Curriculum Vitae

Dr. Dennis Bodewits
Department of Physics, Auburn University
Edmund C. Leach Science Center
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Auburn, AL 36849
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Education	**Degree**	**Major**	**Awarded**
University of Groningen	Ph.D.	Natural Sciences	May 2007
University of Groningen	M.Sc.	Experimental Physics	June 2003
University of Groningen	M.Sc.	Astronomy & Astrophysics	June 2003

Employment History

Auburn University	Professor	2024 – Now
Auburn University	Assoc. Professor	2018 – 2024
University of Maryland	Assoc. Res. Scientist	2017 – 2018
University of Maryland	Assist. Res. Scientist	2011 – 2017
University of Maryland	Postdoctoral Scientist	2010 – 2011
NASA Goddard Space Flight Center	Postdoctoral Fellow	2007 – 2010
Center for Advanced Radiation Technology	Postdoctoral Fellow	2007
Center for Advanced Radiation Technology	Jr Sci./Ph.D. Candidate	2003 – 2007

Summary of activities

<table>
<tr><td colspan="2">Teaching</td></tr>
<tr><td>Courses taught while at Auburn:
• Service classes: PHYS 1607 Honors' Physics
• Developed: PHYS 5100/6100 Applications of Quantum Mechanics, PHYS 3500 Astrobiology, PHYS 5600/6600 Survey of Atomic and Molecular Physics
• Mentoring classes: PHYS 1100 Physics Orientation, PHYS 7900 Introduction to Auburn Research, PHYS 7950 Colloquium

Awards:
AU Soc. Physics Students teaching award
Auburn Alumni Professorship (2023-2028)
Dean's awards for Research and Mentorship</td><td>Postdoctoral mentoring while at Auburn:
• 5 Completed, 1 in progress

PhD/MSc Advising while at Auburn:
• Completed: 13 as Committee Member, 2 as Major professor, 1 Reader
• In progress: 1 as Major Professor, 3 as Committee Member
• 6 external to AU, of which 5 international

Undergraduate advisor at Auburn:
• Undergraduate Program Officer
• 14 undergraduate research projects
• 4 Undergraduate Research Fellowships</td></tr>
<tr><td colspan="2">Research</td></tr>
<tr><td>Research Area:
• Laboratory astrophysics and observational astronomy of comets
• Active collaboration with internal, national, and international partners and laboratories

Publications and conferences (in career):
• 181 published refereed papers
• 13,245 total citations, h-index = 51, i10-index = 155 (Google scholar)

• Over 100 presentations at domestic and international meetings, including plenary talks at major international conferences</td><td>Research Grants:
• Career funding total: $7.0M
• Career funding as PI: $5.5M
• Extramural sources: NASA, HST, Chandra, Swift, ISS/NICER, ESPSCOR, JWST, EuroPlanet, NSF
• Intramural sources: Office of the VPR, COSAM, Provost

• Awarded competitive observing time on multiple orbital telescopes (JWST, HST, Chandra, Swift, ISS/NICER, NUSTAR, XMM-Newton)</td></tr>
<tr><td colspan="2">Service and Outreach</td></tr>
<tr><td>Service at Auburn:
• Associate Dean of Research Fellow, COSAM (2025 - …)
• Undergraduate Program Officer (2024 - 2025)
• COSAM Promotion and Tenure committee (2024 - …)
• Chair Lab Astro faculty search (2023)

General Service:
• Assoc. Editor, Icarus journal (2025 – present)
• Secretary, Laboratory astrophysics Div. American Astron. Soc. (2025–2027)</td><td>Grant proposal reviewer for:
NASA programs (chair and panelist), Hubble Space Telescope, Belgian, Italian, Irish, and UK national science agencies

Journal reviewer for:
Nature, Nature Astronomy, Astronomical Journal, Astrophysical Journal, Icarus, etc.

Time allocation/evaluation committees:
Swift, GALEX, Chandra X-ray Observatory, HST, JWST.</td></tr>
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1. Honors and Awards

- Eugene J. Clothiaux Endowed Faculty Award (2025 – 2026), Physics Department, Auburn University
- Dean's Award for Outstanding Faculty Undergraduate Mentor, College of Science and Mathematics, Auburn University (2024)
- Endowed Alumni Professorship, Auburn University (2023 – 2028).
- Dean's Research Award Faculty, College of Sciences and Mathematics, Auburn University (2023).
- Most Outstanding Physics Professor, Auburn University Society of Physics Students (2018).
- Asteroid (10033) Bodewits named after me for my contribution to the planetary sciences. International Astronomical Union (2017).
- NASA Group Achievement Award (Comet Siding Spring Observing team), NASA Headquarters (2015).
- NASA Group Achievement Award (Comet Modelling, Prediction, and Assessment team), NASA Headquarters (2015).
- Letter of recognition for service to NASA's Comet Siding Spring Observing Campaign, James Green (Director), Planetary Science Division, NASA (2014).
- NASA Group Achievement Award (EPOXI Science Team), NASA Headquarters (2011).
- NASA Postdoctoral Program (NPP) Fellowship, NASA GSFC (2007).
- 'Van Swinderen' Thesis Prize, Dutch Royal Physical Society (2007).
- Dutch Research Council (NWO), Extended International Travel Award (2006).

2. Teaching

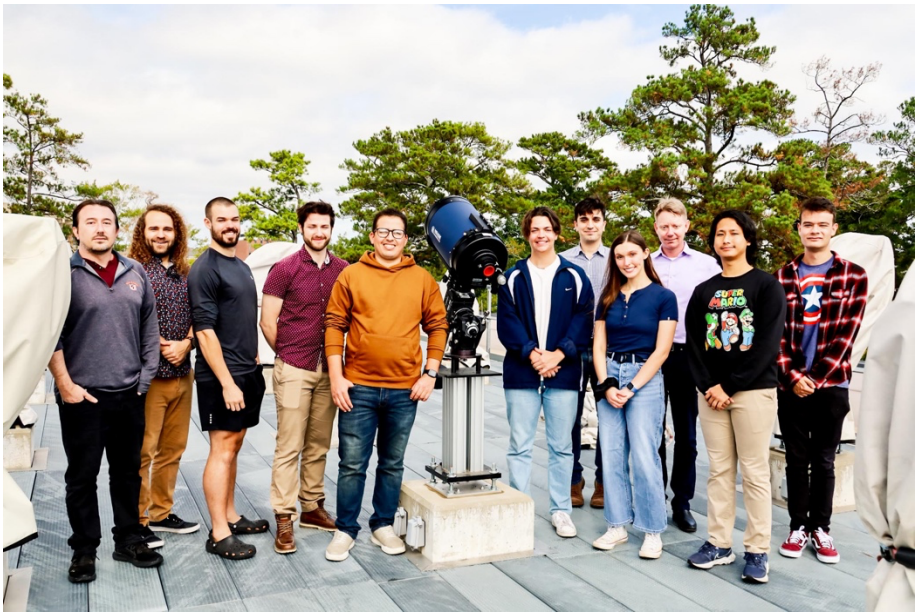
Semester	Course Number	Title	% of Course Taught	Hr/ wk	Enroll-ment
Spring '19	PHYS 7900	Introduction to Physics Research	50%	1	9
Spring '19	PHYS 5100/6100	Applications of Quantum Mechanics	100%	4	9
Spring '19	PHYS 6500	Computational Physics	15%	1	4
Spring '19	PHYS 7930	Comet observations with Swift	100%	1	1
Spring '19	PHYS 8900	Observational astrophysics with HST	100%	1	1
Fall '19	PHYS 3500	Astrobiology	100%	4	10
Fall '19	PHYS 7950	Colloquium	100%	1	26
Fall '19	PHYS 7930	Data science applications to astronomy I	100%	1	1
Fall '19	COMP 4710	Sr Design Project "Virtual Planetarium"	100%	1	4
Spring '20	PHYS 5100/6100	Applications of Quantum Mechanics	100%	4	10
Spring '20	PHYS 7900	Introduction to Physics Research	75%	1	14
Spring '20	PHYS 7950	Colloquium	100%	1	25
Spring '20	PHYS 7930	Data science applications to astronomy II	100%	1	1
Summer '20	PHYS 7930	Laboratory astrophysics of comets	100%	1	2
Summer '20		Undergraduate research	100%	1	2
Fall '20	PHYS 1607	Honors' Physics 1	100%	4	29
Spring '21	PHYS 5100/6100	Applications of Quantum Mechanics	50%	4	10
Spring '21	PHYS 4980	Directed Reading "Introduction to modern astrophysical research methods"	100%	1	1
Spring '21	PHYS 4980	Directed Reading "HST observations of comet 29P"	100%	1	1
Summer '21	PHYS 4980	Directed Reading "High energy astrophysics with ISS/NICER"	100%	1	1
Fall '21	PHYS 3500	Astrobiology	100%	4	11
Fall '21	PHYS 7930	Advanced Astrobiology"	100%	4	2
Fall '21	PHYS 4980	Astrophysical data processing	100%	1	1
Summer '22	PHYS 4980	Radiative processes	100%	4	1

Fall ‘22	PHYS 4980	Introduction to observational Molecular Spectroscopy	100%	3	1
Spring ‘23	PHYS 4980	Introduction to Digital Image Processing of Planetary Exploration Data	100%	2	1
Spring ‘23	PHYS 4980	Introduction to observational Molecular Spectroscopy	100%	3	1
Spring ‘23	PHYS 1607	Honors’ Physics 1	100%	4	39
Spring ‘23	PHYS 8970	Bayesian Data Analysis	50%	3	9
Summer ‘23	PHYS 4980	Intermediate observational Molecular Spectroscopy	100%	3	1
Fall ‘23	PHYS 3500	Astrobiology	100%	4	17
Fall ‘23	PHYS 8930	Astrobiological applications of molecular spectroscopy	67%	4	1
Fall ‘23	PHYS 4980	Advanced observational Molecular Spectroscopy	100%	4	1
Spring ‘24	PHYS 1607	Honors Physics 1	100%	4	34
Summer ‘24	PHYS 4980	Astronomical Image Processing Techniques	100%	4	1
Fall ‘24	PHYS 1100	Physics Orientation	100%	1	18
Fall ‘24	PHYS 5600/6600	Survey of Atomic and Molecular Physics	100%	4	9
Spring ‘25	PHYS 1150	Introduction to Astronomy	100%	4	45
Summer ‘25	PHYS 4980	Introduction to Laboratory Astrophysics	50%	4	1
Fall ‘25	PHYS 1100	Physics Orientation	100%	1	25
Fall ‘25	PHYS 5600/6600	Survey of Atomic and Molecular Physics	100%	4	10
Spring ‘26	PHYS 1150	Introduction to Astronomy	100%	4	64
Spring ‘26	PHYS 4980	Introduction to Laboratory Astrophysics	50%	4	1
Summer ‘26	PHYS 4980	Introduction to Astronomical Data Processing	50%	4	1
Summer ‘26	PHYS 4930	Foundations of Astrophysical Research	100%	2	1
Summer ‘26	PHYS 4980	Advanced Astrophysical Research	100%	4	1

3. Mentoring

3A. Postdoctoral Scientists

Name	Starting date	Completion date	Current Position
Dr Emanuele Bonamente	1/1/2020	9/30/2020	Science teacher (Italy)
Dr Kumar Venkataramani	1/1/2020	12/31/2021	Postdoc at CalTech
Dr Steven Bromley	6/1/2020	7/1/2023	Principal Research Scientist at Auburn University
Dr Mohi Saki	7/1/2021	9/1/2023	Lecturer at UMSL
Dr Youssef Moulane	11/1/2021	12/31/2023	Research Professor at Mohammed VI Polytechnic U.
Dr John Noonan	2/1/2022	12/31/2024	Ast. Research Professor, Auburn University
Dr Olga Harrington Pinto	9/1/2023	12/31/2025	
Dr Zexi Xing	3/1/2024		



Members of the Bodewits Research group in the Fall of 2022.

3B. Graduate Students

Graduate students whose work has been completed

	Name Advisor Status	Starting date	Completion date	Degree	Current Position

1	**Spencer Leblanc (Auburn University, Physics)**				
	Committee member		10/16/2019	Ph.D.	Boeing
2	**Vincent Kofman (Leiden U., The Netherlands)**				
	Committee member		6/19/2019	Ph.D.	Postdoc at NASA/GSFC
3	**Curtis Johnson (Auburn University, Physics)**				
	Committee member		10/29/2020	Ph.D.	Research Scientist Oak Ridge
4	**Lawrence O'Rourke (U. Complutense Madrid, Spain)**				
	Committee member		02/12/2021	Ph.D.	Sr Systems Engineer at European Space Agency
5	**Youssef Moulane (U. de Liège, Belgium and Cadi Ayyad U., Morocco)**				
	Committee member		03/22/2021	Ph.D.	Research Professor at Mohammed VI Polytechnic U.
6	**John Noonan (U. Arizona/Lunar and Planetary Laboratory)**				
	Committee member		01/07/2022	Ph.D.	Ast. Research Professor, Auburn University
7	**Pierce Jackson (Auburn University, Aerospace)**				
	Committee member		4/11/2022	M.Sc.	
8	**Michael McKinlay (Auburn University, Physics)**				
	Committee member		7/11/2022	Ph.D.	
9	**Affelia Wibisono (University College London, London, United Kingdom)**				
	External examiner		11/23/2022	Ph.D.	
10	**Sana Ahmed (Physical Research Laboratory, Ahmedabad, India)**				
	External examiner		9/30/2022	Ph.D.	
11	**Yaeji Kim (Auburn University, Aerospace Engineering)**				
	Committee member	1/1/2021	6/1/2023	Ph.D.	Postdoc at U. Maryland
12	**Eleanor Williamson (Auburn University, Physics)**				
	Committee member		11/14/2023	Ph.D	Postdoc at Auburn U.
13	**Zexi Xing (U. Hong Kong, People's Republic of China)**				
	Major/External Advisor	8/1/2018		Ph.D	Postdoc at Auburn U.
14	**Bebi Rai (Auburn University, Physics)**				
	Major Professor	5/15/2022	8/15/2025	M.Sc.	
15	**Thomas Deskins (Auburn University, Physics)**				
	Major Professor	8/15/2020	12/15/2025	Ph.D.	
16	**Isaac Garcia (Auburn University, Physics)**				
	Committee member		12/15/2025	Ph.D.	
17	**Joseph Ivarson (Auburn University, Aerospace Engineering)**				
	University Reader		4/15/2026	Ph.D.	

Graduate students on whose committee the candidate is presently serving

	Name Advisor Status	Starting date	Completion date	Degree	Current Position
18	**Shawn Oset (Auburn University)**				
	Major Advisor	8/15/2020		Ph.D	
19	**Elon Price (Auburn University)**				
	Committee member	8/1/2023		Ph.D.	
20	**Dane Van Tol**				
	Committee member	12/1/2024		Ph.D.	
21	**Patrick Flint**				
	Committee member	6/1/2025		Ph.D.	

3C. Undergraduate students (since at Auburn University)

	Name	Capacity	Dates
17	Nathan Cantley	Undergraduate Researcher	5/2026 – present
16	Reese Colley	Undergraduate Researcher	5/2026 – present
15	Ryder Cheney	Undergraduate Researcher	1/2026 – 5/2026
14	Charles Smith	Undergraduate Researcher	5/2025 – 8/2025
13	Sara George	Undergraduate Researcher	5/2025 – 8/2025
12	An Min Dam	Undergraduate Researcher	5/2025 – 8/2025
11	Zachary Smith	Undergraduate Researcher	5/2023 – 12/2023
10	Garrett Chambers	Undergraduate Researcher	5/2023 – 9/2025
9	Joseph Tucker	Undergraduate Researcher	1/2023 – 12/2023
8	Chase Lucht	Undergraduate Researcher	1/2023 – 5/2023
7	Ben Lightfoot	AU Research Fellow (2x)	5/2022 – 8/2025
6	Jacob Duffy	AU Research Fellow	3/2022 – 06/2024
5	Tanner Finlay	Undergraduate Researcher	3/2022 – 12/2022
4	Rachel Fulda	AU Research Fellow	9/2021 – 12/2022
3	Johannes Allen	AU Research Fellow	5/2020 – 7/2022
2	Valory Green	Undergraduate Researcher	8/2020 – 12/2021
1	Lauren Lyons	Undergraduate Researcher	8/2020 – 12/2020

4. Talks and Presentations

Note: Recent colloquia and seminars (since 2016), first author only. Red – international; black – domestic; blue – local.

- **International Space Science Institute Beijing**, Beijing, China, Oct. 2026
  Invited Review, *'Cometary Science Through Planetary Missions'*
- **Asteroids, Comets, and Meteors**, Poznan, Poland, July 2026
  Contributed presentation, *'Long-term volatile evolution of interstellar comet 3I/ATLAS'*
- **Pontificia Universidad Católica de Chile,** Dept. of Astronomy, Santiago, Chile, May 2026
  Invited Seminar, *'Comets as Laboratories for Prebiotic Chemistry'*
- **Georgia Institute of Technology Astrobiology Colloquium,** Georgia, GA, Feb. 2026
  Keynote Speaker, *'Comets as Laboratories for Prebiotic Chemistry'*
- **Brown University,** Providence, RI, Dec. 2025
  Invited Colloquium (Geology Dept), *'Comets: from Icy Wanderers to Rocky Surprises'*
- **Boston University,** Boston, MA, March 2025
  Invited Colloquium (Astronomy Dept), *'Comets: from Icy Wanderers to Rocky Surprises'*
- **International Astronomical Union General Assembly 2024**, Cape Town, South Africa (Aug. 2024)
  Contributed presentation, *'Direct detection of water in main belt comet 238P/Read'*.
- **Astronomical Society of Troy University**, Troy, AL (Feb. 2024)
  Invited colloquium, *'Comets: from icy wanderers to rocky surprises'*
- **Ultrasat Team Meeting**, Tel Aviv, Israel (July 2023).
  Invited presentation, *'Mapping Cometary Water Production Rates throughout the Solar System'*.
- **Mississippi State University**, Starkville, MS (Feb. 2023)
  Invited colloquium, *'A day in the life of a cometary molecule'*
- **University of Central Florida,** Orlando, FL, Oct. 2022
  Invited Colloquium, *'Comets as Natural Laboratories'*
- **European Space Agency StarCon**, Noordwijk, The Netherlands (Nov. 2022).
  Invited presentation, *'The storage and release of volatiles in small bodies'*.
  - **American Astronomical Society/Division of Planetary Sciences**, London (Canada), Oct. 2022
    Contributed presentation, *'Characterizing the aftermath of outbursts of Centaur 29/Schwassmann–Wachmann 1 with HST/WFC3'*
- **University of Northern Kentucky, Oct. 26, 2022 (virtual)**
  Invited colloquium, *'Comets as Natural Laboratories'*
- **NICER Summer 2022 Science and Proposal workshop**, virtual, Aug. 2022
  Invited review, 'NICER observations of comets: Charge exchange near and far'

- **American Astronomical Society (AAS) Summer meeting 2022**, Pasadena, CA, June 2022.
  Invited Plenary Talk, *'A day in the life of a cometary molecule'*
- **NASA Goddard Space Flight Center**, X-ray Science Task Group, Greenbelt, MD, virtual, May 2022
  Invited Talk, *'X-rays in the Solar System'*
- **International Space Science Institute, Bern (Austria)**, virtual, March 2022
  Invited review, *'The storage of volatiles and orbital variations in their sublimation patterns'*
- **43d Assembly of the Committee on Space Research (COSPAR)**, Sydney (Australia), virtual, Jan. 2021.
  Invited Review, '*X-rays in the Solar System*'.
- **University of Groningen, Astronomy Department,** Groningen (The Netherlands), virtual, Dec. 7, 2020.
  Invited Colloquium, 'Atomic and Molecules Physics of Comets and Exocomets'
  - **American Astronomical Society/Division of Planetary Sciences**, virtual, Oct. 2020
    Contributed presentation, *'Composition and Evolution of Interstellar Comet 2I/Borisov.'*
- **Chandra Frontiers in Time Domain Science,** Chandra X-ray Center, virtual, Oct. 2020.
  Invited Review, *'Time Domain Studies of Solar System X-rays'*.
- **AtomDB/Atomic Data for Astrophysicists Workshop**, virtual, Aug. 2020.
  Invited Review, *'Diagnostics of solar wind charge exchange'.*
  - **235th meeting of the American Astronomical Society**, Honolulu, HI, Jan. 2020.
    Contributed oral presentation, *'Swift observations of the water production of interstellar comet 2I/Borisov'*.
- **University of South Carolina, Department of Physics and Astronomy**, Columbia (SC), Nov. 2019.
  Invited Seminar, *'Physics of Comets and Laboratory Astrophysics at Auburn University'*.
- **University of Georgia**, Department of Physics and Astronomy, Athens (GA), Nov. 2019
  Invited Seminar, *'Physics of Comets and Laboratory Astrophysics at Auburn University'*.
- **Auburn University,** Auburn (AL), Sep. 2019.
  Discover Auburn Series: *'From the Microscope to the Hubble Space Telescope: Laboratory Astrophysics at Auburn University'.*
- **University of Alabama**, Dept. of Physics and Astronomy, Tuscaloosa (AL), Sep. 2019
  Invited Seminar, *'Physics of Comets and Laboratory Astrophysics at Auburn University'.*
  - **AAS/Division of Planetary Sciences/European Planetary Science Conference,** Geneva, (Switzerland), Sep. 2019
    Contributed poster, *'Characterizing the physical and chemical behavior of comet 46P/Wirtanen'.*
  - **New Cometary Insights from the Close Approach of 46P/Wirtanen**: A Symposium in Celebration of Mike A'Hearn, College Park, MD, Aug. 2019

Oral contribution: *'Physical and Chemical properties of comet Wirtanen'.*

- **Small Bodies of Solar System Workshop**, National Central University, Jhongli City, Taiwan (R.O.C), May 2019
  Invited Speaker, *'Diagnostics of cometary emission processes'.*

- **Workshop on New Results of Comet 46P/Wirtanen from Coordinated Observations**, Macau University of Science and Technology (Macau), May 2019
  Invited Speaker, *'Deep Impact and Stardust: two spacecraft, three comets'*.
- **'Exocomets' workshop**, Lorentz Center, Leiden U., the Netherlands, May 2019.
  Invited Speaker *'Cometary emission processes: fingerprints of their physical and chemical behavior'*.
- **Auburn University,** Auburn, AL, April. 2019.
  Annual Duncan Lecture, invited: *'Water in the solar system'*.
- **Valdosta State University**, Valdosta (GA), April. 2019.
  Invited seminar: *'The Physics of Comets'*.
- **Auburn University**, Chemistry Department, Auburn (AL), Feb. 2019.
  Invited seminar: *'The Physical and Chemical Behavior of Comets'*.
- **Time Domain Astrophysics with Swift III**, Clemson (SC), Oct. 2018.
  Invited Speaker: *'Swift observations of Small bodies in the Solar System'*.
  - **Division of Planetary Sciences Meeting** (AAS-DPS), Knoxville, TN, Oct. 2018
    Oral contribution: *'Near Ultraviolet and Optical Emission Features of Electron Impact on Water Vapor'*.
- **Georgia Institute of Technology**, Atlanta (GA), Oct. 2018.
  Invited seminar, *'Physics of Cometary Atmospheres'*.
- **Physics of Comets after Rosetta: Unresolved problems**, Stará Lesná (Slovakia), Sep. 2018.
  Invited keynote lecture: *'Physics of Comets after Rosetta'*.
  - **15th Annual Meeting, Asia Oceania Geosciences Society**, Honolulu (HI), Jun. 2018.
    Oral contribution: *'Small Body Science with the Zwicky Transient Facility'*.
- **Comenius University,** Bratislava (Slovakia), Mar. 2018.
  Visiting scientist, invited seminar: *'Ion and Electron Collisions in Cometary Atmospheres'*.
- **Southwest Research Institute**, Boulder (CO), Mar. 2018.
  Invited seminar: *'Comets after Rosetta'*.
- **Auburn University**, Physics Department, Auburn (AL), Mar. 2018.
  Invited seminar: *'Comets after Rosetta'*.
- **Comenius University,** Bratislava, (Slovakia), Sep. 2017.
  Visiting scientist, invited seminar: *'Living with a comet: The Rosetta mission to 67P/Churyumov-Gerasimenko'*.
- **Lunar and Planetary Laboratory/University of Arizona**, Tucson (AZ), Aug 2016.
  Invited seminar: *'Living with a comet: The Rosetta mission to 67P/Churyumov-Gerasimenko'*.

5. Grants and Contracts (since joining Auburn)

5A. Funded External Support

Title: 'Swift/UVOT and the water cycle of Oort Cloud Comets'
Period: 2027
Funding Agency: NASA/Swift Cycle 22
Awarded to Auburn: $40,000
PI: Dennis Bodewits

Title: 'The NICER Comet Survey: A Legacy Dataset for Charge Exchange in the Heliosphere and Beyond'
Period: 2026 – 2027
Funding Agency: NICER Guest Investigator program cycle 8 (though NASA/GSFC)
Awarded to Auburn: $60,000
PI: Dennis Bodewits (Auburn)

Title: 'Capturing Planetesimal Chemistry from Fragmenting Oort Cloud Comet C/2025 K1 (ATLAS)'
Period: 2025 – 2028
Funding Agency: Space Telescope Science Institute/ James Webb Telescope Cycle 4
Awarded to Auburn: $35,000
PI: John Noonan (Auburn)

Title: 'Examining Cometary Volatile Storage Mechanisms with HST Observations of C/2024 E1 (Wierzchos)'
Period: 2026 – 2029
Funding Agency: Space Telescope Science Institute/Hubble Space Telescope Cycle 33
Awarded to Auburn: $58,064
PI: Dennis Bodewits (Auburn)

Title: 'Testing the Refractory Sulfur Reservoir Hypothesis with the Next Interstellar Object '
Period: 2025 – 2028
Funding Agency: Space Telescope Science Institute/Hubble Space Telescope Cycle 32
Awarded to Auburn: $81,501
PI: John Noonan (Auburn)

Title: 'Composition of an Interstellar Object – unique insights into Protoplanetary Disk Midplane Chemistry '
Period: 2025 – 2028
Funding Agency: Space Telescope Science Institute/James Webb Telescope Cycle 3
Awarded to Auburn: $28,713
PI: Martin Cordiner (NASA/CUA)
AU PI: Dennis Bodewits

Title: EXPLORING SOLAR-WIND DYNAMICS THROUGH COMETARY INTERACTIONS DURING SOLAR MAXIMUM: A COMPARATIVE STUDY OF C/2023 A3 (TSUCHINSHAN-ATLAS) AND P/2010 H2 (VALES)
Period: 2026 – 2027
Funding Agency: NICER Guest Investigator program cycle 7 (though NASA/GSFC)
PI: Dennis Bodewits
Total Amount: $38,470

Title: 'The volatile content of Oort Cloud Comet C/2014 UN271'
Period: 2024 - 2027
Funding Agency: Space Telescope Science Institute/James Webb Telescope
Awarded to Auburn: $30,443
PI: Bryce Bolin (NASA GSFC)
AU PI: Dennis Bodewits

Title: 'The activity and evolution of Oort Cloud Comets at a wide range of distances'
Period: 2026-2026
Funding Agency: Swift Cycle 21 Guest Investigator program (NASA/GSFC)
Awarded to Auburn: $39,956
PI: Dennis Bodewits

Title: 'Mapping Solar Wind Dynamics Through Cometary Interactions: Dual Observations of Comets 12P and 62P During Solar Maximum'
Period: 2024 – 2025
Funding Agency: NICER Guest Investigator program cycle 6 (though NASA/GSFC)
PI: Dennis Bodewits
Total Amount: $38,499

Title: 'Characterization of Water Outgassing in Main-Belt comets 133P/Elst-Pizarro and 457P/Lemmon-PANSTARRS'
Period: 2024 – 2027
Funding Agency: Space Telescope Science Institute/James Webb Telescope
Awarded to Auburn: $61,815
PI: Henry Hsieh (Planetary Science Institute)
AU PI: Dennis Bodewits

Title: 'The activity and evolution of Oort Cloud Comets'
Period: 2024-2025
Funding Agency: Swift Cycle 20 Guest Investigator program (NASA/GSFC)
Awarded to Auburn: $39,999
PI: Dennis Bodewits

Title: 'Physical processes in the coma of 29P/SchwassmannWachmann1: ionization and excitation mechanisms in distant comets'

Period: 2024 – 2025
Funding Agency: NASA/Solar System Observations
PI: Dennis Bodewits
Total Amount: $462,014

Title: 'Characterization of Water Outgassing in Main-Belt comets 133P and 358P'
Period: 2023 – 2026
Funding Agency: Space Telescope Science Institute/James Webb Telescope
Awarded to Auburn: $59,859
PI: Henry Hsieh (Planetary Science Institute)
AU PI: Dennis Bodewits

Title: 'The volatile content of Oort Cloud Comet C/2014 UN271'
Period: 2023 - 2026
Funding Agency: Space Telescope Science Institute/James Webb Telescope
Awarded to Auburn: $14,000
PI: Bryce Bolin (NASA GSFC)
AU PI: Dennis Bodewits

Title: 'The activity and evolution of Oort Cloud Comets'
Period: 2023-2024
Funding Agency: Swift Guest Investigator program (NASA/GSFC)
Requested Amount Auburn: $39,956
PI: Dennis Bodewits

Title: 'Testing natal heritage among comet dynamical families'
Period: 2024 - 2026
Funding Agency: Space Telescope Science Institute/James Webb Telescope
Awarded to Auburn: $40,760
PI: Mohi Saki (UMSL)
AU PI: Dennis Bodewits

Title: 'Gas-phase chemical and spectral modeling to unlock the diagnostic potential of cations in small body atmospheres'
Period: 2024-2027
Funding Agency: NSF/Astronomy
Total Amount: $604,321
PI: Steve Bromley (Auburn)

Title: 'Mapping cometary water production rates throughout the solar system'
Period: 2023 – 2026
Funding Agency: ULTRASAT participating science program (through NASA/GSFC)
PI: Dennis Bodewits
Total Amount: $209,654
Awarded to Auburn: $209,654

Title: 'Multi-cycle monitoring of the volatile evolution of a returning planetesimal as it approached perihelion'
Period: 2024 – 2025
Funding Agency: James Webb Space Telescope Cycle 2 at Space Telescope Science Institute
PI: Bryce Bolin (NASA GSFC)
Total Amount: Unknown
Awarded to Auburn: $37,520

Title: 'Characterization of water outgassing in main belt comets 133P/Elst-Pizarro and 358P/Panstarrs
Period: 2023 – 2025
Funding Agency: James Webb Space Telescope Cycle 2 at Space Telescope Science Institute
PI: Henry Hsieh (PSI)
Total Amount: Unknown
Awarded to Auburn: $61,276

Title: 'Close up samples of exoplanetary systems: characterizing the next interstellar object'
Period: 2023 – 2025
Funding Agency: James Webb Space Telescope Cycle 2 at Space Telescope Science Institute
PI: Karen Meech (IFA/U. Hawaii)
Total Amount: Unknown
Awarded to Auburn: $26,832 (Provisionally awarded but not executed)

Title: 'NICER Cycle 5 - Observing the Bright Comet C/2022 E3 to Study Charge Exchange Interactions with All Solar Wind'
Period: 2023 – 2024
Funding Agency: NICER Guest Investigator program cycle 5 (though NASA/GSFC)
Science PI: Thomas Deskins (Graduate student, Auburn U.)
PI: Dennis Bodewits
Total Amount: $42,118
Awarded to Auburn: $42,118
Awarded Observing time: 134 ksec/1.5 days

Title: 'The activity and evolution of Oort Cloud Comets'
Period: 2023 – 2024
Funding Agency: Swift Guest Investigator program Cycle 19 (though NASA/GSFC)
PI: Dennis Bodewits
Total Amount: $39,956
Awarded to Auburn: $39,956
Awarded Observing time: 88.4 ksec/1.0 days

Title: 'Investigating Sulfur Abundances and Distributions in UV Comet Observations'
Period: 2023 – 2026
Funding Agency: Hubble Space Telescope Cycle 30 at Space Telescope Science Institute
Science PI: J. Noonan (Postdoc, Auburn U.)
PI: D. Bodewits

Total Amount: $493,072
Awarded to Auburn: $269,112

Title: 'The volatile content of Oort Cloud Comet C/2014 UN271
Period: 2022 – 2023
Funding Agency: James Webb Space Telescope Cycle 1 at Space Telescope Science Institute
PI: Bryce Bolin (American U.)
Total Amount: Unknown
Awarded to Auburn: $23,992
Awarded Observing time: 4.4 hours (Approved)

Title: 'Using NICER to study the solar wind interaction with the rare, CO-rich comet C/2017 K2'
Period: 2021 – 2022
Funding Agency: ISS/NICER Guest Investigator program cycle 4 (though NASA/GSFC)
Science PI: Thomas Deskins (AU graduate student)
PI: Dennis Bodewits
Total Amount: $43,942
Awarded to Auburn: $43,942
Awarded Observing time: 26 hours

Title: 'Characterizing the aftermath of multiple mega-outbursts of Centaur 29P'
Period: 2021 – 2023
Funding Agency: Hubble Space Telescope Cycle 29, Director's Discretionary Time, at Space Telescope Science Institute
PI: D. Bodewits
Total Amount: ($112,412)
Awarded to Auburn: ($112,412)
Awarded Observing time: 6 orbits (6 hours) (Approved)

Title: 'Determining the coma contents of the incoming Oort Cloud comet C/2014 UN271'
Period: 2022 – 2024
Funding Agency: Hubble Space Telescope program at Space Telescope Science Institute
PI: Bryce Bolin (CalTech)
Total Awarded Amount: unknown
Awarded to Auburn: ($11,568)
Observing Time (~$100k/orbit): 3 orbits/4.5ksec

Title: 'Why was comet C/2017 K2 active at record-setting distances from the sun and what happens when it reaches the inner solar system?'
Period: 2022 – 2023
Funding Agency: Swift Guest Investigator program Cycle 18 (though NASA/GSFC)
PI: Dennis Bodewits
Total Amount: $38,459
Awarded to Auburn: $38,459
Awarded Observing time: 61 ksec/0.7 days

Title: 'Detecting Water on Metallic M-type Asteroids'
Period: 2022 – 2024
Funding Agency: Hubble Space Telescope program Cycle 29 at Space Telescope Science Institute
PI: T. Becker (SWRI)
Total Amount: Unknown
Awarded to Auburn: $11.5k
Awarded Observing time: (6 hours)

Title: 'The return of Rosetta's comet 67P/Churyumov-Gerasimenko'
Period: 2022 – 2024
Funding Agency: Hubble Space Telescope program Cycle 29 at Space Telescope Science Institute
PI: D. Bodewits
Total Amount: $95.4k
Awarded to Auburn: $82k
Awarded Observing time: 4 orbits (6 hours)

Title: 'Composition of an Interstellar Object – unique insights into Protoplanetary Disk Midplane chemistry'
Period: 2022 – 2023
Funding Agency: James Webb Space Telescope Cycle 1 at Space Telescope Science Institute
PI: Martin Cordiner (American U.)
Total Amount: Unknown
Awarded to Auburn: $19,075 (Approved) but not executed
Awarded Observing time: 17.7 hours (Approved) but not executed

Title: 'First detection of volatiles from a main belt comet'
Period: 2022 – 2023
Funding Agency: James Webb Space Telescope Cycle 1 at Space Telescope Science Institute
PI: Michael Kelley (U. Maryland)
Total Amount: Unknown
Awarded to Auburn: $14,702
Awarded Observing time: 14 hours (Approved)

Title: 'NICER DIAGNOSTICS OF THE COMET-SOLAR WIND INTERACTION WITH DEEP SPACE 1'S 19P/BORRELLY AND ROSETTA'S 67P/CHURYUMOV-GERASIMENKO'
Period: 2021 – 2022
Funding Agency: NICER Guest Investigator program cycle 3 (though NASA/GSFC)
Science PI: Thomas Deskins (AU graduate student)
PI: Dennis Bodewits
Total Amount: $40,000
Awarded to Auburn: $40,000
Awarded Observing time: 32 hours

Title: 'Characterizing the Distant Activity Evolution of Comet 2017 K2 (PanSTARRS)
Period: 2021 – 2022
Funding Agency: Swift Guest Investigator program Cycle 17 (though NASA/GSFC)
PI: Dennis Bodewits
Total Amount: $40,000
Awarded to Auburn: $40,000
Awarded observing time: 48 orbits/67.2 ksec

Title: 'Characterize UV-Optical emission by conducting electron impact reactions on molecules relevant to the atmospheres of small bodies in our solar system'
Period: 2020 – 2021
Funding Agency: Europlanet/European Union's Horizon 2020 research and innovation programme
PI: Dennis Bodewits
Total Amount: $10,000 (direct travel reimbursement)
Awarded to Auburn: $10,000

Title: 'Chandra Director's Discretionary Time observations of comet C/2019 Y4 (ATLAS)
Period: 2020 – 2021
Funding Agency: Chandra Guest Investigator program (though Smithsonian Astrophysical Observatory)
PI: Dennis Bodewits
Total Amount: $22,300
Awarded to Auburn: $12,300
Awarded observing time: 30 ksec (8.3 hours)

Title: 'Comet Diagnostics of the Solar Wind'
Period: 2021 – 2022
Funding Agency: NICER Guest Investigator program cycle 2 (though NASA/GSFC)
PI: Dennis Bodewits
Total Amount: $40,000
Awarded to Auburn: $40,300

Title: 'Determining the cause of activity of the first active Trojan'
Period: 2020 – 2022
Funding Agency: Hubble Space Telescope program at Space Telescope Science Institute
PI: Bryce Bolin (CalTech)
Total Awarded Amount: $100,000
Awarded to Auburn: $20,000
Observing Time (~$100k/orbit): 3 orbits/4.5ksec

Title: 'Rapid follow up characterization of cometary outburst ejecta'
Period: 2020 – 2021
Funding Agency: Swift Guest Investigator Program Cycle 16 (though NASA/GSFC)
PI: Dennis Bodewits
Total Amount: $40,000

Awarded to Auburn: $40,000

Title: 'Auburn University Participation in the Lunar Dust Research and Mitigation Science Definition Team'
Period: 2020 – 2021
Funding Agency: Jet Propulsion Laboratory Lunar Dust Research and Mitigation Science Definition Team
PI: Edward Thomas Jr (AU Physics Dept.)
Total Amount: $30,000
Awarded to Auburn: $30,000

Title: 'Chemical Inventory and Activity of Interstellar Object 2I/Borisov'
Period: 2020 – 2022
Funding Agency: Hubble Space Telescope program at Space Telescope Science Institute
PI: Dennis Bodewits
Total Awarded Amount: $165,000
Awarded to Auburn: $69,702
Observing Time (~$100k/orbit): 15 orbits/22.5 ksec

Title: 'Constraining the coma volatile content of interstellar comet 2I/Borisov'
Period: 2020 - 2022
Funding Agency: Hubble Space Telescope program at Space Telescope Science Institute
PI: Bryce Bolin (CalTech)
Total Awarded Amount: $100,000
Awarded to Auburn: $29,362
Observing Time (~$100k/orbit): 6 orbits/9ksec

Title: 'Comet Outburst Target of Opportunity'
Period: 2019 – 2021
Funding Agency: Hubble Space Telescope Cycle 27 at Space Telescope Science Institute
PI: Dennis Bodewits
Total Awarded Amount: $116,345
Awarded to Auburn: $31,601
Observing Time (~$100k/orbit): 6 orbits/9 ksec

Title: 'Thickness of the Dust/Water ice layer in the permanently shaded regions on the Moon'
Period: 2019 – 2020
Funding Agency: NASA EPSCOR through UAH
PI: Masatoshi Hirabayashi (Auburn, dept. Aerospace)
Total Awarded Amount: $90,000
Awarded to Auburn: $90,000

Title: 'Composition and Physical Processes of the Inner Coma of Comet 46P/Wirtanen'
Period: 2019 – 2021
Funding Agency: Hubble Space Telescope program at Space Telescope Science Institute

PI: Dennis Bodewits
Total Awarded Amount: $459,554
Awarded to Auburn: $144,000
Observing Time (~$100k/orbit): 36 orbits/54 ksec

Title: 'A multidisciplinary approach to unravel photon and electron processes and their interaction with the coma of 67P/Churyumov-Gerasimenko'
Period: 08/2019 – 08/2023
Funding Agency: NASA Rosetta Data Analysis Program
PI: Dennis Bodewits
Total Awarded Amount: $567,000
Awarded to Auburn: $567,000

Title: 'The Archive for UV Data of Small Bodies'
Period: 05/16/17-05/15/19
Funding Agency: NASA Planetary Data Archiving, Restoration, and Tools program
PI: Amanda Hendrix (PSI)
Awarded to Auburn: $32,773

Title: 'Archiving Two Decades of Wide-field Space-based UV-visible Observations of Comets'
Period: 05/16/17-05/15/20
Funding Agency: NASA Planetary Data Archiving, Restoration, and Tools program
PI: Jeffrey Morgenthaler (PSI)
Awarded to Auburn: $134,648

Title: 'Deep Impact Narrowband Imaging of the Gas and Dust around Tempel 1'
Period: 09/01/17-08/31/19
Funding Agency: NASA Discovery Data Analysis program
PI: Dennis Bodewits
Total Awarded Amount: $312,000
Awarded to Auburn: $288,150

Title: 'Far UV measurements of the deuterium abundance of comets'
Period: 12/01/15-11/30/18
Funding Agency: Hubble Space Telescope program at Space Telescope Science Institute
PI: Dennis Bodewits
Total Awarded Amount: $100,000
Awarded to Auburn: $16,225
Observing Time (~$100k/orbit): 10 orbits/15ksec

Title: 'Close Encounter with Comet 46P/Wirtanen: X-Ray Tomography of the Coma (Hubble Space Telescope)'
Period: 12/01/18-11/30/20
Funding Agency: Hubble Space Telescope program at Space Telescope Science Institute
PI: Dennis Bodewits
Total Awarded Amount: $120,000

Awarded to Auburn: $39,350
Observing Time (~$100k/orbit): 8 orbits/12ksec

Title: 'Close Encounter with Comet 46P/Wirtanen: X-Ray Tomography of the Coma'
Period: 12/01/18-11/30/20
Funding Agency: Chandra Guest Investigator program (though Smithsonian Astrophysical Observatory)
PI: Dennis Bodewits
Total Awarded Amount: $69,457
Awarded to Auburn: $27,458

Title: 'Proposal Preparation CAESAR: Comet Astrobiology Exploration Sample Return'
Period: 08/15/18-12/31/18
Funding Agency: Cornell University
PI: Dennis Bodewits
Total Awarded Amount: $30,685
Awarded to Auburn: $30,685

Title: 'Rotation and Chemical Heterogeneity of Hyperactive Comet 46P/Wirtanen'
Period: 01/01/19-12/31/20
Funding Agency: Swift Guest Investigator program cycle 14 (though NASA/GSFC)
PI: Dennis Bodewits
Total Awarded Amount: $40,000
Awarded to Auburn: $40,000

5B Auburn University Internal Support

Title: 'Interactions between structures on asteroids and the Moon and particle levitation for exploration and sciences (iSAMPLES)'
Funding Program: Interdisciplinary Grant Program
Requested Amount: $50,000
PI: Masatoshi Hirabayashi (Auburn)
Status: Awarded
Date submitted: 2018/10

Title: 'Investigate potential Mars or Lunar resources'
Period: 7/2019 – 6/2020
Funding Agency: NASA EPSCoR Rapid Response Research Funding Opportunity 2018
Requested Amount: $100,000
PI: Masatoshi Hirabayashi (Auburn)
Granted to Auburn: Awarded
Date submitted: 2019/02

5C Awarded observing proposals (telescopic facility time only)

Note: Different facilities use different standards for time allocation. 1 ksec = 1,000 seconds ~ 16 minutes. Observing time is oftentimes defined in orbits that a certain spacecraft makes around earth. Typical selection rates for orbital facilities are 10 – 15%.

Title: 'Physical processes in the coma of 29P/Schwassmann-Wachmann 1: ionization and excitation mechanisms in distant comets'
Facility: NOIRLab Magellan Telescope, Clay/MIKE (6.5-m in Chile)
Awarded observing time: 2.0 nights (4 × 0.5 night; 4 runs)
PI: Dennis Bodewits
Date submitted: 2025/09

Title: 'SOAR/Goodman spectroscopy of multiple comets to trace ionization and refractory-metal release through CO+, N2+, Ni I, and Fe I'
Facility: NOIRLab SOAR Telescope / Goodman Spectrograph (4.1-m in Chile)
Awarded observing time: 3.0 nights (3 × 1.0 night; 3 runs)
PI: Dennis Bodewits
Date submitted: 2025/09

Title: 'Magellan/Clay MIKE monitoring of comet 29P to study the physical mechanisms behind ionization and excitation in its coma'
Facility: CNTAC Magellan Clay Telescope / MIKE (6.5-m in Chile)
Awarded observing time: 10 h ≃ 1.0 night requested (8 × 75 min visits); 8.75 h ≃ 0.875 night visible in schedule (7 × 75 min visits)
PI: Thomas Puzia
Date submitted: 2025/09

Title: 'Activity of interstellar comet 3I/Atlas after passing the Sun'
Period: 2025
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 48 orbits/17 hrs
PI: Dennis Bodewits
Date submitted: 2025/12

Title: 'Spatial distribution and water production rates of the fragments of C/2025 K1'
Period: 2025
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 24 orbits/7 hrs
PI: Dennis Bodewits
Date submitted: 2025/12

Title: 'Swift Target of Opportunity observations of the third interstellar object'
Period: 2025
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 40 orbits/14 hrs

PI: Dennis Bodewits
Date submitted: 2025/10

Title: 'Physical processes in the coma of 29P/Schwassmann-Wachmann 1: ionization and excitation mechanisms in distant comets'
Facility: NOIRLab Magellan Telescope (6.5-m in Chile)
Awarded observing time: 0.5 night (4x 1.25h)
PI: Dennis Bodewits
Date submitted: 2025/09

Title: 'Swift Target of Opportunity observations of the third interstellar object'
Period: 2025
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 40 orbits/14 hrs
PI: Dennis Bodewits
Date submitted: 2025/07

Title: 'Physical processes in the coma of 29P/Schwassmann-Wachmann 1: ionization and excitation mechanisms in distant comets'
Facility: NOIRLab Magellan Telescope (6.5-m in Chile)
Awarded observing time: 0.5 night (4x 1.25h)
PI: Dennis Bodewits
Date submitted: 2025/04

Title: 'Physical processes in the coma of 29P/Schwassmann-Wachmann 1: ionization and excitation mechanisms in distant comets'
Facility: NOIRLab Magellan Telescope (6.5-m in Chile)
Awarded observing time: 0.5 night (5x 1h)
PI: Dennis Bodewits
Date submitted: 2024/04

Title: 'Physical processes in the coma of 29P/Schwassmann-Wachmann 1: ionization and excitation mechanisms in distant comets'
Facility: NOIRLab SOAR Telescope (4-m in Chile)
Awarded observing time: 5 nights (10x 0.5 nights over 2 years)
PI: Dennis Bodewits
Science PI: Youssef Moulane (Auburn)
Date submitted: 2023/04

Title: 'Swift Target of Opportunity observations of C/2023 A3 (Tsuchinshan-ATLAS)'
Period: 2022
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 30 orbits/11 hrs
PI: Dennis Bodewits
Date submitted: 2023/11

Title: 'Swift Target of Opportunity observations of C/2017 K2 (PanSTARRS)'
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 30 orbits/11 hrs
PI: Dennis Bodewits
Date submitted: 2023/05

Title: 'Swift Target of Opportunity observations of C/2022 K3 (ZTF)'
Period: 2022
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 57 orbits/20.5 hrs
PI: Dennis Bodewits
Date submitted: 2022/08

Title: 'NICER Target of Opportunity Observations of C/2017 K2 Experiencing a major solar storm'
Period: 2022
Facility: International Space Station/NICER
Awarded observing time: 24 hrs
PI: Dennis Bodewits
Date submitted: 2022/08

Title: 'Swift Target of Opportunity observations of 29P'
Period: 2021
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 10 orbits/3.6 hrs
PI: Dennis Bodewits
Date submitted: 2021/09

Title: 'Swift Target of Opportunity observations of Solar analog P-330-E'
Period: 2021
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 5 orbits/1.6 hr
PI: Dennis Bodewits
Date submitted: 2021/06

Title: 'Swift Target of Opportunity observations of Asteroid (16) Psyche'
Period: 2021
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 5 orbits/1.6 hr
PI: Dennis Bodewits
Date submitted: 2020/12

Title: 'Swift Target of Opportunity observations of comet 88P/Howell'
Period: 2020
Facility: Neil Gehrels-Swift Observatory

Awarded observing time: 10 orbits/3.6 hr
PI: Dennis Bodewits
Date submitted: 2020/09

Title: 'ISS/NICER Director's Discretionary Time observations of comet C/2019 Y4 (ATLAS)'
Period: 2020
Facility: International Space Station/NICER
Awarded observing time: 30 ksec (8.3 hours)
Science PI: Emanuele Bonamente (AU Physics Dept. Postdoc)
PI: Dennis Bodewits
Date submitted: 2020/04

Title: 'Swift Target of Opportunity observations of comet C/2019 Y4 (ATLAS)'
Period: 2020
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 57 ksec (16 hours)
PI: Dennis Bodewits
Date submitted: 2020/04

Title: 'Swift Target of Opportunity observations of extrasolar comet 2I/Borisov'
Period: 2019 - 2020
Facility: Neil Gehrels-Swift Observatory
Awarded observing time: 36 hours
PI: Dennis Bodewits
Date submitted: 2019/09

Title: 'Rapid follow-up on cometary outburst detections'
Period: 2019
Funding Agency: Las Cumbres Observatory NOAO Semester 2019A
PI: Dennis Bodewits
Granted to Auburn: awarded observing time (3 nights equivalent to $11.5k)
Date submitted: 2018/10

Title: 'Changes in the rotation rate of comet 46P/Wirtanen'
Period: 2019
Funding Agency: Las Cumbres Observatory NOAO Semester 2019A
PI: Dennis Bodewits
Granted to Auburn: awarded observing time (2 nights equivalent to $10k)
Date submitted: 2018/10

Title: 'Swift Target of Opportunity observations of the outburst of comet 64P/Swift-Gehrels'
Period: 2018
Facility: Neil Gehrels-Swift Observatory

Awarded observing time: 18 ksec (5 hours)
PI: Dennis Bodewits
Date submitted: 2018/08

6. Outreach

- D. Bodewits & M. Saki, *'Underground reservoir of oxygen in comet 67P'*. Nature Astronomy 6, 635–636 (2022). Popular summary.
- Science Olympiad 2019–2025. Lead 'Solar System' and 'Astronomy' events. Designed questions, proctored event, scored Alabama state exam at Auburn University.
- "Comet Exploration", Denver astronomical society, virtual. Popular science presentation. May 13, 2022
- D. Bodewits & S. J. Bromley, *'Iron and nickel vapours present in most comets'*. Nature 593, 349–350 (2021). Popular summary.
- "Astronomy on Tap" popular presentation, Groningen University, The Netherlands (virtual). Popular science presentation. 2020-12-07.
- COSAM Campfires (Auburn U. College of Science and Mathematics) – public, family-friend presentation and science demonstration. 75 people. 2020-11.
- Discover Auburn (Auburn University Libraries) – General invited public lecture 'From the Microscope to the Hubble Space telescope: Laboratory Astrophysics at Auburn University'
- Organizer and speaker Auburn University Duncan Lecture 2019, 'Water in our solar system', combined with exhibit of the work by Ekatarina Smirnova at the Jule Collins Smith Museum of Fine Art.
- Several press interviews with international (Royal Museums Greenwich, UK), national (Forbes, space.com, WBHM/NPR) and local coverage (WFSA 21, WSBT 22, Fox San Antonio, Orlando Sentinel) regarding the close fly-by of comet 46P/Wirtanen and our observing campaign using several NASA assets. 2018-12
- American Geophysical Union Fall Meeting, Washington, DC. Invited NASA Flash talk on Hyper Wall (aimed at general audience). 2018-12

7. Service

7A. University level

- Fellow, Associate Dean of Research and Graduate Studies, College of Science and Mathematics, Auburn University (2025 – 2027)
- Tenure and Promotion committee, College of Science and Mathematics, Auburn University (2024 – present)
- Reviewer of Auburn University fellowship applications for the Alabama Space Grant Consortium (2022, 2023)
- Reviewer of Auburn University fellowship applications for the Astronaut Fellowships (2023)
- Auburn University Postdoc Conference, poster judge (2021)
- Auburn E-Day presentations on the space exploration of small bodies in the solar system (2019).

7B. Department level

- Undergraduate Program Officer, Physics Department, Auburn University (2024 – 2025).
- Chair, Laboratory Astrophysics Faculty Search Committee, Physics Department, Auburn University (2023 – 2024).
- Organizer Duncan Lecture Auburn University. Endowed annual lecture series with the aim to popularize astronomy with typically 150-200 attendees. Speakers hosted include Drs Alan Stern, Nicky Fox, and Anna Frebel.
- Equity, Diversity, and Inclusion committee, Physics Department, Auburn University (2022 – 2024).
- Graduate student recruitment talks for the Physics Department. For this I traveled to multiple nearby Academic Institutions (including Valdosta (GA), Tuscaloosa (AL), Athens (GA), Columbia (SC) and presented on my research, laboratory astrophysics at Auburn, and the Auburn physics graduate program in general; 2018.
- Faculty recruitment: Participated in multiple meetings and social events with potential faculty candidates (2018 – now)

7C. Professional Service

- American Astronomical Society – Laboratory Astrophysics Division. Elected officer: Executive Secretary. (2025 – present)
- American Astronomical Society, Agent for Auburn University (2023 – present)
- American Astronomical Society – Laboratory Astrophysics Division. Prize committee member. (2023 – 2024)
- International Space Station – Neutron star Interior Composition Explorer (ISS/NICER) User Group, member (2022 – present). Provide input and feedback to NASA's Goddard Space Flight Center regarding the NICER Mission's planning, execution, and facilitating of NICER science.

- Icarus, Associate Editor (planetary science journal). Responsible for all papers concerning comets and small bodies.
- NASA research and analysis grant review (multiple times as panelist and chair).
- NSF research and analysis grant review (panelist).
- Grant proposal reviewer for Belgian, Italian, Irish, and UK national science agencies
- Time Allocation Committee member for several space observatories (Hubble Space Telescope, Swift, GALEX, Chandra X-ray Observatory, James Webb Space Telescope)
- Reviewer for several journals (including Nature, Nature Astronomy, The Astronomical Journal, The Astrophysical Journal, Icarus, Astronomy & Astrophysics, Earth, Moon & Planets, Physical Review A, Planetary & Space Science, Monthly Notices of the Royal Astronomical Society, Review of Scientific Instruments, Journal of Quantitative Spectroscopy & Radiative Transfer).
- Reviewer NASA Postdoctoral Program fellowship proposals
- NASA Planetary Data System review panel member (3x)

7C. Conference Organizing Committees and Other Service

- Science Organizing Committee for the Scientific Assembly of Committee on Space Research (COSPAR), *'2026-B1.1 Small Bodies'*, 1 – 9 August 2026, Florence, Italy.
- Co-convener, EuroPlanet Science Conference (EPSC), *'Active small bodies: dynamics, activity, and genetic links'*, 6-11 September 2026, The Hague, The Netherlands.
- Science Organizing Committee for the Scientific Assembly of Committee on Space Research (COSPAR), *'2024-B1.1 Small Bodies event of the 45th'*, 13 – 21 July 2024, Busan, South Korea.
- Science Organizing Committee, 239th Meeting of the International Astronomical Union (IAU), '*Planetary Science, Exoplanets in the Era of James Webb Space Telescope'*, Aug. 13-15, 2024, Cape Town, South Africa.
- Science Organizing Committee *"Meeting of the Division of the Planetary Sciences of the American Astronomical Society"* conference, San Antonio, TX (2023).
- Science Organizing Committee *"Active small Bodies in the Solar System over a wide range of heliocentric distances"* conference, Stará Lesná, Slovakia (2023).
- Scientific Organizing Committee 'The new view of comet coma processes after Rosetta: The importance of electrons', Bratislava, Slovakia (May 2017).
- Scientific Organizing Committee, *'Charge Exchange in Beams and Plasmas from Here to the Ends of the Universe'*, (ESAC, Madrid – Sep 2010).
- Science Organizing Committee *"Comets 3"* review book, U. Arizona Press (2020 – now).
- Local Organizing Committee, *'Southeastern Laboratory Astrophysics Conference 2019'*, Clemson, SC. (2018 – 2019).
- American Geophysical Union *'Astrobiology Science Conference'* (AbSciCon), session convener on interstellar comets and exocomets, Atlanta, GA conference May 2022 (2021 – 2022).

- *Athena* X-ray Observatory, Science Study Team (ASST), member Topical Panel *"SWG3.1: Solar system and exoplanets"* (2020 – now)
- Senior Review Preparation Committee Neil Gehrels-Swift Observatory NASA, 2018.
- Founder, past chair and member Zwicky Transient Facility, Solar System Working Group (2016 – present).
- Lead Cometary Science Focus Group, Wide Field Infrared Survey Telescope (WFIRST). (2016 – 2019).
- Solar System Science Collaboration member, Vera Rubins/Legacy Survey of Space and Time (LSST). (2016 – now).
- Cometary Research Lead, Solar System Working Group, Large UV/Optical/Infrared Surveyor (LUVOIR) mission concept study.