CURRICULUM VITA: JAMES F. BELL III (JIM)

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EDUCATION:

Ph.D.: 1992, University of Hawaii at Manoa; Planetary Geosciences
M.S.: 1989, University of Hawaii at Manoa; Geology and Geophysics
B.S.: 1987, California Institute of Technology; Planetary Science and Aeronautics

PERSONAL INFORMATION:

Born: July 23, 1965, Providence RI; Citizenship: USA.

FIELDS OF EXPERTISE:

- Surface composition and geology of terrestrial planets, moons, asteroids, comets
- Spacecraft instrumentation, testing, operations (multispectral imaging & spectroscopy)
- Reflectance & emittance spectroscopy (telescopic, laboratory, spacecraft)
- Image processing and data reduction/calibration/analysis (telescopic, spacecraft)

PROFESSIONAL EXPERIENCE:

Since 2025: Regents Professor, School of Earth and Space Exploration, ASU
2024-2025: Visiting Associate and Moore Distinguished Scholar in Planetary Science, Division of Geological and Planetary Sciences, California Institute of Technology
Since 2018: Chief Scientist, MILO Space Science Institute
Since 2018: Graduate Faculty, ASU School for the Future of Innovation in Society's PhD program in Human and Social Dimensions of Science and Technology
Since 2013: Distinguished Visiting Scientist, NASA Jet Propulsion Laboratory/Caltech
Since 2013: Director, ASU Space Technology and Science ("NewSpace") Initiative
Since 2011: Professor, Honors Faculty, ASU Barrett Honors College
Since 2011: Professor, School of Earth and Space Exploration, Arizona State University
Since 2011: Adjunct Professor, Department of Astronomy, Cornell University
2009-2010: Professor, Department of Astronomy, Cornell University
2003-2008: Associate Professor, Department of Astronomy, Cornell University
2005: Visiting Scientist, CNRS/Observatoire Midi-Pyrénées, Toulouse, France
1998-2003: Assistant Professor, Department of Astronomy, Cornell University
1997 to 1998: Senior Research Associate, Department of Astronomy, Cornell
1995 to 1997: Research Associate, Department of Astronomy, Cornell
1994 to 1995: Postdoctoral Research Assistant, U. Washington Remote Sensing Lab
1992 to 1994: NRC Postdoctoral Research Fellow, NASA Ames Research Center.
1989 to 1992: NASA Graduate Student Researchers Program Fellow, NASA/JSC
1987 to 1989: Graduate student researcher, U. Hawaii Planetary Geosciences Dept.
1983 to 1987: Undergraduate researcher, Caltech Department of Planetary Sciences

PROFESSIONAL AFFILIATIONS:

American Astronomical Society (Division for Planetary Sciences); American Geophysical Union (Planetary Sciences Section); International Astronomical Union; American Association for the Advancement of Science; Geologic Society of America (Planetary Sciences Div.); The Planetary Society (Board: 2006-; President: 2008-2020)

HONORS AND AWARDS:

Eugene Shoemaker Lecturer, American Geophysical Union, 2025
Fellow, American Astronomical Society (AAS), 2025
Fellow, American Geophysical Union (AGU), 2024
ASU "Professor of Impact" Award (student selected), 2024
ESA Group Achievement Award: JUICE mission JANUS camera dev. team, 2023
NASA Group Achievement Awards (3): Mars 2020 Prime Mission: Strategic Science Planning; Mastcam-Z Instrument Science/Operations; Atmos. Sci. Wk. Grp, 2023
NASA Group Achievement Award: Lucy mission development team, 2022
NASA Group Achievement Award: Mars 2020 instrument development & testing, 2021
NASA Group Achievement Award, NASA Psyche mission development, 2020
Distinguished Alumnus Award, Univ. Hawaii Dept. of Geology & Geophysics, 2019
NASA Group Achievement Awards (2), MSL/*Curiosity* Science Team, 2015-2017
Nominated for ASU's CLAS Zebulon Pearce Teaching Award, 2017.
ASU/SESE "Best Undergraduate Professor" Award (by student vote), 2015-2016
NASA Group Achievement Award, MSL/*Curiosity* Operations Team, 2013
AAS/DPS Carl Sagan Medal for Excellence in Public Communication, 2011
NASA Group Achievement Award, MRO MARCI and CTX Science Team, 2011
NASA Group Achievement Award, Phoenix Mission Support Team, 2008
NASA Group Achievement Awards (2), MER 3rd & 4th Extended Missions, 2008
National Academy of Sciences Kavli Fellow, 2007
NASA Group Achievement Award, Mars Odyssey Primary Mission, 2006
National Air and Space Museum Trophy, Mars Exploration Rover Team, 2005
NASA Group Achievement Awards (2), MER 1st, 2nd Extended Missions, 2004-2005
NASA Group Achievement Awards (2), MER Primary Mission, 2004
NASA Group Achievement Award, NEAR/Eros mission, 2001
Awarded asteroid name 8146 Jimbell by the IAU, 1999
Editor's Letter of Commendation, *Icarus,* 1997
NASA Group Achievement Award, Mars Pathfinder mission, 1997
NASA Group Achievement Award, NEAR/Mathilde flyby, 1997
Editor's Citation for Excellence in Refereeing, *J. Geophys. Res.*, 1996
NASA/National Research Council Postdoctoral Fellowship, 1992-1994
NASA Graduate Student Researcher's Program Fellowship, 1989-1992

PROFESSIONAL ACTIVITIES:

Interdisciplinary Investigation Scientist, NASA/JPL SkyFall mission, 2026-
Instrument Scientist, NASA Lucy Discovery mission Target Tracking Camera, 2018-
Deputy P.I. and Imaging Investigation Lead, NASA *Psyche* Discovery Mission, 2017-
Deputy P.I.: NASA LunaH-Map SIMPLEX Artemis-1 CubeSat mission (2015-2023);
P.I., *Kuiper* Discovery program Space Telescope mission (not accepted), 2015
P.I., NASA Mars-2020 *Perseverance* rover Mastcam-Z imaging investigation, 2014-
Science Team Co-I: ESA JUICE mission JANUS camera team; 2013-
Science Team Member: ESA Mars Trace Gas Orbiter MAGIE camera team; 2010-2012
P.I., *Odysseus* New Frontiers program Trojan asteroid mission (not accepted), 2009
Member: NASA Advisory Council, Planetary Sciences Subcommittee, 2009-2012
Participating Scientist: NASA Lunar Reconnaissance Orbiter LROC team, 2008-
Deputy P.I.: NASA Mars Science Laboratory Rover Mastcam camera system; 2005-
Participating Scientist: NASA Mars Odyssey THEMIS Investigation, 2002-
Science Team Member: NASA MRO MARCI/CTX team, 2003-

Pancam Payload Element Lead: NASA 2003 Mars Exploration Rover Missions, 1997-
Science Team Member: NASA CONTOUR Discovery Mission, 1997-2002
Participating Scientist: NASA Mars Pathfinder Mission, 1997-1998
Science Team Member: Mars-98 Orbiter MARCI Investigation, 1996-1999
Science Team Member, NASA Near Earth Asteroid Rendezvous Mission, 1994-2001
Guest Observer, ESA Infrared Space Observatory, 1995-1997
Guest Observer, NASA Hubble Space Telescope, 1994-2003
Visiting Astronomer, NASA Infrared Telescope Facility, 1988-1999

PROFESSIONAL SERVICE:

Reviewer, NASA Postdoctoral Fellowship Program panel, 2023
Study Team Member, "Enabling Fast Response Missions to NEOs, ISOs, and LPCs", Keck Institute for Space Studies, 2023
Member, Scientific Organizing Committee, AAS/DPS Annual Conference, 2023
Consulting Editor, *Icarus,* 2011-2021.
Chair, NASA Senior Review Panel for Mars InSight extended mission, 2020
NASA Europa Clipper Instrument Risk Assessment Team member, 2020
Editorial Advisory Board, *Astronomy* magazine, 2019-
External Advisory Board, Univ. Winnipeg Centre for Terrestrial & Planet. Exp., 2019-
Study Team Member, "Space Science Opportunities Augmented by Exploration Telepresence", Keck Institute for Space Studies, 2016-2017
Member, NASA Mars International Collaboration Science Analysis Group, 2016
Member, NASA Chief Scientist's Office Citizen Science Advisory Forum, 2016
Member, AAS/DPS Prize Committee, 2015-2016
Member, NASA Human Exploration Mission Directorate (HEOMD) Asteroid Redirect Mission (ARM) Formulation Assessment and Support Team (FAST), 2015
Member, Science Definition Team for the NASA Mars-2020 Rover mission, 2013
Study Team Member, *In Situ Instrumentation for Primitive Bodies*, KISS, 2012
Organizing Committee, *International Space Science Institute*, Quantifying the Martian Geochemical Reservoirs; Workshop and Book, 2011-2012
Member, Mars Science Laboratory Participating Scientist Review Panel, 2011
Member, NASA ROSES Education and Outreach Review Panel, 2010-2011
Contributing Editor, *Sky & Telescope* magazine, 2011-
Member, NASA/JPL Mars Critical Data Products Program Review Panel, 2011
Member, Acting Chair: NASA Advisory Council Planetary Sci. Subcomm., 2009-2012
Chair, NASA Lunar Science Institute Review Panel, 2008
Member then Chair, AAS/DPS Federal Relations Subcommittee, 2006-2008; 2008-2010
Member, NASA Planetary Data System Geosciences Node Advisory Group, 2008-
Member, National Academy of Sciences Committee on the Review of Planetary Protection Requirements for Mars Sample Return Missions, 2008
Local Organizing Committee Co-Chair, 2008 AAS/DPS Conference, Ithaca
Member, NASA Mars Instrument Development Program Review Panel, 2007
Elected to AAS/DPS Committee, 2004-2006
Chair, NASA Mars Fundamental Research Program Review Panel, 2005
Editor, *Icarus* (International Journal of Solar System Studies), 1998-2010
Consulting Editor, Cambridge University Press Planetary Science book series, 2002-
NSF Planetary Astronomy Review panel, 2003
Group Chief, NASA Mars Scout '07 mission Review Panel, 2002
Group Chief, NASA Planetary Geology & Geophysics Review Panel, 2001-2002
Hubble Space Telescope Cycle 10 Review Panel (Solar System Committee), 2000

Group Chief, NASA Mars Data Analysis Program Review Panel, 2000
Member, NASA Planetary Astronomy NEO Program Review Panel, 2000
Program Committee Member, AAS/DPS annual meeting, Pasadena CA, 2000
Member, Italian Space Agency/NASA 2003 Mars Lander Instrument Review Panel, 1999
Member, NASA Mars Exploration Program Assessment Group (MEPAG), 1999-
Chair, NASA Mars-98 Participating Scientist Program Review Panel, 1999
Member, AAS Working Group on Professional-Amateur Collaboration, 1999-
Group Chief, NASA Mars Data Analysis Program Review Panel, 1998
Member, NASA Planetary Geology & Geophysics Program Review Panel, 1998
NASA Planetary Astronomy Program Management Operations Working Group, 1996-98
Eos Planetary Sciences Editor, AGU Weekly newspaper, 1997-1999
Member, NASA Mars Science Working Group (MarsSWG), 1996-1997
Member, SIRTF Solar System Working Group, 1996-
Member, SIRTF Large Projects/Survey Working Group, 1995-96
National Research Council Panel on Reducing Space Science Mission Costs, 1996
NASA Planetary Instrument Definition and Development Program Review Panel, 1995
Hubble Space Telescope Cycle 6 Review Panel (Solar System Committee), 1995
NASA Discovery Missions and Planetary Astronomy Review Panels, 1994
Lunar and Planetary Science Conference Program Committee, 1994-1995
Member, NASA MSATT, MECA, MEVTV, and MSATT Study Groups, 1988-1993

TEACHING EXPERIENCE:

SES 404, "Fundamentals of Planetary Geology" (avg. ~25 in-person students), 2025–
SES 107, "A Solar System Journey," (online; avg ~250 students), every semester 2019–
SES 494/598: "Commercial Opportunities in Space", co-taught, 2014–
SES 121-124: "Earth/Solar System/Universe" (Introductory, majors, + Labs), 2014-2017
SES 394: "Exploration: The Human Imperative," co-taught, 2016-2017
GEO/ASTRO 494/598: "Dissecting the Decadal Survey," ASU, Spring 2012
Astronomy 111, "Introduction to Solar System Astronomy," ASU, Fall 2011
Astronomy 310, "Planetary Image Processing", Cornell, Fall 2002, '05, '07, '09
Astronomy/EAS 577, "Planetary Surface Processes," Cornell, Spring 2007, 2009
Astronomy 102, "Our Solar System", Cornell University, Spring 2001, 2002
Astronomy 202, "Our Home in the Solar System", Cornell, Spring 1998, '99, '00, '08
Astronomy 7671/EAS 7310, "Lunar Science and Exploration", Cornell, Fall 2009
Astronomy 410, "Experimental Astronomy", Cornell, Fall 2005, 2006
Astronomy 671/EAS 693, "The Martian Surface", Cornell, Spring 2008
Astronomy 671, "Spectroscopy of Planetary Surfaces", Cornell, Fall 2001
Astronomy 671, "Asteroids", Cornell, Fall 2000
Astronomy 101, "The Nature of the Universe", Cornell University, Fall 1998
BioG 101-106 "Explorations" Program, Cornell University, Spring 2000, 2001
Fieldwork in Human Development 402 (Service learning/outreach course), 2007, '08, '09

ASU DEPARTMENT/UNIVERSITY FACULTY SERVICE

Member, ASU Instrument & Mission Development Lab Project Strategy Comm., 2026-
ASU/SESE Undergraduate Committee, Aug. 2025 – July 2028
ASU/SESE Planetary Science Faculty Search Committee, 2023
ASU/SESE Faculty Evaluation Committee, 2023; 2015-2017
ASU/SESE Awards Committee, 2021-2024 (Chair, 2023-2024)
ASU/KE Space Strategy Committee member, 2020- (Chair, 2022-2023)
ASU/SESE Colloquium Committee, 2020-2023; 2015-2017

Member, SESE Discipline-Based Education Research Faculty Search Committee, 2019
Chair, ASU/SESE Director Search Committee, 2018-2019
ASU/SESE Exploration Postdoctoral Fellowship evaluation committee, 2013
ASU/SESE Graduate Admissions Committee, 2011-2012
ASU/SESE Faculty search committees (2), 2012-2013
Thesis Advisor for 13 graduate students, 1998-2016
Minor Advisor/Committee member for 18 other graduate students, 1998-2016

EDUCATION, OUTREACH, AND COMMUNITY ACTIVITIES:

- Author of 9 popular science books about space (see below)
- Appearances on numerous radio and television shows, including the NBC *Today Show* and PBS *News Hour*, *C-SPAN, Wall St. Journal Live, CNN,* and the Discovery, National Geographic, and History cable channels
- Interviewed for Voyager mission documentary film, "The Farthest," 2017
- TEDx talk, "We Have to Get Off This Planet!", 2016.
- Science Consultant for PBS "Nova" television series and WNYC radio
- Numerous talks to Elementary and High School students and community, religious, and civic groups around the country about astronomy and planetary sciences.
- Faculty Advisor for Cornell and ASU student SEDS and Planetary Society chapters
- Faculty Fellow In Service Awardee, Cornell HD402 service course (with Prof. C. Hazan)
- Mentor/Advisor: Athena Mars Rover K-12 outreach program
- Member: JPL/NASA Mars Education and Outreach Advisory Board
- Volunteer at the Sciencenter, Ithaca. Projects include assistance with Sagan Planetwalk, Mars exhibit, slide shows, and newsletters
- Organizer of teacher workshops for Tompkins County educators (in cooperation with the Sciencenter) in order to promote increased science education in the K-12 classroom;

INVITED TALKS/LECTURES (see detailed list at http://jimbell.sese.asu.edu/appearances)

TEDx; Keck Institute for Space Studies (multiple); Smithsonian Air and Space Museum; National Academy of Sciences Kavli Program, Space Telescope Science Institute; American Museum of Natural History; Rochester Museum and Science Center; Argonne Laboratories; Buffalo Science Museum; Boston Museum of Science; Miami Museum of Science; MIT, Caltech, U. Washington; U. Colorado; U.C. Santa Cruz; U. Virginia; Science Museum of Minnesota; Denver Museum of Nature and Science; Elmira Wings of Eagles Museum; NYC 92nd St. Y; Cornell Olin Lecture; Georgia Tech

TECHNICAL EXPERIENCE

Instrumentation: Proficiency with laboratory and telescopic VIS-IR spectrometers and Near-IR and CCD cameras. 90+ nights observing experience on large telescopes at Mauna Kea, Wyoming, Lick, Lowell, Palomar, and Pic du Midi observatories, plus observing time on HST and ISO. Lab experience: reflectance, emittance, and Mössbauer spectrometers, magnetometers, and water evolution analysis; Machine shop work (NC mill, lathe, etc.) and familiarity with electronic testing equipment.

Computer/Software: Proficiency in Unix/Linux on a variety of platforms. Programming proficiency in IDL, and experience with IRAF, USGS-ISIS, and ENVI. Proficiency in workstation system administration and with Mac and Windows PCs.

LANGUAGES

French (3 years high school), Russian (1 year college), Rhode Islandese (18 yeahs)

HOBBIES AND INTERESTS

Baseball/Softball, Woodworking, Hiking, Photography, Hawaiian Outrigger Canoe

POPULAR SCIENCE BOOKS (see http://jimbell.sese.asu.edu/books)

- "The Art of the Cosmos: Visions from the Frontier of Deep Space Exploration", Union Square & Co., New York; ISBN-13: 9781454946083, 224 pp., 2022.
- "Hubble Legacy: 30 Years of Discoveries and Images," Sterling, New York, ISBN-13: 978-1454936220, 224 pp., 2020. [also translated into Japanese and Chinese]
- "The Earth Book," Sterling, New York, ISBN-13: 978-1454929109, 528 pp., 2019. [also translated into Chinese]
- "The Ultimate Interplanetary Travel Guide," ISBN-13: 978-1454925682, 146 pp., Sterling, New York, 2018. [also translated into Chinese]
- "The Interstellar Age: Inside the Forty Year Voyager Mission," ISBN-13: 978-0525954323, 336 pp., Dutton, New York, 2015. [also translated into Italian and Japanese]
- "The Space Book", ISBN-13: 978-1402780714, 529 pp., Sterling, New York, 2013. [also translated into Chinese, Russian, French, Spanish, Dutch, Greek, and German]
- "Moon 3-D", ISBN-13: 978-1402765513, Sterling, New York, 160 pp., 2009.
- "Mars 3-D", ISBN-13: 978-1-4027-5620-7, Sterling, New York, 160 pp., 2008.
- "Postcards from Mars", ISBN 0525949852, Dutton/Penguin, New York, 196 pp., 2006. [also translated into Japanese and German]

SCHOLARLY PUBLICATIONS (see http://molokai.sese.asu.edu/~jimbo/Bell_Pubs.pdf)

- 42 first-authored, peer-reviewed published/submitted publications from 1989-2024
- Co-author on 54 peer-reviewed published/submitted papers by my grad students & postdocs
- Co-author on 257 other peer-reviewed publications
- Editor/co-editor of four professional reference books ("Discovering Mars" w/W. Sheehan; "Remote Compositional Analysis" w/J. Bishop & J. Moersch; "The Martian Surface: Composition, Mineralogy, and Physical Properties,"; "Asteroid Rendezvous", w/J. Mitton)
- Author of more than 100 popular science magazine articles, web blogs, and podcasts
- First author or co-author on more than 900 abstracts and conference presentations
- Complete list included at http://molokai.sese.asu.edu/~jimbo/Bell_Pubs.pdf
- Current Google Scholar h-index: 110 (Since 2021: 63)
- Highest impact peer-reviewed first-authored publications:

Scientific Analyses:

Bell III, J.F.*et al.*, Geological, multispectral, and meteorological imaging results from the Mars 2020 *Perseverance* rover in Jezero crater, *Science Advances, 8,* doi:10.1126/sciadv.abo4856, 2022.

Bell III, J.F.*, et al.*, Pancam multispectral imaging results from the Spirit rover at Gusev crater, *Science, 305,* 800-806, doi:10.1126/science.1100175, 2004.

Bell III, J.F.*, et al.*, Pancam multispectral imaging results from the Opportunity rover at Meridiani Planum, *Science, 306,* 1703-1709, doi:10.1126/science.1105245, 2004.

Bell III, J.F., *et al.*, Mineralogic and compositional properties of Martian soil and dust: Results from Mars Pathfinder, *JGR, 105,* 1721, doi:10.1029/1999JE001060, 2000.

Bell III, J.F., T.B. McCord, and P.D. Owensby, Observational Evidence of crystalline iron oxides on Mars, *JGR, 95,* 14447-14461, doi:10.1029/JB095iB09p14447, 1990.

Instrumentation/Calibration:

Bell III, J.F. *et al.,* The Psyche Multispectral Imager Investigation: Characterizing the Geology, Topography, and Multispectral Properties of a Metal-Rich World, *Space Sci. Rev., 221,* doi:10.1007/s11214-025-01169-3, 2025.

Bell III, J.F., *et al.,* The Terminal Tracking Camera System on the NASA *Lucy* Trojan

Asteroid Mission, *Space Sci. Rev., 219*, doi:10.1007/s11214-023-01030-5, 2023.

Bell III, J.F., *et al.*, The Mars 2020 Rover Mast Camera Zoom (Mastcam-Z) Multispectral, Stereoscopic Imaging Investigation, *Space Sci. Rev., 217*, doi:10.1007/s11214-020-00755-x, 2020.

Bell III, J.F., *et al.,* The Mars Science Laboratory *Curiosity* rover Mast Camera (Mastcam) instruments: Pre-flight and in-flight calibration, validation, and data archiving, *Earth and Space Science, 4*, doi:10.1002/2016EA000219, 2017.

Bell III, J.F., *et al.*, Calibration and Performance of the Mars Reconnaissance Orbiter Context Camera (CTX), *Mars, 8*, 1-14, doi:10.1555/mars.2013.0001, 2013.

Bell III, J.F. *et al.*, The Mars Exploration Rover Athena Panoramic Camera (Pancam) Investigation, *J. Geophys. Res*., *108* (E12), doi:10.1029/2003JE002070, 2003.