

Dr. Michael E. Evans

EDUCATION

- Doctorate of Philosophy (PhD) in Oceanography 5/17
Texas A&M University (TAMU), College Station, Tx.
- Doctorate of Jurisprudence (JD) 5/99
University of Houston Law Center (UHLC), Houston, Tx.
- Graduate Certificate in Space Studies (Space Policy) 8/93
International Space University, Space Studies Program
- Masters of Physical Science (MS, Space Science) 5/89
University of Houston Clear Lake, Houston, Tx
- Bachelors of Science (BS), Petroleum Engineering 5/82
University of Tulsa, Tulsa, Ok

SCIENCE EXPERIENCE (NASA/JSC, 5/84 – 2/05, 6/12 – Present)

- Planetary Scientist: Develop science requirements for NASA Gateway Habitation module ground test program, conduct stable isotope geochemist analysis studying martial meteorites and Ordinary Chondrites, lead research on novel technologies for space exploration missions
- Planetary Scientist (NASA Pathways Graduate Co-op, PhD Thesis): Study stable isotopes of ordinary chondrite (OC) and martian meteorites to understand formation of carbonates. Received *Outstanding Student Paper Award* at 2016 American Geophysical Union conference (top 5% of student presentations)
- Mission Control Specialist: Lead Mission Control Center (MCC) team providing daily operations support to an oceanographic mission to study hydrothermal vents as an analog for astobiology on other worlds. Resulted in movie “Aliens of the Deep” by filmmaker James Cameron, produced by Disney Productions.
- RADAR Specialist: Evaluate Department of Defense (DoD) ground RADAR resources, develop NASA requirements and integrate new NASA ground RADAR systems to track Space Shuttle ascent debris following the Space Shuttle (STS-107) accident.

MANAGEMENT EXPERIENCE (NASA/JSC, 5/84 – 2/05)

- Technical Manager: Lead team developing overall trajectory flight design for Space Shuttle mission STS-78. Integrate technical activities between Space Shuttle prime contractor, payload customers and NASA. Support real-time operations in the MCC.
- Program Manager and Contracting Officer's Technical Representative (COTR): Assignment to the Ballistic Missile Defense Organization (BMDO), The Pentagon, WDC. Lead Topaz International Program (TIP) coordinating international space nuclear power research with scientists from the USAF Phillips Laboratory in Albuquerque, NM and Russian institutes in Moscow and St. Petersburg as part of the “Star Wars” program. Lead acquisition team to St. Petersburg, Russia to transport four unfueled Topaz II reactors to the United States for testing.
- Supervisor/Section Head: Lead Space Station Freedom (SSF) trajectory design section coordinating tasks, budget, schedule, and requirements with internal and external trajectory customers to develop ops plan (team composed of 20 contractors and 10 civil servants).

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ENGINEERING EXPERIENCE (NASA/JSC, 5/84 – 2/05)

- Aerospace Engineer: Lead development of requirements for trajectory cockpit components of NASA space vehicle under the Space Launch Initiative (SLI). Integrate team composed of personnel from NASA, the Federal Aviation Administration (FAA) and National Transportation Safety Board (NTSB) searching RADAR returns for the STS-107 (Columbia) accident. Design Space Shuttle mission trajectories for STS-30 and STS-32. Train as a Shuttle Trajectory Officer in the Mission Control Center (MCC).

LEGAL EXPERIENCE (2/05 – 6/10)

- Attorney (State Bar Licenses: Ca. #256932, Tx. #24012603) Working for small firms in San Diego and Palm Springs, Ca., create pleadings and legal documents, research legal positions, appear and argue at court hearings and mediations, conduct trials and depositions, and interview clients providing frequent status updates. Experience in estate planning, mass tort construction defect litigation, and contract drafting and interpretation.

RESEARCH GRANTS

- Principal Investigator (PI): Lunar Superconducting Magnetic Energy Storage (LSMES), \$100k for 1 year to study a new technology to store electrical energy on the lunar surface for exploration missions, NASA JSC Center Innovation Fund (CIF)

SELECTED PUBLICATIONS

- New Technologies for Powering a Surface Mission on Titan: Capturing Energy from Titan's Winds for Science Exploration (CETiWiSE); ME Evans, WJ O'Hara; Lunar and Planetary Science Conference 49 (2018)
- Revisiting the Origin of Carbonates in Elephant Moraine A79001 and Possible Evidence for Liquid Water on Mars in the Amazonian; PB Niles, T Sun, EL Berger, ME Evans, M El-Shenawy; Lunar and Planetary Science Conference 49 (2018)
- Using Science Ground Test Procedures in Habitat Mockup Evaluations to Evolve Science Requirements for NASA's Deep Space Gateway (DSG); ME Evans, DH Needham, KR Fisher, SJ Lawrence, PB Niles; Lunar and Planetary Science Conference 49 (2018)
- The story of Amazonian climate change on Mars as told by carbonates in Miller Range Nakhrites; ME Evans, PB Niles, D Locke, P Chapman; AGU Fall Meeting Abstracts (2017)
- Studying Antarctic Ordinary Chondrite (OC) and Miller Range (MIL) Nakhlite Meteorites to Assess Carbonate Formation on Earth and Mars; ME Evans, Texas A&M University PhD Thesis (2017)
- Hydrogen (H) Isotope Composition of Type II Kerogen Extracted by Pyrolysis-GC-MS-IRMS: Terrestrial Shale deposits as Martian Analogs; R Socki, D Pernia, KK Bissada, JA Curiale, M Evans, Q Fu, PB Niles; AGU Fall Meeting Abstracts (2014)
- TOPAZ International Program: Lessons Learned in Technology Cooperation with Russia; Stephenson Printing, Springfield, Va. (1994)
- A Parametric Analysis of Orbital Debris Collision Probability and Maneuver Rate for Space Vehicles; J.L.Foster, S. Herbert, M. Evans, W. Jackson; NASA White Paper JSC-25898 (1992)