

**Nicolle E. B. Zellner**  
Professor of Physics, Albion College

**Positions (abridged)**

Professor of Physics, Albion College, August 2017 – present  
Associate Professor of Physics, Albion College, August 2010 – July 2017  
Assistant Professor of Physics, Albion College, August 2005 – July 2010  
Meteorite Hunter, Antarctic Search for Meteorites (ANSMET), Nov. 2006 – Jan. 2007  
Adjunct Lecturer, Ohlone College, Jan. 2005 – May 2005  
Adjunct Lecturer, Las Positas College, Aug. 2004 – May 2005  
Adjunct Lecturer, Siena College, Jan. 2002 – May 2002  
Post-doctoral Researcher, Lawrence Livermore National Laboratory, 2002-2005  
Scientist, New York Center for Studies on the Origin of Life (at RPI), 2001-2002  
Recitation Instructor, Rensselaer Polytechnic Institute, Aug. – Dec. 1996, Jan. - May 1999  
Research Scientist, Jet Propulsion Laboratory, Pasadena CA, June – Dec. 1997  
Research Scientist, UW - Madison, Space Astronomy Laboratory, April 1994 – Aug. 1996

**Education**

Ph.D., Department of Physics, Rensselaer Polytechnic Institute (RPI), 2001  
M.S., Department of Physics, Rensselaer Polytechnic Institute, 1998  
B. S., Department of Astronomy, University of Wisconsin – Madison, 1993  
Major: Astronomy (Honors Degree), Major: Physics  
Certificate: Institute for Environmental Studies (IES)

**Awards and Honors (abridged)**

2019, Herbert and Grace Dow Endowed Professorship in the Sciences  
2018, Teacher of the Year  
2017, Phi Beta Kappa Scholar of the Year (Albion College Chapter)  
2016, Matriculation Speaker (Charge from the Albion College Faculty)  
2011, Antarctic Service Medal  
2010, American Astronomical Society Chrétien International Research Award (Albion)  
2007, Albion College Blanchard Faculty Research Fellowship (Albion)  
2004, American Assoc. of University Women, American Postdoc. Res. Fellowship (LLNL)  
2001, Harry F. Meiners Fellowship (RPI)  
2000 and 1999, Zonta International Amelia Earhart Fellowship (RPI)  
1998, Founders' Award for Excellence (RPI)  
1997, Walter Eppenstein Graduate Teaching Assistant Award (RPI)  
1996, NASA Group Achievement Award, Astro-2 Mission Team (UW-Madison)  
1993, Wisconsin Alumni Association Outstanding Senior Student Award (UW-Madison)

**Recent Publications and Presentations** (select list, >70 others; students denoted by \* and +)

**Zellner N. E. B.** (2019) Lunar Impact Glasses: Probing the Moon's Surface and Constraining its Impact History, *Journal of Geophysical Research: Planets*, **124**, 2686-2702, doi:10.1029/2019JE006050; featured on the cover of the November issue.

Nguyen P. Q.\* and **Zellner N. E. B.** (2019) Using Size and Composition to Assess the Quality of Lunar Impact Glass Ages, *Geosciences*, **9**(85), doi:10.3390/geosciences9020085.

**Zellner N. E. B.** (2018) Video Killed the Writing Assignment, *Journ. Astron. Earth Sci. Edu.*, **5**(2), 137-150.

Huang Y.-H.+, Minton D. A., **Zellner N. E. B.**, Hirabayashi M., Richardson J. E., and Fassett C. I. (2018) No Change in Recent Lunar Impact Flux from Modeling Impact Glass Spherule Ages, *Geophys. Res. Lett.*, **45**, 6805–6813, 10.1029/2018GL077254.

**Zellner N. E. B.** (2017) Cataclysm no more: New views on the timing and delivery of lunar impactors, *Origins of Life and Evolution of Biospheres*, **47**(3), 261-280, doi: 10.1007/s11084-017-9536-3.

Huang Y-H.<sup>+</sup>, Minton D. A., Hirabyashi M., Elliot J., Richardson J. E., Fassett C. I., and **Zellner N. E. B.** (2017) Impact-Generated Material Transport on the Moon, *JGR-Planets*, **122**, doi:10.1002/2016JE005160.

**Zellner N. E. B.** and Delano J. W. (2015)  $^{40}\text{Ar}/^{39}\text{Ar}$  ages of lunar impact glasses: Relationships among Ar diffusivity, chemical composition, shape, and size, *Geochimica et Cosmochimica Acta*, **161**, 203-218, 10.1016/j.gca.2015.04.013.

**Zellner N. E. B.** and Delano J. W. (2015) Lunar Impact Glass Ages and the Bombardment of the Moon: Composition, Size, and Shape Matter, *46<sup>th</sup> Lun. Plan. Sci. Conf.*, The Woodlands, TX, March, 2028.pdf. Oral presentation.

**Zellner N. E. B.** and Delano J. W (2015), Relationships Among Chemical Composition, Size, and Shape When Evaluating  $^{40}\text{Ar}/^{39}\text{Ar}$  Ages of Lunar Impact Glasses, *Early Solar System Impact Bombardment III*, Houston, TX, February, 3018.pdf. Oral presentation.

McCaffrey V. P., **Zellner N. E. B.**, Waun C.\*., Bennett E. R.\*., and Earl E.\* (2014) Reactivity and Survivability of Glycolaldehyde in Simulated Meteorite Impact Experiments, *Origins of Life and Evolution of Biospheres*, DOI 10.1007/s11084-014-9358-5.

**Zellner N.E.B.**, Delano J.W., Swindle T.D., Barra F., Olsen E., and Whittet D.C.B. (2009) Evidence from  $^{40}\text{Ar}/^{39}\text{Ar}$  Ages of Lunar Impact Glasses for an Increase in the Impact Rate ~800 Ma Ago, *Geochim. Cosmochim. Acta*, **73**, 4590-4597.

**Zellner N.E.B.**, Delano J.W. Swindle T.D., Barra F., Olsen E., and Whittet D.C.B. (2009) Apollo 17 regolith, 71501,262: A record of impact events and mare volcanism in lunar glasses, *Meteorit. Plan. Sci.*, **44**(6), 839-852.

Delano J.W., **Zellner N.E.B.**, Barra F., Olsen E., Swindle T.D., Tibbetts N.J., and Whittet D.C.B. (2007) An integrated approach to understanding Apollo 16 impact glasses: Chemistry, isotopes, and shape, *Meteorit. Plan. Sci.*, **42**(6), 993-1004.

#### Recent Funding Received (select list, >\$1.2M since 1999)

2015-2019, **Albion College Faculty Development Committee**, various activities

2015-2018, **National Science Foundation, PI**, *Using Lunar Impact Glasses as Tools for Investigating Solar System Processes*, \$193,612, Awarded September 2015.

2015-2018, **NASA Solar System Workings, Co-I**, *Modeling Material Transport in the Lunar Regolith*, \$78,199/\$500,922, Awarded March 2015.

2015-2018, **NASA Solar System Workings, Collaborator**, *Noble-Gas Geochronology of the Inner Solar System*, Awarded March 2015.

2013 - 2017, **Albion College Faculty Development Grants** for various activities related to professional development, course materials, and telescope maintenance.

2012-2017, **NASA Astrobiology: Exobiology and Evolutionary Biology Program, PI**, *Survival of Sugars in Ice/Mineral Mixtures Upon High Velocity Impact: Simulating the Impact of Comets and Meteorites into Early Earth*, \$436,171, Awarded September 2011.

#### Synergistic Activities (selected events)

Member, Curation and Analysis Planning Team for Extraterrestrial Materials (CAPTEM; 2015 - 2018)

Committee on the Status of Women in Astronomy (American Astronomical Society; since 2012)

Scientist and organizer, Jackson Country Math and Science Center Astronomy Camp (since 2006)

Invited speaker, topics ranging from stargazing to women in science to research (>90 since 2006)

#### Student Research Collaborations

Supervised Projects: 37

Theses: 7 (Advisor), 9 (Committee Member)

Conference Presentations: 27

Publications: 3