
Trevor Van Engelhoven	Grad 2017	John Hopkins PhD Student
Michael Busch	Grad 2016	John Hopkins PhD Student
James Cornelison	Grad 2015	Harvard University PhD Student
Diane Van Hoy	Grad 2015	Teacher in the Mesa Public Schools
Miguel Bueno	Grad 2014	ASU engineering PhD Student
Stuart Spackman	Grad 2014	CU Boulder PhD Student
Amanda Wilber	Grad 2014	Associate Lecturer at Curtin University

Jon Van der Water	Grad 2013	Lead flight director Challenger Space Cent.
Michael Falcon	Grad 2013	Test engineer at Freescale Semiconductor
Zelong Yu	Grad 2013	Univ. Maryland PhD Student
Devon Powell	Grad 2013	Postdoc at Max Plank Inst. For Astrophys.
Holly Hutchison	Grad 2013	ISS Payload Integration Manager, Boeing

### **Recent Conference Workshop Organization**

2020	Science Organizing Committee Member Eighth Annual GMT Community Science Meeting: Black Holes at all Scales
2019	Lead Organizer The Turbulent Life of Cosmic Baryons Workshop, Aspen Center for Physics
2019	Science Organizing Committee Member, Joint Institute for Nuclear Astrophysics workshop on R-process Sources in the Universe, Tempe, AZ
2019	Science Organizing Committee Member Seventh Annual GMT Community Science Meeting: The Cosmic Baryon Cycle: Gas and Galaxies, Catalina Island, CA
2018	Science Organizing Committee Member Simulating Line Emission from Galaxies, Tempe, AZ
2013	Science Committee Chair Turbulence in Cosmic Structure Formation conference, Tempe, AZ

### **Selected Recent Lectures, Addresses, and Colloquia**

11/2020	National Society of Black Physicists, Virtual Conference
2/2020	Astro 2020 Decadal Review, Enabling Foundation for Research Panel
10/2019	Circumgalactic Medium Berlin 2019, Berlin, Germany
6/2019	The Turbulent Life of Cosmic Baryons, Aspen, CO
1/2019	Astrophysics Colloquium, University of Virginia
7/2018	Intergalactic Interconnections Conference, Marseille, France
6/2018	Massive black holes in evolving galaxies Conference, Paris, France
6/2018	Rise and Shine Conference, Strasbourg, France
5/2018	Interstellar: The Matter Meeting, Cozumel, Mexico
5/2018	Simons Symposium on Galactic Superwinds, Schloss Elmau, Germany
4/2018	Interstellar Medium of High-redshift Galaxies Workshop, Garching, Germany
3/2018	University of Victoria, Physics and Astronomy Colloquium, Victoria, Canada
3/2018	NRC Herzberg Inst. of Astrophysics, Astrophys. Seminar, British Columbia, Canada
3/2018	University of British Columbia, Astrophysics Colloquium, Vancouver, Canada
12/2017	Dark Matters Conference in Honor of Joseph Silk, Paris, France
11/2017	Clusters of Galaxies Workshop: Physics and Cosmology, Bern, Switzerland
9/2017	Giant Magellan Telescope Community Science Meeting, Tarrytown, NY
6/2017	European Week of Astronomy and Space Science, Prague, Czech Republic
6/2017	What Matters Around Galaxies Conference, Durham, England
8/2016	Intracluster Medium Workshop, Fine Center, Univ. Minnesota
8/2016	Cloudy: Emission Lines in Astrophysics Symposium, Mexico City
7/2016	The Cold Universe KITP Workshop, Santa Barbara, CA
4/2016	Simons Symposium on Galactic Superwinds, Schloss Elmau, Germany

*Evan S. Scannapieco*

8/2015 IAU FM 18: Scale-free Processes in the Universe, Honolulu, HI  
8/2015 IAU FM 10: Stellar Explosions in an Ever-changing Environment, Honolulu, HI  
7/2015 The Metal Enrichment of Diffuse Gas in the Universe Conf., Sexten, Italy  
9/2014 Theoretical Astrophysics Colloquium, University of Arizona, Tucson, AZ  
6/2014 Gravity's Loyal Opposition KITP Workshop, Santa Barbara, CA  
3/2014 Simons Symposium on Galactic Super Winds: Beyond Phenomenology, Puerto Rico  
2/2014 Near-field Deep-Field Connection, UC Irvine, CA  
1/2014 Theoretical Astrophysics Seminar, UC Berkeley, CA

### **Recent Public Talks**

11/2017 ASU STEM Equity Exchange Brown Bag Lunch  
11/2017 Invited talk, Society for Literature, Science, and the Arts, Annual Meeting  
9/2017 Mathew Blades Radio Show, Mix 96.9  
9/2017 AZ Central, Facebook Live Video  
7/2016 Kavli Institute for Theoretical Physics, Chalk Talk  
3/2016 Saguaro Astronomy Club  
2/2016 ASU Night of the Open Door  
1/2016 Building a Research Program Panelist Discussion

### **Languages**

Bilingual in English and Spanish, Fluent in French and Italian

## Selected Publications

### Publication Summary

- 121 refereed publications in Astrophysics, 7 in other areas of science
- Citations: 4531 ADS, 6259 Google Scholar; h-index: 40 ADS, 45 Google Scholar

### Refereed Publications in Astrophysics

(underline indicates undergraduate or PhD student and *italics* indicates postdoc working under my supervision)

- [A121] Acceleration of Dense Blobs by Cosmic-Ray-Driven Winds  
M. Brüggén & **E. Scannapieco** 2020, *Astrophysical Journal (ApJ)*, in press  
(arXiv:2010.07308)
- [A120] Shock--multicloud interactions in galactic outflows - I. Cloud layers with log-normal density distributions  
W. Banda-Barragán, M. Brüggén, C. Federrath, A. Y. Wagner, **E. Scannapieco**, & J. Cottle 2020, *Monthly Notices of the Royal Astronomical Society (MNRAS)*, in press  
(arXiv:2009.07718)
- [A119] Limits to Rest-Frame Ultraviolet Emission from Far-Infrared-Luminous  $z > 6$  Quasar Hosts  
M. Marshall, M. Mechtley, R. A. Windhorst, S. H. Cohen, R. A. Jansen, V. R. Jones, J. S. B. Wyithe, X. Fan, N. P. Hathi, K. Jahnke, L. Jiang, W. C. Keel, A. M. Koekemoer, V. Marian, J. Robinson, H. Röttgering, R. E. Ryan, Jr., **E. Scannapieco**, D. P. Schneider, G. Schneider, B. M. Smith, M. A. Strauss, & H. Yan 2020, *ApJ*, 900, 21, pp. 22
- [A118] A New Model for Including Galactic Winds in Simulations of Galaxy Formation I: Introducing the Physically Evolved Winds (PhEW) Model  
S. Huang, N. Katz, **E. Scannapieco**, J. Cottle, R. Davé, D. H. Weinberg, J. A. Kollmeier, & M. S. Peebles 2020, *MNRAS*, 498, 2586, pp. 21
- [A117] Modeling Photoionized Turbulent Material in the Circumgalactic Medium II: Effect of Turbulence within a Stratified Medium  
E. Buie, **E. Scannapieco**, W. J. Gray, & *M. Safarzadeh* 2020, *ApJ*, 893, 136, pp. 24
- [A116] The Launching of Cold Clouds by Galaxy Outflows III: The Influence of Magnetic Fields  
J. Cottle, **E. Scannapieco**, M. Brüggén, W. Banda-Barragán, & C. Federrath, 2020, *ApJ*, 892, 59, pp. 15
- [A115] Modeling Observations of Absorption Lines in the Circumgalactic Medium with a Turbulent Medium  
E. Buie, M. Fumagalli, & **E. Scannapieco** 2020, *ApJ*, 890, 33 pp. 19
- [A114] Magnetic helicity dissipation and production in an ideal MHD code  
A. Brandenburg, & **E. Scannapieco** 2020, *ApJ*, 889, 55, pp. 9
- [A113] Catastrophic Cooling in Galaxy Outflows: Line Emission and Nonequilibrium Ionization  
W. J. Gray, M. S. Oey, S. Silich, & **E. Scannapieco** 2019, *ApJ*, 887, 161, pp. 17

- [A112] Warped diffusive radio halo around the quiescent spiral edge-on galaxy NGC 4565  
V. Heesen, L. Whitley, P. Schmidt, A. Miskolczi, S. S. Sridhar, R. Beck, G. Gurkan,  
**E. Scannapieco**, & M. Bruggen 2019, *A&A*, 628, 3, pp. 9
- [A111] Measuring the Delay Time Distribution of Binary Neutron Stars II: Using the Redshift  
Distribution from Third-Generation Gravitational Wave Detectors  
*M. Safarzadeh*, E. Berger, K.-Y. Ng, H.-Y. Chen, S. Vitale, C. Whittle, **E. Scannapieco**  
2019, *ApJ*, 878, 13, pp. 9
- [A110] On Neutron Star Mergers as the Source of r-process Enhanced Metal Poor Stars in the  
Milky Way  
*M. Safarzadeh*, R. Sarmiento, & **E. Scannapieco** 2019, *ApJ*, 876, 28, pp. 10
- [A109] Non-equilibrium Ionization States within Galaxy Outflows: Explaining Their OVI and  
NV Columns Densities  
W. J. Gray, **E. Scannapieco**, & M. D. Lehnert 2019, *ApJ*, 875, 110, pp. 12
- [A108] r-process Enrichment of Ultra-Faint Dwarf Galaxies by Fast Merging Double Neutron  
Stars  
*M. Safarzadeh*, E. Ramirez-Ruiz, J. J. Andrews, P. Macias, T. Fragos, & **E. Scannapieco**,  
2019 *ApJ*, 872, 105, pp. 9
- [A107] Hot X-ray Atmospheres, Molecular Gas and AGN Feedback in Early Type Galaxies:  
A Topical Perspective  
N. Werner, B. R. McNamara, E. Churazov, & **E. Scannapieco**, 2019, *Space Science  
Reviews*, 215, 5, pp. 48
- [A106] Astrophysics with the Spatially and Spectrally Resolved Sunyaev-Zeldovich Effects: A  
Millimetre/Submillimetre Probe of the Warm and Hot Universe  
T. Mroczkowski, D. Nagai, K. Basu, J. Chluba, J. Sayers, R. Adam, E. Churazov,  
A. Crites, L. Di Mascolo, D. Eckert, J. Macias-Perez, F. Mayet, L. Perotto, E.  
Pointecouteau, C. Romero, F. Ruppin, **E. Scannapieco**, J. ZuHone 2019, *Space Science  
Reviews*, 215, 17, pp. 60
- [A105] Following the Cosmic Evolution of Pristine Gas III: The Observational Consequences of  
the Unknown Properties of Population III Stars  
R. Sarmiento, **E. Scannapieco**, and B. Côté 2019, *ApJ*, 871, 206, pp. 18
- [A104] Calibrating the low-frequency radio–SFR relation in nearby galaxies at 1-kpc scale with  
LOFAR  
V. Heesen, E. Buie II, CJ Huff, L. A. Perez, J. G. Woolsey, D. A. Rafferty, A. Basu, R.  
Beck, E. Brinks, C. Horellou, **E. Scannapieco**, M. Brüggen, R.-J. Dettmar, K.  
Sendlinger, B. Nikiel-Wroczyński, K. T. Chyzy, P. N. Best, G.H. Heald, & R. Paladino,  
2019 *A&A*, 662, 8, pp. 23
- [A103] Using Real and Simulated Measurements of the Thermal Sunyaev-Zel'dovich Effect to  
Constrain Models of AGN Feedback  
A. Spacek, M. Richardson, **E. Scannapieco**, J. Devriendt, Y. Dubois, S. Peirani, &  
C. Pichon 2018, *ApJ*, 865, 109, pp. 12
- [A102] Understanding Star-Formation as a Markov Process



- E. Scannapieco & M. Safarzadeh** 2018, *ApJL*, 865, 14, pp. 5
- [A101] Modeling Photoionized Turbulent Material in the Circumgalactic Medium  
E. Buie, W. J. Gray, & **E. Scannapieco** 2018, *ApJ*, 864, 114, pp. 10
- [A100] Column Density Profiles of Cold Clouds Driven by Galactic Outflows  
J. Cottle, **E. Scannapieco**, & M. Brüggen 2018, *ApJ*, 864, 96, pp. 14
- [A99] A Limit on the Warm Dark Matter Mass From the Redshifted 21cm Absorption Line  
*M. Safarzadeh*, **E. Scannapieco**, & A. Babul 2018, *ApJL*, 859, 18, pp. 5
- [A98] Selecting Ultra-faint Dwarf Candidate Progenitors in Cosmological N-body Simulations at High Redshifts  
*M. Safarzadeh*, A. P. Ji, G. A. Dooley, A. Frebel, **E. Scannapieco**, F. A Gómez, B. W. O’Shea 2018, *MNRAS*, 476, 5006, pp. 9
- [A97] Following the Cosmic Evolution of Pristine Gas II: The Search For Pop III Bright Galaxies  
R. Sarmento, **E. Scannapieco**, & S. Cohen 2018, *ApJ*, 854, 75, pp. 13
- [A96] The Fate of Gas-Rich Satellites in Clusters  
*M. Safarzadeh*, & **E. Scannapieco** 2017, *ApJ*, 850, 88, pp. 7
- [A95] The Effect of Turbulence on Nebular Emission Line Ratios  
W. J Gray & **E. Scannapieco** 2017, *ApJ*, 849, 132, pp.11
- [A94] Constraining the Properties of Neutron Star Mergers by Simulating r-process Element Production in Ultra-Faint Dwarf Galaxies  
*M. Safarzadeh*, & **E. Scannapieco** 2017, *MNRAS*, 471, 2088-2096
- [A93] The Production of Cold Gas Within Galaxy Outflows  
**E. Scannapieco** 2017, *ApJ*, 837, 28, pp. 17
- [A92] Numerical Simulation of Star Formation by the Bow Shock of the Centaurus A Jet  
C. Gardner, J. Jones, **E. Scannapieco**, & R. A. Windhorst, 2017, *ApJ*, 835, 232, pp. 9
- [A91] Searching for Fossil Evidence of AGN Feedback in WISE-Selected Stripe-82 Galaxies by Measuring the Thermal Sunyaev-Zel’dovich Effect with the Atacama Cosmology Telescope  
A. Spacek, **E. Scannapieco**, S. Cohen, B. Joshi, & P. Mauskopf 2017, *ApL*, 834, 102, pp. 16
- [A90] Following the Cosmic Evolution of Pristine Gas I: Implications for Milky Way Halo Stars  
R. Sarmento, **E. Scannapieco**, & L. Pan 2017, *ApJ*, 834, 23, pp. 20
- [A89] On the Formation of Molecular Clumps in QSO Outflows  
A. Ferrara, & **E. Scannapieco**, 2016, *ApJ*, 833, 46, pp. 16
- [A88] The Impact of Unresolved Turbulence on the Escape Fraction of Ly-Continuum Photons  
*M. Safarzadeh*, & **E. Scannapieco** 2016, *ApJL*, 832, L9, pp. 4

- [A87] Comparing Simulations of AGN Feedback  
M. L. A. Richardson, **E. Scannapieco**, R. J. Thacker, J. Devriendt, A. Slyz, J. Wurster,  
Y. Dubois, & J. Silk 2016, *ApJ*, 825, 83, pp. 26
- [A86] The Launching of Cold Clouds by Galaxy Outflows II: Hydrodynamic Interactions with  
Conduction  
M. Brüggen, & **E. Scannapieco** 2016, *ApJ*, 822, 31, pp. 17
- [A85] Constraining AGN Feedback in Massive Ellipticals with South Pole Telescope  
Measurements of the Thermal Sunyaev-Zel'dovich Effect  
A. Spacek, **E. Scannapieco**, S. Cohen, B. Joshi, & P. Mauskopf 2016, *ApJ*, 819, 128,  
pp. 22
- [A84] Atomic Chemistry in Turbulent Media II: Effect of the Redshift Zero Metagalactic  
Background  
W. J. Gray & **E. Scannapieco** 2016, *ApJ*, 2016, 818, 198, pp. 26
- [A83] Galaxy Outflows Without Supernovae  
S. Sur, **E. Scannapieco**, & E. Ostriker 2016, *ApJ*, 818, 28, pp. 17
- [A82] Observing and Analyzing Images From a Simulated High-Redshift Universe  
R. Morgan, R. Windhorst, **E. Scannapieco**, R. Thacker, 2015, *PASP*, 127, 803, pp. 22
- [A81] The Launching of Cold Clouds by Galaxy Outflows I: Hydrodynamic Interactions with  
Radiative Cooling  
**E. Scannapieco**, & M. Brüggen, 2015, *ApJ*, 805, 158, pp. 19
- [A80] Atomic Chemistry in Turbulent Media I: Effect of Atomic Cooling  
W. J. Gray, **E. Scannapieco**, & D. Kasen, 2015, *ApJ*, 801, 107, pp. 16
- [A79] Alignment of the Scalar Gradient in Evolving Magnetic Fields  
S. Sur, L. Pan, & **E. Scannapieco**, 2014, *ApJL*, 790, 9, pp. 5
- [A78] Astrobiological Stoichiometry  
P A. Young, et al. (including **E. Scannapieco**) 2014, *Astrobiology*, 14, 603-626
- [A77] High-Velocity-Dispersion Cold Gas in ULIRG Outflows. I: Direct Simulations  
D. J. Williamson, R. J. Thacker, **E. Scannapieco**, & M. Brüggen 2014, *MNRAS*, 441,  
389-403
- [A76] Mixing in Magnetized Turbulent Media  
S. Sur, L. Pan, & **E. Scannapieco**, 2014, *ApJ*, 784, 94, pp. 13
- [A75] Formation of Compact Clusters from High Resolution Hybrid Cosmological Simulations  
M. L. A. Richardson, **E. Scannapieco**, & W. J. Gray 2013, *ApJ*, 778, 80, pp. 22
- [A74] Modeling the Pollution of Pristine Gas in the Early Universe  
L. Pan, **E. Scannapieco**, & J. Scalzo 2013, *ApJ*, 775, 111, pp. 34
- [A73] Hybrid Cosmological Simulations with Stream Velocities  
M. L. A. Richardson, **E. Scannapieco**, & R. J. Thacker 2013, *ApJ*, 771, 81, pp. 13

- [A72] Thermal and Chemical Evolution of Collapsing Filaments  
W. J. Gray, & **E. Scannapieco** 2013, *ApJ*, 768, 174, pp. 16
- [A71] Understanding Galaxy Outflows as the Product of Unstable Turbulent Support  
**E. Scannapieco** 2013, *ApJL*, 763, 51, pp. 5
- [A70] Mixing of Clumpy Supernova Ejecta into Molecular Clouds  
*L. Pan*, *S. J. Desch*, **E. Scannapieco**, & *F.X. Timmes*, 2012, *ApJ*, 756, 102, pp. 21
- [A69] Near-Infrared Imaging of a  $z=6.42$  Quasar Host Galaxy With the Hubble Space Telescope Wide Field Camera 3  
M. Mechtley, *R. A. Windhorst*, *R. E. Ryan*, *G. Schneider*, *S. Cohen*, *R. A. Jansen*, *X. Fan*, *N. Hathi*, *W. C. Keel*, *A. Koekemoer*, *H. R. Rottgering*, **E. Scannapieco**, *D. P. Schneider*, *M. A. Strauss*, *H. J. Yan* 2012, *ApJL*, 756, 38, pp. 6
- [A68] Remnants of Binary White Dwarf Mergers  
C. Raskin, **E. Scannapieco**, *G. Rockefeller*, *C. Fryer*, *S. Diehl*, & *F.X. Timmes*, 2012, *ApJ*, 746, 62, pp. 15
- [A67] Identification of a Fundamental Transition in a Turbulently-Supported Interstellar Medium  
**E. Scannapieco**, W. Gray, & *L. Pan* 2011, *ApJ*, 746, 57, pp. 9
- [A66] Formation of Compact Stellar Clusters by High-Redshift Galaxy Outflows III: Observability and Connection to Halo Globular Clusters  
W. J. Gray, & **E. Scannapieco** 2011, *ApJ*, 742, 100, pp. 18
- [A65] Predicting the Merger Fraction of Lyman alpha Emitters from Redshift  $z\sim 3$  to  $z\sim 7$   
V. Tilvi, **E. Scannapieco**, *S. Malhotra*, & *J. Rhoads* 2011, *MNRAS*, 418, 2196-2201
- [A64] The Temperature of Hot Gas in Galaxies and Clusters: Baryons Dancing to the Tune of Dark Matter  
*S. H. Hansen*, *A. V. Maccio*, *E. Romano-Diaz*, *Y. Hoffman*, *M. Brüggen*, **E. Scannapieco**, & *G. S. Stinson* 2011, *ApJ*, 734, 62, pp. 7
- [A63] Formation of Compact Stellar Clusters by High-Redshift Galaxy Outflows II: Effect of Turbulence and Metal-line Cooling  
W. J. Gray, & **E. Scannapieco** 2011, *ApJ*, 733, 88-100
- [A62] Passive Scalar Structures in Supersonic Turbulence  
*L. Pan*, & **E. Scannapieco** 2011, *Physical Review E*, 83, 04302(R), pp. 4
- [A61]  $^{56}\text{Ni}$  Production in Double Degenerate White Dwarf Collisions  
C. Raskin, **E. Scannapieco**, *G. Rockefeller*, *C. Fryer*, *S. Diehl*, & *F.X. Timmes*, 2010, *ApJ*, 724, 111-125
- [A60] Mixing in Supersonic Turbulence  
*L. Pan*, & **E. Scannapieco** 2010, *ApJ*, 721, 1765-1782
- [A59] The Size and Origin of Metal-Enriched Regions in the Intergalactic Medium from Spectra of Binary Quasars

- C. L. Martin, **E. Scannapieco**, S. L. Ellison, J. F. Hennawi, S. G. Djorgovski, & A. Fournier 2010, *ApJ*, 721, 174-192
- [A58] Simulating Supersonic Turbulence in Galaxy Outflows  
**E. Scannapieco**, & M. Brüggen 2010, *MNRAS*, 405, 1634-1653
- [A57] Formation of Compact Stellar Clusters by High-Redshift Galaxy Outflows I: Nonequilibrium Coolant Formation  
W. J. Gray, & **E. Scannapieco** 2010, *ApJ*, 718, 417-432
- [A56] Thermonuclear Ia Supernovae from Helium Shell Detonations: Explosion Models and Observables  
K. J. Shen, D. Kasen, N. Weinberg, L. Bildsten, & **E. Scannapieco** 2010, *ApJ*, 715, 767-775
- [A55] Mining the Galactic Halo for Very Metal-Poor Stars  
S. Salvadori, A. Ferrara, R. Schneider, **E. Scannapieco**, & D. Kawata 2010, *MNRAS*, 401, L5-L9
- [A54] Spectra and Light Curves of Failed Supernovae  
C. L. Fryer, P. J. Brown, F. Bufano, J. A. Dahl, C. J. Fontes, L. H. Frey, S. T. Holland, A. L. Hungerford, S. Immler, P. Mazzali, P. A. Milne, **E. Scannapieco**, N. Weinberg, & P. A. Young, 2009, *ApJ*, 707, 193-207
- [A53] Prompt Ia Supernovae are Significantly Delayed  
C. Raskin, **E. Scannapieco**, J. Rhoads, M. Della Valle 2009, *ApJL*, 707, 74-78
- [A52] On Type Ia Supernova From The Collision of Two White Dwarfs  
C. Raskin, F. Timmes, **E. Scannapieco**, S. Diehl, & C. Fryer 2009, *MNRAS Letters*, 399, 156-159
- [A51] A Physical Model of Lyman Alpha Emitters  
V. Tilvi, S. Malhotra, J. Rhoads, **E. Scannapieco**, R. J. Thacker, I. Iliev, & G. Mellema 2009, *ApJ*, 704, 724-732
- [A50] The Contribution of the IGM and Minihalos to the 21 cm Signal of Reionization,  
B. Yue, B. Ciardi, **E. Scannapieco**, & X. Chen, 2009, *MNRAS*, 398, 2122-2133
- [A49] Self-Regulation of AGN in Galaxy Clusters,  
M. Brüggen, & **E. Scannapieco** 2009, *Monthly Notices of the Royal Astronomical Society*, 398, 548-560
- [A48] Power Spectrum for the Small-scale Universe  
L. M. Widrow, P. J. Elahi, R. J. Thacker, M. Richardson, & **E. Scannapieco** 2009, *MNRAS*, 397, 1275-1285
- [A47] Evolution of X-ray Cavities  
M. Brüggen, & **E. Scannapieco** 2009, *Monthly Notices of the Royal Astronomical Society*, 395, 2210-2220
- [A46] Subhaloes in Scale-Free Cosmologies

- P. J. Elahi, R. J. Thacker, L. M. Widrow, & **E. Scannapieco** 2009, *MNRAS*, 395, 1950-1962
- [A45] Globular Clusters as Testbeds for Type Ia Supernovae  
E. Pfahl, **E. Scannapieco**, & L. Bildsten 2009, *ApJL*, 695, 111-114
- [A44] Predictions of Quasar Clustering: Redshift, Luminosity and Selection Dependence  
R. J. Thacker, **E. Scannapieco**, & H. M. P. Couchman. & M. Richardson 2009, *ApJ*, 693, 552-563
- [A43] Using Spatial Distributions to Constrain Progenitors of Supernovae and Gamma Ray Bursts  
C. Raskin, **E. Scannapieco**, J. Rhoads, & M. Della Valle 2008, *ApJ*, 689, 358-370
- [A42] Subgrid Modeling of AGN-Driven Turbulence in Galaxy Clusters  
**E. Scannapieco**, & M. Brüggen 2008, *ApJ*, 686, 927-947
- [A41] Measuring AGN Feedback with the Sunyaev-Zel'dovich Effect  
**E. Scannapieco**, R. J. Thacker, & H. M. P. Couchman, 2008, *ApJ*, 678, 674-685
- [A40] The Spatial Distribution of the Galactic First Stars II: SPH Approach  
C. B. Brook, D. Kawata, **E. Scannapieco**, H. Martel, & B. K. Gibson 2007, *ApJ*, 661, 10-18
- [A39] The Spatial Distribution of the Galactic First Stars I: High-Resolution N-body Approach  
**E. Scannapieco**, D. Kawata, C. B. Brook, B. K. Gibson, R. Schneider, A. Ferrara, & B. K. Gibson 2006, *ApJ*, 653, 285-299
- [A38] Quasars: What turns them off?  
R. J. Thacker, **E. Scannapieco**, H. M. P. Couchman, 2006, *ApJ*, 653, 86-100
- [A37] Relativistic Ionization Fronts  
P. R. Shapiro, I. T. Iliev, M. A. Alvarez, & **E. Scannapieco**, 2006, *ApJ*, 648, 922-935
- [A36] The Effect of Minihalos on Cosmic Reionization  
B. Ciardi, **E. Scannapieco**, F. Stoehr, A. Ferrara, I. T. Iliev, & P. R. Shapiro 2006, *MNRAS*, 366, 689-696
- [A35] The Sources of Intergalactic Metals  
**E. Scannapieco**, C. Pichon, B. Aracil, P. Petitjean, R. J. Thacker, D. Pogosyan, J. Bergeron, & H. M. P. Couchman 2006, *MNRAS*, 365, 615-637
- [A34] AGN Feedback Causes Downsizing  
**E. Scannapieco**, J. Silk, R. Bouwens 2005, *ApJL*, 635, 13-16
- [A33] Where are the Missing Cosmic Metals?  
A. Ferrara, **E. Scannapieco**, & J. Bergeron 2005, *ApJL*, 634, 37-40
- [A32] The Detectability of Pair-Production Supernovae at  $z \leq 6$

- E. Scannapieco**, P. Madau, S. Woosley, A. Heger, & A. Ferrara 2005, *ApJ*, 633, 1031-1041
- [A31] The Type Ia Supernova Rate  
**E. Scannapieco** & L. Bildsten 2005, *ApJL*, 629, 85-88
- [A30] What Can the Distribution of Intergalactic Metals Tell Us About the History of Cosmological Enrichment?  
**E. Scannapieco** 2005, *ApJL*, 624, 1-4
- [A29] The Impact of Small-Scale Structure on Cosmological Ionization Fronts and Reionization  
I. Iliev, **E. Scannapieco**, & P. R. Shapiro 2005, *ApJ*, 624, 491-504
- [A28] Toward an Improved Description of Lagrangian Bias  
**E. Scannapieco** & R. J. Thacker 2005, *ApJ*, 619, 1-11
- [A27] Suppression of Dwarf Galaxy Formation by Cosmic Shocks  
F. Sigward, A. Ferrara, & **E. Scannapieco** 2005, *MNRAS*, 358, 755-764
- [A26] A VLT Spectroscopic Survey of RX J0152.7-1357, a Forming Cluster of Galaxies at  $z = 0.837$   
R. Demarco, P. Rosati, N. L. Homeier, **E. Scannapieco**, N. Benitez, V. Manieri, M. Nonino, M. Girardi, S. A. Stanford, P. Tozzi, S. Borgani, & G. Squires 2005, *A&A*, 432, 381-394
- [A25] Triggering the Formation of Halo Globular Clusters with Galaxy Outflows  
**E. Scannapieco**, J. Weisheit, & F. Harlow 2004, *ApJ*, 615, 29-44
- [A24] Quasar Feedback: The Missing Link in Structure Formation  
**E. Scannapieco** & S. Peng Oh 2004, *ApJ*, 608, 62-79
- [A23] The Clustering of Intergalactic Metals  
C. Pichon, **E. Scannapieco**, B. Aracil, P. Petitjean, D. Aubert, J. Bergeron, & S. Colombi 2003, *ApJL*, 587, 97-100
- [A22] On the Spatial Correlations of Lyman Break Galaxies  
**E. Scannapieco** & R. J. Thacker 2003, *ApJL*, 590, 69-72
- [A21] Nonlinear Clustering During the Cosmic Dark Ages and its Effect on the 21-cm Background from Minihalos  
I. Iliev, **E. Scannapieco**, H. Martel, & P. R. Shapiro 2003, *MNRAS*, 341, 81-90
- [A20] The Detectability of the First Stars and Their Cluster Enrichment Signatures  
**E. Scannapieco**, R. Schneider, & A. Ferrara 2003, *ApJ*, 589, 35-52
- [A19] Violence in the Dark Ages  
R. J. Thacker, **E. Scannapieco**, & M. Davis 2002, *ApJ*, 581, 836-843
- [A18] Feedback Processes in Early-Type Galaxies  
I. Ferreras, **E. Scannapieco**, & J. Silk 2002, *ApJ*, 579, 247-260

- [A17] Early Enrichment of the Intergalactic Medium and its Feedback on Galaxy Formation  
**E. Scannapieco**, A. Ferrara, & P. Madau 2002, *ApJ*, 574, 590-598
- [A16] An Analytical Approach to Inhomogeneous Structure Formation  
**E. Scannapieco** & R. Barkana 2002, *ApJ*, 571, 585-603
- [A15] How is the Reionization Epoch Defined?  
M. Bruscoli, A. Ferrara, & **E. Scannapieco** 2002, *MNRAS Letters*, 330, 43-47
- [A14] High-Redshift Galaxy Outflows and the Formation of Dwarf Galaxies  
**E. Scannapieco**, R. J. Thacker, & M. Davis, 2001, *ApJ*, 557, 605-615
- [A13] Linking the Metallicity Distribution of Galactic Halo Stars to the Enrichment History of the Universe  
**E. Scannapieco** & T. Broadhurst 2001, *ApJL*, 550, 39-42
- [A12] The Role of Heating and Enrichment in Galaxy Formation  
**E. Scannapieco** & T. Broadhurst 2001, *ApJ*, 549, 28-45
- [A11] Is There a Detectable Ostriker-Vishniac Effect?  
**E. Scannapieco** 2000, *ApJ*, 540, 20-31
- [A10] Measurement of a Peak in the Cosmic Microwave Background Power Spectrum from the North American Test Flight of BOOMERANG  
P. Mouskops et al. (including **E. Scannapieco**) 2000, *ApJ Letters*, 536, 59-62
- [A9] The Influence of Galactic Outflows on the Formation of Nearby Galaxies  
**E. Scannapieco**, A. Ferrara, & T. Broadhurst 2000, *ApJL*, 536, 11-14
- [A8] Detecting the Gravitational Redshift of Cluster Gas  
T. Broadhurst & **E. Scannapieco** 2000, *ApJL*, 533, 93-97
- [A7] Lensing-Induced Structure of Submillimeter Sources: Implications for the Microwave Background  
**E. Scannapieco**, J. Silk, & J. C. Tan 2000, *ApJ*, 529, 1-11
- [A6] Temperature Correlations in a Finite Universe  
**E. Scannapieco**, J. Levin, & J. Silk 1999, *MNRAS*, 303, 797-800
- [A5] How the Universe Got its Spots  
J. Levin, **E. Scannapieco**, G. de Gasperis, J. Silk, & J. D. Barrow 1998, *Phys Rev D*, 58, 123006 (14 pages). *This work inspired the popular book, "How the Universe Got Its Spots: Diary of a Finite Time in a Finite Space," by J. Levin.*
- [A4] Is the Universe Infinite or Just Really Big?  
J. Levin, **E. Scannapieco**, & J. Silk 1998, *Physical Review D*, 58, 103516 (5 pages)
- [A3] The Effect of the Detector Response Time on Bolometric Cosmic Microwave Background Anisotropy Experiments  
S. Hanany, A. Jaffe, & **E. Scannapieco** 1998, *MNRAS*, 229, 653-660

[A2] The Topology of the Universe: the Biggest Manifold of Them All  
J. Levin, **E. Scannapieco**, & J. Silk 1998, *Classical & Quantum Gravity*, 15, 2689 -2697

[A1] Polarization-Temperature Correlation from a Primordial Magnetic Field  
**E. Scannapieco** & P. Ferreira 1997, *Physical Review D*, 56, R7493-7497

### **Refereed Publications in Other Areas of Science**

[B7] The Pollution of Pristine Material in Compressible Turbulence  
*L. Pan, E. Scannapieco, & J. Scalo* 2012, *Journal of Fluid Mechanics*, 700, 459-489

[B6] Nuclear Temperature Measurements with Helium Isotopes  
H. Xi et al. (including **E. Scannapieco**) 1998, *Nuclear Phys. A*, 630, 160-167

[B5] Temperature Measurements for Central Au + Au Collisions at 35A MeV  
M. Huang et al. (including **E. Scannapieco**) 1997, *Phys. Rev. Lett.* 78, 1648-165

[B4] The Gold Flashlight: Coherent Photons (and Pomerons) at RHIC  
S. Klein & **E. Scannapieco** 1998, in *Photon 97*, eds. A. Buijs and F. C. Berne (World Scientific), pp. 5

[B3] Coherent Photons and Pomerons in Heavy Ion Collisions  
S. Klein & **E. Scannapieco** 1997, *Intersections of Particle and Nuclear Physics* ed. T. W. Donnelly, (Springer-Verlag: New York), 412, 274-278

[B2] STAR Note 243: Two Photon Physics with STAR  
S. Klein & **E. Scannapieco** 1995, available online at <http://www.star.bnl.gov>

[B1] Introduction to Finite Difference Techniques for Numerical Fluid Dynamics  
**E. Scannapieco** & F. Harlow 1995, (Los Alamos National Laboratory Press: Los Alamos) 205 pages, available at <http://scannapieco.asu.edu/fluids.html>, *Translated into Vietnamese for use by the Danish Aid organization, DANIDA.*