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EDUCATION

2000-2005: University of Arizona, **Ph.D. in Planetary Sciences** (geosciences minor),
Dissertation Advisors: H. Jay Melosh and Richard Greenberg.
1998-2000: Florida State University, **B.S. in Physics**, *cum laude*.
1995-1998: Troy State University at Dothan, Physical Sciences coursework.
1984: U.S. Navy: Advanced Electronics Technician school.
1983: U.S. Navy: Nuclear Power Training Unit qualification school.
1982: U.S. Navy: Nuclear Power School.
1981-1982: U.S. Navy: Electronics Technician school.

EMPLOYMENT

2016-present: Senior Scientist, Planetary Science Institute, Tucson, AZ.
2014-2016: Research Scientist (USRA), Planetary Radar Group, Arecibo Observatory, National Astronomy & Ionosphere Center (NAIC), Arecibo, PR.
2010-2014: Assistant Research Professor, Department of Earth, Atmospheric, & Planetary Sciences, Purdue University, West Lafayette, IN.
2005-2010: Research Associate (Joseph Veverka, supervisor), Center for Radiophysics and Space Research, Cornell University, Ithaca, NY.
1993-2005 (gap): Visually impaired (1993), Rehabilitation (1993-1995), Retraining (1995-2005).
1991-1993: Nuclear Plant Operator, Farley Nuclear Plant, Ashford, AL.
1989-1991: Junior Engineer (nuclear plant instrumentation), Eigen Engineering, San Jose, CA.
1981-1989: United States Navy, active duty enlisted:
1986-1989: USS Hawkbill (SSN-666), Pearl Harbor, HI,
Nuclear plant operator & supervisor, Reactor Controls Division supervisor,
1983-1986: Nuclear Power Training Unit, Idaho Falls, ID,
Nuclear plant operator, staff instructor.

SPACECRAFT MISSION TEAMS

2006-2011: NASA Stardust-NeXT mission: Science Team member.
2001-2007: NASA Deep Impact mission, Associate Science Team member.

RESEARCH HIGHLIGHTS

Icarus, 2014*:* Described the erosional process whereby spin and gravity combine to minimize topographic variation on asteroid surfaces.
Icarus, 2013: Determined the surface properties of comet 9P Tempel 1 via measurements of the crater produced by Deep Impact.
Icarus, 2009: Solved the long-standing question of how crater density equilibrium is reached on heavily-cratered terrains.
Icarus, 2007: Determined the density of comet 9P Tempel 1 via the expansion rate of the ejecta plume produced by Deep Impact.
Science, 2004, *Icarus*, 2005: Linked the paucity of small craters on asteroid 433 Eros to the effects of impact-induced seismic shaking.
Icarus, 2004: Extracted surface features of Saturn's moon Titan hidden within the Orange-filter images taken by Voyager 1.

AWARDED RESEARCH GRANTS

2015-2018: NASA Lunar Data Analysis Program, *Ejecta and Melt Interactions During Impact Ejecta Emplacement*, **Co-Investigator** with Veronica Bray.

2015-2018: NASA Lunar Data Analysis Program, *Modeling material transport in the lunar regolith*, **Co-Investigator** with David Minton.

2011-2014: NASA Planetary Geology and Geophysics Program, *Investigating the Production and Distribution of Secondary Craters as a Function of Primary Crater Production on Planetary Surfaces*, **Principal Investigator**.

2011-2014: NASA Mars Fundamental Research Proram, *Investigating the Seismic Contribution of Meteoritic Impacts to the Current Seismicity of Mars and Its Potential for Exploration of the Martian Interior,* **Principal Investigator.**

2011-2014: NASA Planetary Geology and Geophysics Program, *Thermal, Physical, and Climatic Effects of Impact Bombardments on Rocky Worlds*, **Co-Investigator** with Oleg Abramov.

2010-2013: NASA *GRAIL-Gravity Recovery and Interior Lab mission*, **Co-Investigator** with Jay Melosh.

2011-2012: NASA Planetary Geology and Geophysics Program, *Geophysical Properties of Near-Earth Asteroids: Surface and Structure*, **Co-Investigator** with Don Korycansky.

2006-2011: NASA *STARDUST-Next II: A Mission to Complete the Exploration of Comet Tempel 1 with Stardust*, **Co-Investigator** *with Joseph Veverka*.

2007-2009: NASA Discovery Data Analysis Program, *Infrared Studies of the Material Excavated by the Deep Impact Experiment*, **Co-Investigator** with Casey Lisse.

2007-2009: NASA Discovery Data Analysis Program, *Investigating the Regional Seismic Effects of Impacts on the Surface Morphology of Asteroid 433 Eros*, **Principal Investigator**.

DEVELOPED NUMERICAL MODELING PACKAGES

2012-present: *ShapeGrav*, used to investigate and visualize the surface gravitational/rotational properties of small-bodies for whom shape models have been derived.

2007-present: *CTEM (Cratered Terrain Evolution Model)*, used to investigate the cratering statistics and surface processes of impact crater dominated terrains.

2004-present: *Plume*, used to investigate the formation, expansion, and final disposition of the ejecta plume produced by an impact on a small, irregular, solar-system body.

TEACHING EXPERIENCE

2010-2014: Purdue University (West Lafayette, IN), guest lecturer and substitute graduate-level instructor, Department of Earth, Atmospheric, and Planetary Sciences.

2000-2001: University of Arizona (Tucson, AZ), graduate teaching assistant, Department of Planetary Sciences.

1983-1986: U.S. Navy Nuclear Power Training Unit (Idaho Falls, ID), classroom and on-the-job instructor in power plant theory, operation, and maintenance.

FELLOWSHIPS AND HONORS

2006: Meteoritical Society, Pellas-Ryder Award.

2005: Lunar and Planetary Laboratory, Gerard P. Kuiper Award.

2005: Galileo Circle Fellowship.

2000-2001: Graduate College Fellowship

1997: Troy State University at Dothan, Outstanding Student Award.

PROFESSIONAL ORGANIZATIONS

American Astronomical Society, Division of Planetary Sciences (AAS-DPS)

PUBLICATIONS LIST

- **22** reviewed papers (**9** first authored): 2004-2016
- 3 *Science* papers (1 first authored); 1 *Nature* paper
- First-authored paper citations: **467** total / 9 papers = **52** per paper average
- Hirsch citation metrics: h = **13**, m = **1.2**

REVIEWED JOURNAL ARTICLES

2016: J.L. Crowell, E.S. Howell, C. Magri, M. Nolan, Y.R. Fernandez, **J.E. Richardson**, B.D. Warner, S.E. Marshall, A. Springmann, R.J. Vervack. Radar and Lightcurve Shape Model of Near-Earth Asteroid (1627) Ivar, *icarus*.
[In Review (22.0)]

2016: M.K.Shepard, **J.E. Richardson**, P.A.Taylor, L.A. Rodrigues-Ford, A. Conrad, I. Pater, M. Adamkovics, K. Kleer, J.R. Males, K.M. Morzinski, L.M. Close, M. Kaasalainen, M. Viikinkoski, B. Timerson, V. Reddy, C. Magri, M. Nolan, E.S. Howell, L.A.M. Benner, J.D. Giorgini, B.D. Warner, A.W. Harris. Radar Observations and Shape Model of Asteroid 16 Psyche, *Icarus*.
[In Revision (21.0)]

2016: J.K. Steckloff, K. Graves, T. Hirabayashi, H.J. Melosh, **J.E. Richardson**. Rotationally Induced Surface Slope-1 Instabilities and the Activation of CO_2 Activity on Comet 103P / Hartley 2, *Icarus*.
[Accepted (20.0)]

2015: S. Marchi, C.R. Chapman, O.S. Barnouin, **J.E. Richardson**, J-B Vincent. Cratering on Asteroids, *Asteroids IV*, University of Arizona Press, Tucson, AZ.
[In Press (19.0)]

2015: D.A. Minton and **J.E. Richardson**. Re-examining the main asteroid belt as the primary source of ancient lunar craters. *Icarus*, **247**, 170-192.
[6 citations (18.0)]

2014: **J.E. Richardson** and T.J. Bowling. Investigating the combined effects of shape, density, and rotation on small body surface slopes and erosion rates, *Icarus*, **234**, 53-65.
[5 citations (17,9)]

2013: P.C. Thomas, M.F. A'Hearn, J. Veverka, M.J.S. Belton, K. Jochen, K.P. Klaasen, L.A. McFadden, H.J. Melosh, P.H. Schultz, S. Besse, B.T. Carcich, T.L. Farnham, O. Groussin, B. Hermalyn, J.-Y. Li, D.J. Lindler, C.M. Lisse, K. Meech, **J.E. Richardson**. Shape, density, and geology of the nucleus of Comet 103P/Hartley 2, *Icarus*, **222,** 550-558.
[48 citations (16,0)]

2013: **J.E. Richardson** and H.J. Melosh. An examination of the Deep Impact collision site on comet Tempel 1 via Stardust--NExT: Further constraints on cometary surface properties, *Icarus*, **222**, 492-501.
[13 citations (15,8)]

2013: P.C. Thomas, M.F. A'Hearn, M.J.S. Belton, D. Brownlee, B. Carcich, B. Hermalyn, K. Klaasen, S. Sackett, P.H. Schultz, J. Veverka, S. Bhaskaran, D. Bodewits, S. Chesley, B. Clark, T. Farnham, O. Groussin, A. Harris, J. Kissel, J.-Y. Li,, K. Meech, H.J. Melosh, A. Quick, **J.E. Richardson**, J. Sunshine, D. Wellnitz. The nucleus of Comet 9P/Tempel 1: Shape and geology from two flybys, *Icarus*, **222**, 453-466.
[31 citations (14,0)]

2013: J. Veverka, K. Klaasen, M. A'Hearn, M. Belton, D. Brownlee, S. Chesley, B. Clark, T. Economou, R. Farquhar, S.F. Green, O. Groussin, A. Harris, J. Kissel, J.-Y. Li, K.

Meech, J. Melosh, **J.E. Richardson**, P. Schultz, J. Silen, J. Sunshine, P. Thomas, S. Bhaskaran, D. Bodewits, B. Carcich, A. Cheuvront, T. Farnham, S. Sackett, D. Wellnitz, A. Wolf. Return to Comet Tempel 1: Overview of Stardust-NExT results, *Icarus*, **222**, 424-435.
[30 citations (13,0)]

2011: **J.E. Richardson**. Modeling impact ejecta plume evolution via an extension of the classic ejecta scaling-laws: a comparison to laboratory studies, *Journal of Geophysical Research - Planets*, **116-E15**, 12004-12020.
[6 citations (12,7)]

2011: M.F. A'Hearn, M.J.S. Belton, W.A. Delamere, L.M. Feaga, D. Hampton, J. Kissel, K.P. Klaasen, L.A. McFadden, K.J. Meech, H.J. Melosh, P.H. Schultz, J.M. Sunshine, P.C. Thomas, J. Veverka, D.D. Wellnitz, D.K. Yeomans, S. Besse, D. Bodewits, T.J. Bowling, B.T. Carcich, S.M. Collins, T.L. Farnham, O. Groussin, B. Hermalyn, M.S. Kelly, M.S. Kelly, J.Y. Li, D.J. Lindler, C.M. Lisse, S.A. McLaughlin, F. Merlin, S. Protopapa, **J.E. Richardson**, J.L. Williams. EPOXI at comet Hartley 2, *Science*, **332**, 1396-.
[190 citations (11,0)]

2009: **J.E. Richardson**. Cratering saturation and equilibrium: a new model looks at an old problem, *Icarus*, **204**, 697-715.
[47 citations (10,6)]

2007: **J.E. Richardson**, H.J. Melosh, C.M. Lisse, and B. Carcich. A ballistics analysis of the Deep Impact ejecta plume: determining comet Tempel 1's gravity, mass, and density, *Icarus*, **190**, 357-390; and *Icarus*, **191**, Issue 2, 176-209.
[157 citations (9,5)]

2007: P.C. Thomas, J.W. Armstrong, S.W. Asmar, J.A. Burns, T. Denk, B. Giese, P. Helfenstein, L. Iess, T.V. Johnson, A. McEwen, L. Nicolaisen, C. Porco, N. Rappaport, **J.E. Richardson**, L. Somenzi, P. Tortora, E. P. Turtle, and J. Veverka. Hyperion's sponge-like appearance, *Nature*, **448**, 50-56.
[37 citations (8,0)]

2006: D.P. O'Brien, R. Greenberg, and **J.E. Richardson**. Craters on asteroids: reconciling diverse impact records with a common impacting population, *Icarus*, **183**, 79-92.
[33 citations (7,0)]

2005**:** **J.E. Richardson**, H.J. Melosh, R.J. Greenberg, and D.P. O'Brien. The global effects of Impact-induced seismic shaking on fractured asteroid surface morphology, *Icarus*, **179**, 325-349.
[95 citations (6,4)]

2005: M.F. A'Hearn, M.J.S. Belton, W.A. Delamere, J. Kissel, K.P. Klaasen, L.A. McFadden, K.J. Meech, H.J. Melosh, P.H. Schultz, J.M. Sunshine, P.C. Thomas, J. Veverka, D.K. Yeomans, M.W. Baca, I. Busko, C.J. Crockett, S.M. Collins, M. Desnoyer, C.A. Eberhardy, C.M. Ernst, T.L. Farnham, L. Feaga, O. Groussin, D. Hampton, S.I. Ipatov, J.Y. Li, D. Lindler, C.M. Lisse, N. Mastrodemos, W.M. Owen, **J.E. Richardson**, D.D. Wellnitz, and R.L. White. Deep Impact: excavating comet Tempel 1, *Science*, **310**, 258-264.
[530 citations (5,0)]

2005: **J.E. Richardson**, H.J. Melosh, N.A. Artemeiva, and E. Pierazzo. Impact cratering theory and modeling for the Deep Impact mission: From mission planning to data analysis, *Space Science Reviews*, **117**, 241-267.
[34 citations (4,3)]

2004: **J.E. Richardson**, H.J. Melosh, and R.J. Greenberg. Impact-induced seismic shaking on asteroid 433 Eros: a surface modification process, *Science*, **306 (5701)**, 1526-1529.
[82 citations (3,2)]

2004: **J.E. Richardson**, R.A. Lorenz, and A.S. McEwen. Titan's surface and rotation: new results from Voyager 1 images, *Icarus*, **170/1**, 113-124.
[28 citations (2,1)]

2004: P.S. Gural, P. Jenniskens, M. Koop, M. Jones, J. Houston-Jones, D. Holman, and **J.E. Richardson**. The relative activity of the 2001 Leonid storm peaks and implications for the 2002 return, *Advances in Space Research*, **33-9**, 1501-1506.
[3 citations (1,0)]

DISSERTATION

2005 : **J.E. Richardson**. *The seismic effect of impacts on asteroid surface morphology*, The University of Arizona, Dissertation (Committee Chairs: Henry J. Melosh & Richard J. Greenberg), 133 pgs.

INVITED PRESENTATIONS

2014: **J.E. Richardson** and K. Graves. Investigating the combined effects of shape, density, and rotation on the surface topography and erosional states of radar-observed asteroids, *Colloquium presented at the National Astronomy and Ionosphere Center (NAIC) - Arecibo Observatory.*

2012: **J.E. Richardson**. Modeling the Evolution of Heavily Cratered Terrains: an Application to the Bombardment History of the Outer Solar System, *Colloquium presented to the Dept. of Earth and Planetary Sciences, Washington University.*

CONFERENCE PRESENTATIONS [42 total]

2015: **J.E. Richardson,** P.A. Taylor, E.G. Rivera-Valentin, L.A. Rodriguez-Ford, L.A.M. Benner, S.P. Naidu, J.D. Giorgini, M.W. Busch, F.D. Ghigo, A. Kobelski, B.D. Warner, A. Springmann, S.E. Marshall, J.K. Steckloff, B. Sharkey. *Arecibo and Goldstone Radar Observations of the First-Recognized Binary Near-Earth Asteroid: (385186) 1994 AW1,* American Astronomical Society, DPS meeting #47, id.308.08.

2015: **J.E. Richardson** and P. Taylor. The Fate of Impact Ejecta in the 1999 KW4 Binary Asteroid System: A Detailed Modeling Investigation, *46th Lunar and Planetary Science Conference,* LPI Contribution No. 1832, p.1895.

2015: D.A. Minton, A.P. Jackson, E. Asphaug, C.I. Fassett, **J.E. Richardson**. Debris from Borealis Basin Formation as the Primary Impactor Population of Late Heavy Bombardment, *Workshop on Early Solar System Impact Bombardment III*, LPI Contribution No. 1826, p.3033.

2014: **J.E. Richardson**, K.J. Graves, and T.J. Bowling. Asteroid shapes and spins reveal a preferred erosional state of maximum surface stability, *American Astronomical Society, DPS meeting #46*, #509.10.

2014: D.A. Minton, **J.E. Richardson,** C.I. Fassett. Re-examining the main asteroid belt as the primary source of ancient lunar craters, American Astronomical Society, DPS meeting #46, #205.07.

2014: **J.E. Richardson**, K.J. Graves, and T.J. Bowling. Radar-derived asteroid shapes point to a 'zone of stability' for topography slopes and surface erosion rates, *Asteroids, Comets, Meteors 2014. Proceedings, Edited by K. Muinonen et al.*.

2013: **J.E. Richardson**. A Modeling Investigation of the Observed Differences Between Secondary Crater Fields on the Moon and Mercury, *American Astronomical Society, DPS meeting*, **45**, #102.04.

2013: **J.E. Richardson** and K. Sheron. An Experimental Investigation of the Seismic Signal Produced by Hypervelocity Impacts, *44rd Lunar and Planetary Science Conference, LPI Contribution No. **1719**, p. 2863.*

2013: **J.E. Richardson**. Three-Dimensional Modeling of Crater Degradation via the Effects of Impact Induced Seismic Shaking, with Comparison to Crater Count Data, *44rd Lunar and Planetary Science Conference, LPI Contribution No. **1719**, p. 2397.*

2012: **J.E. Richardson** and D.A. Minton. General Properties of Secondary Craters: Preliminary Modeling Results, *American Astronomical Society, DPS meeting*, **44**, #509.02.

2012: D.A. Minton, and **J.E. Richardson**. Understanding The Apparent Lack Of Cometary Impactors During The Late Heavy Bombardment On The Moon, *American Astronomical Society, DPS meeting,* **44**, #401.04.

2012: D.A. Minton, **J.E. Richardson**, P.C. Thomas, M. Kirchoff, and M.E. Schwamb. Combining Saturnian Craters and Kuiper Belt Observations to Build an Outer Solar System Impactor Size-Frequency Distribution, *43rd Lunar and Planetary Science Conference, LPI Contribution No. **1659**, id.2669.*

2012: **J.E. Richardson**, D.A. Minton, P.C. Thomas, and M. Kirchoff. Uncovering the Impactor Population for the Outer Solar System from Saturnian Satellite Cratering Records, *43rd Lunar and Planetary Science Conference, LPI Contribution No. **1659**, id.2585.*

2012: **J.E. Richardson**, D.A. Minton, and P.C. Thomas. Exploring the Bombardment History of the Outer Solar System via Saturnian Satellite Cratering Records, *Workshop on the Early Solar System Bombardment II, LPI Contribution No. **1649**, p.65-66.*

2011: **J.E. Richardson** and T.J. Bowling. Investigating the combined effects gravity and rotation on small-body surface terrains, *American Geophysical Union, Fall Meeting 2011*, abstract #P23C-1728.

2011: **J.E. Richardson** and D.A. Minton. Illuminating the bombardment history of the outer solar system, *AAS/Division for Planetary Sciences Meeting Abstracts*, **43**.

2011: **J.E. Richardson**. Regolith Generation, Retention, and Movement on Asteroid Surfaces: Early Modeling Results, 42*th annual Lunar and Planetary Science Conference (LPSC)*, No. 1084..

2010: **J.E. Richardson**. A Finite-Element Model of Asteroid Surface Evolution: Slope Processes, Crater Creation and Erasure, Regolith Generation and Loss, 73rd Annual Meeting of the Meteoritical Society, Meteoritics and Planetary Science Supplement 5285.

2010: **J.E. Richardson**. Uncovering the Saturnian Impactor Population via Small Satellite Cratering Records, 41*th annual Lunar and Planetary Science Conference (LPSC)*, No. 1523.

2009: **J.E. Richardson**. The seismic effect of impacts on asteroid surface morphology: Three-dimensional modeling results, 40*th annual Lunar and Planetary Science Conference (LPSC)*, No. 2144.

2008: **J.E. Richardson**. Interpreting Cratered Terrains: a New Model Investigation of Crater Saturation Conditions, *AAS/Division for Planetary Sciences Meeting Abstracts*, **40**, No. 9.05.

2008: **J.E. Richardson**. A 3-D model of asteroid surface evolution, crater creation and erosion, regolith generation, and hillslope processes, *The 2008 Asteroids, Comets and Meteors conference*, No. 8090.

2008: **J.E. Richardson**. Modeling the evolution of cratered terrain in three dimensions: a study of crater creation and erosion on airless bodies, *39th annual Lunar and Planetary Science Conference (LPSC)*, No. 2079..

2007: **J.E. Richardson** and P.C. Thomas. Modeling the cratering records of Hyperion and Phoebe: indications of a shallow-sloped impactor population, *AAS/Division for Planetary Sciences Meeting Abstracts*, **39**, No. 11.11.

2007: **J.E. Richardson**. Improving the modeling of impact ejecta behavior: the effects of gravity and strength near the crater rim, *38th annual Lunar and Planetary Science Conference (LPSC)*, No. 1345.

2006: **J.E. Richardson**, J. Veverka, and P.C. Thomas. Large impact features on Phoebe and Hyperion: early analysis results, *AAS/Division for Planetary Sciences Meeting Abstracts*, **38**, No. 69.04.

2006: **J.E. Richardson** and H.J. Melosh. Impact generated seismic activity on fractured-monolith asteroids: a seismic propagation theory, *LPI Contributions*, **1325**, 66-67.

2006: **J.E. Richardson** and H.J. Melosh. Modeling the ballistic behavior of solid ejecta from the Deep Impact cratering event, *37th annual Lunar and Planetary Science Conference (LPSC)*, No. 1836.

2005: **J.E. Richardson**, H.J. Melosh, and Deep Impact Science Team. The Deep Impact experiment and the physics of impact cratering, *Bulletin of the American Astronomical Society*, **37**, 703.

2005: **J.E. Richardson**, H.J. Melosh, and R. Greenberg. A stochastic cratering model for asteroids surfaces, *36th annual Lunar and Planetary Science Conference (LPSC)*, No. 2032.

2004: **J.E. Richardson**, H.J. Melosh, and R. Greenberg. Impact-induced seismic shaking on asteroid 433 Eros: the mechanics of a surface modification process, *Bulletin of the American Astronomical Society*, **36**, 1186.

2004: **J.E. Richardson**, H.J. Melosh, and R. Greenberg. The seismic effect of impacts on asteroid surface morphology: early modeling results, *35th annual Lunar and Planetary Science Conference (LPSC)*, No. 1864.

2003: **J.E. Richardson**, H.J. Melosh, and R. Greenberg. The seismic effect of impacts on asteroids: early modeling results, *American Geophysical Union (AGU), Fall Meeting 2003*, No. P52A-0476.

2003: **J.E. Richardson**, H.J. Melosh, and R. Greenberg. An impact ejecta behavior model for small irregular bodies, *34th annual Lunar and Planetary Science Conference (LPSC)*, No. 1241.

2002: O. Abramov, **J.E. Richardson**, and A.S. McEwen. Altimetry-based analysis of valley systems on Mars, *American Geophysical Union (AGU), Fall Meeting 2002*, No. P51B-0361.

2002: **J.E. Richardson** and H.J. Melosh. A numerical impact ejecta model for the Deep Impact mission, *Bulletin of the American Astronomical Society*, **34**, 886.

2001: **J.E. Richardson**, R.A. Lorenz, and A.S. McEwen. Titan's surface and rotation: new results from Voyager 1 images, *Bulletin of the American Astronomical Society*, **33**, 1110.

1999: **J.E. Richardson**, J. Bedient, R. Lunsford, N. McLeod, and P. Martin. Refining visual meteor perception models: shower radiant altitude effect, probability function, and limiting magnitude effect, *The 1999 Asteroids, Comets, Meteors conference, IAU Commission 22 professional-amateur working group meeting*.

1999: **J.E. Richardson**, D.D. Meisel, D.E. Binns, and A. Mallama. Analysis of radiometeor rates using Fourier and Wavelet techniques, *The 1999 Asteroids, Comets and Meteors conference*, No. ACM99 20.02.

1997: **J.E. Richardson** and D.D. Meisel. An amateur radiometeor network and its scientific results, *Bulletin of the American Astronomical Society*, **29**, 821.

1997: D.D. Meisel, **J.E. Richardson**, and A. Mallama. Wavelet and Fourier analysis of radiometeor rate data, *Bulletin of the American Astronomical Society*, **29**, 820.

1996: D.D. Meisel and **J.E. Richardson**. Fourier analysis of sporadic meteor rates, *News Letter of the Astronomical Society of New York*, **4-10**, 5.