

Stuart J. Robbins
stuart.robbsins@colorado.edu

ASTROPHYSICS AND PLANETARY SCIENCES DEPARTMENT
UCB 391
UNIVERSITY OF COLORADO
BOULDER, CO 80309

EDUCATION:

Graduate Education: University of Colorado; Boulder, CO 80309

Standing: Sixth-Year graduate student; Ph.D. Candidate; 3.82 G.P.A.
M.S. in Geophysics, Spring 2008
expected Ph.D. Defense ~ April 2011

Undergraduate Education: Case Western Reserve University; 10900 Euclid Avenue; Cleveland, Ohio 44106

Graduated: Spring 2005, 3.73 G.P.A. *cum laude*
B.S. in Astronomy, double minors in Geology and Physics

High School Education: Indian Hill Exempted Village School District; 6845 Drake Road; Cincinnati, Ohio 45243

Graduated: Spring 2001, 4.027 G.P.A., Diploma with Honors

RESEARCH EXPERIENCE:

CU Boulder - January 2007 through present LASP / APS Department

Advisor: Brian Hynek, Ph.D. <hynek@lasp.colorado.edu>

Research Description: Crater studies on Mars

Exploration of crater properties in Arabia Terra to determine region's history (MS thesis).

Generating a complete catalog of Mars' craters to 1.5 km, though the catalog contains more smaller craters to ensure statistical completeness (main Ph.D. thesis component). Applications once complete include layered ejecta formation scenarios (see below), geologic mapping, Mars surface ages, planet-wide resurfacing rates, and ground-truth comparisons for modeling and automation.

Mars general crater catalog contains in-depth information on layered ejecta craters to test different scenarios for their formation and possibly use them as a proxy for sub-surface volatiles (*e.g.*, water).

Dating of Mars' volcanic calderae using high-resolution data to refine chronology, pyroclastic/effusive volcanism transition, implications for the water and heat budgets of Mars, and the role of secondary craters at the ~50-100 meter scale.

CU Boulder - Summer through December 2006 LASP / APS Department

Advisor: Glen Stewart, Ph.D. <glen.stewart@colorado.edu>

Research Description: *N*-body simulations of Saturn's rings

Simulating the largest range of parameter space to-date of particle internal density, distance from Saturn, particle size range, and geometric optical depth.

Simulated *Cassini* UVIS instrument stellar occultations through the simulation cells were then compared with actual *Cassini* data in order to constrain the physical properties of the rings and provide a new mass estimate (2× larger than previous).

CU Boulder - Spring 2006

Class Project

Advisor: Brian Hynek, Ph.D. <hynek@lasp.colorado.edu>

Research Description: Statistical analysis and study of layered ejecta craters on Mars.

Wrote programs to analyze MOLA topography data to determine various characteristics of layered ejecta craters and their ejecta, and compare with other data sets for physical/chemical trends. This became a Mars Crater Conference abstract for 2007.

For a proof-of-concept, did $\frac{1}{4}$ of the planet Mars to show that previous, more limited but so-called "representative" studies were not actually representative. This became the basis of my NESSF application and award.

CU Boulder - Fall 2005

Class Project

Advisor: Robert Pappalardo, Ph.D. <robert.pappalardo@colorado.edu>

Research Description: Theoretical investigations into impact melt as a possible explanation for Mercurian smooth plains.

Used analytic scaling equations to determine what size crater on Mercury was needed before its melt would exceed the crater volume.

Linked to statistical anomaly where, per surface area, Mercury is lacking in large impact events compared to Earth's Moon.

CU Boulder - Summer 2005

LASP

Advisor: Nick Schneider, Ph.D. <nick.schneider@lasp.colorado.edu>

Research Description: Search for periodic asymmetries in Cassini UVIS spectral data of the Io plasma torus.

NSO REU Program - Summer 2004

National Solar Observatory, NOAO, in Tucson, AZ

Mentors: Carl Henney, Ph.D. <chenney@noao.edu> and Jack Harvey, Ph.D. <jharvey@noao.edu>

Research Description: Development of an empirical model for solar wind forecast based upon He I images.

CWRU - Fall 2003 through Spring 2004

Dept. of Astronomy

Mentor: John Feldmeier, Ph.D. <johnf@bottom.astr.cwru.edu>

Research Description: Finding planetary nebulae near and around M81/82 group.

CWRU - October through December 2003

Dept. of Geology - Class Project

Advisor: Ralph Harvey, Ph.D. <rph@case.edu>

Research Description: Simulation of Earth-Mars/Mars-Earth ejecta exchange with computer simulations.

SARA REU Program - Summer 2003

Clemson University, Dept. of Physics & Astronomy

Mentor: Bradley S. Meyer, Ph.D. <mbradle@clemson.edu>

Research Description: Java implementation and web wrapper of Clemson nucleosynthesis code.

CWRU - Fall 2002 through Spring 2003

Dept. of Physics

Mentor: Corbin Covault, Ph.D.

Research Description: Work in high-energy astrophysics.

PUBLICATIONS:

- Submitted Hynek, B.M.; **Robbins, S.J.**; Šmárek, O.; and S. Zhong. *Geological Evidence for a Migrating Tharsis Plume*. Submitted to Nature-Geoscience.
- Submitted **Robbins, S.J.**; Di Achille, G; and B.M. Hynek. *The Volcanic History of Mars, As Told by Nineteen Major Volcanic Caldera Complexes*. Submitted to Icarus.
- 2010 **Robbins, S.J.**; Stewart, G.R.; Lewis, M.C.; Colwell, J.E.; and M. Sremčević. (2010). *Estimating the Masses of Saturn's A and B Rings from High-Optical Depth N-Body Simulations and Stellar Occultations*. **206**, pp. 431-445. doi: 10.1016/j.icarus.2009.09.012.
- 2006 **Robbins, S. J.**; Henney, C. J.; and J. W. Harvey. (2006). *Solar Wind Forecasting with Coronal Holes*. *Solar Physics*, **233**, No. 2.
- 2003 **Robbins, S. J.**; Meyer, B. S.; and G. C. Jordan, IV. (2003). *Modeling Nucleosynthesis: Web-Based Tools*. *IAPPP*. **94**, pp. 22-29.

GRANTS:

- Jun. 2010 - Jun. '13 Hynek, B.M.; **S. J. Robbins**; Barlow, N., and Tanaka, K. *A Global Mars Crater Database to 1.5-km-Diameter*. NASA grant awarded under the 2010 ROSES solicitation. This was to fund my last year of graduate school and half of two years of a post-doc to complete my Mars crater database and analyze it.
- Sep. 2007 - Aug. '10 Hynek, B.M.; and **S. J. Robbins**. *Understanding Lobate Craters on Mars: Keys to Subsurface Water*. NASA grant awarded under the 2007 NESSF program in planetary science. Fellowship terms state the advisor is the PI with the money awarded to fund the graduate student.

CONTRIBUTED ABSTRACTS / CONFERENCE PROCEEDINGS:

- 2010/03 LPSC **Robbins, S. J.**; and B. M. Hynek. (2010). *Progress Towards a New Global Catalog of Martian Craters and Layered Ejecta Properties, Complete to 1.5 km*. **41**, #2257.
- 2010/03 LPSC **Robbins, S. J.**; Di Achille, G.; and B. M. Hynek. (2010). *Dating the Most Recent Episodes of Volcanic Activity from Mars' Main Volcanic Calderae*. **41**, #2252.
- 2009/09 MCC **Robbins, S. J.**; and B. M. Hynek. (2009). *Progress Towards a New Global Catalog of Martian Craters and Layered Ejecta Properties, Complete to 1.5 km*. 12th Mars Crater Conference, #1207.
- 2009/03 LPSC **Robbins, S. J.**; and B. M. Hynek. (2009). *Towards a New Catalog of Lobed Martian Craters Compared with a New Global Crater Database, Complete to 1.5 km*. **40**, #2460.
- 2008/10 DPS **Robbins, S. J.**; Stewart, G.R.; Colwell, J.E.; and M.C. Lewis. (2008). *Self-Gravity Wakes in Saturnian Rings: Effects of Varying Location, Particle Density and Introducing a Particle Size Distribution*. pp. 424, **40:21.05**.
- 2008/09 MCC **Robbins, S. J.**; Haber, R.; and B. M. Hynek. (2008). *depth/Diameter Ratios of 2.5+ km Craters in Arabia Terra, Mars, and Hints at Refining the Region's History*. 11th Mars Crater Conference, #1108.
- 2008/09 MCC **Robbins, S. J.**; and B. M. Hynek. (2008). *MOLA Data May Introduce Significant Artifacts in Crater Diameters*. 11th Mars Crater Conference, #1107.
- 2008/03 LPSC **Robbins, S. J.**; and B. M. Hynek. (2008) *Testing Formation Theories of NW Arabia Terra, Mars: New Clues from Old Craters*. **39**, #2417.
- 2007/10 DPS **Robbins, S. J.**; Stewart, G.R.; Colwell, J.E.; and M.C. Lewis. (2007). *Simulations of Clumping Effects in High-Optical Depth Rings*. **38**, pp. 420.
- 2007/10 DPS Stewart, G.R.; **Robbins, S. J.**; and J.E. Colwell. (2007). *Evidence for a Primordial Origin of Saturn's Rings*. **39**, pp. 07.06.
- 2007/10 MCC **Robbins, S. J.**; and B. M. Hynek. (2007). *A New Automated Method of Determining Depth, Diameter, and Volume of Known Craters*. 10th Mars Crater Conference, #1006.

- 2005/09 DPS Schneider, N.M.; **Robbins, S.J.**; Delamere, P.A.; and A.J. Steffl. *Ion Temperature Control of the Io Plasma Torus*. Bulletin of the American Astronomical Society. pp. 758, **37:3** (2005).
- 2005/05 AGU/SPD **Robbins, S. J.**; Henney, C. J.; and J. W. Harvey. *Solar Wind Forecasting with SOLIS-VSM*.
- 2005/01 AAS **Robbins, S. J.**; Henney, C. J.; and J. W. Harvey. *Solar Wind Forecasting with Coronal Holes*. Bulletin of the American Astronomical Society. pp. 1350, **36:5** (2004).
- 2004/01 AAS **Robbins, S. J.**; Meyer, B. S.; and G. C. Jordan, IV. *Modeling Nucleosynthesis: Web-Based Tools*. Bulletin of the American Astronomical Society. pp. 1209, **35:5** (2003).

INVITED SPEAKER:

- August, 3 2007 **Robbins, S. J.** *The Apollo Moon Hoax: Why We Did NOT Not Go to the Moon*. Spoke at the Pre-Party event of Denver's "scepticamp."
- October 15, 2004 Spoke as a student representative to the External Departmental Review for the CWRU Astronomy Department.
- March 18, 2004 Spoke as a student representative to the Outcome Assessment Committee for the CWRU Physics Department.
- January 2002, '03, '05 Spoke as a student representative for CWRU in a recruitment for graduating high school students.
- November 9, 2002 Spoke as an astronomy major / physics minor student representative for CWRU in its "Connect with CWRU" program for prospective students.

PROFESSIONAL AFFILIATIONS:

- 2004 - present Junior Member, American Astronomical Society

ACTIVITIES & HONORS:

- Fall 2008 - Spring 2011 Webmaster of the APS Department at CU Boulder
- Fall 2006 - Spring 2009 Graduate student representative on Course Fees Committee
- Fall 2006 - Spring 2008 Graduate student representative on Observatories Committee
- Fall 2006 - Spring 2007 Graduate student representative on COSMOS lab sub-committee
- Fall 2004 Invitation for induction into the Mortar Board National Honor Society
- Fall 2004, Spring 2005 Dean's Honors List
- 2002 - 2004 Dean's High Honors List (five consecutive semesters)
- Spring 2004 Invitation for induction into the International Golden Key Honors Society
- 2001 President's Award for Outstanding Academic Excellence
- 2001 Ohio State Board of Education's Award of Merit
- 2000 Ohio Board of Regents recognition
- 2000 Member of the Honor Guard at Commencement
- 2000 National Merit Commended Scholar
- 2000 Inducted, International Thespians Troupe #1367
- 1999 - 2001 AP Scholar with Honors
- 1999 Inducted, National Honor Society
- 1998 - 2001 Selected to take the National Math Exam
- 1998 - 2001 *Who's Who in American High School Students* listing (3 consecutive academic years)
- May 1997 & 1998 First place in Spanish I and Biology in the Ohio Test of Scholastic Achievement
- March 1997 Grand Prize in the National Robotics Competition

Music:

- 2000 Created new arrangement of the IH Alma Mater (arr. for concert band)
- 1999 & 2000 Bands of America Summer Symposium for Concert Band and Leadership

Winter 1999 Rating of "1" on 5-point scale at Ohio Music Educators' Association Solo and Ensemble Contest

Winter 1999 Eastern Kentucky University Honors Band

1999 Composed solos for IH Marching Band

1999 Created the award-winning IH Flute Choir

1998 - 1999 & 2001 "Most Academically Achieved Freshman/Sophomore/Senior" in the Band

Leadership:

2002 - 2005 Officer, Physics and Astronomy Club, incl. VP for 2004 - '05

2003 - 2005 Officer, SIGMAC (Apple Computer Club)

Fall 2004 Nominated to attend Case LeaderShape Conference

2002 - 2003 Webmaster, Pierce House (a dormitory)

2002 - 2003 Webmaster, Spectrum

1999 - 2001 Student Representative, School Planning Team

1999 - 2001 Vice President, Creative Digital Technology Club

1999 - 2001 Robotics Chair, Technology Club

1999 - 2001 Mentored, Middle School Science Olympiad

1998 - 2001 Historian (1998-99) and Vice President (2000-01), Spanish Club

1998 - 1999 Mentored, Elementary School after school science club

COLLEGE SCHOLARSHIPS & AWARDS (2001):

from Case Western Reserve University: President's (\$14.5k annually) and Ohio Student Choice Grant (\$500 annually)

from Purdue University: Dean's Freshman Scholar Award (\$6.6K) and Academic Success Award

from University of Cincinnati: Founders' Scholarship (\$20K) and Honors Program acceptance

from Ohio State Board of Education: \$500 scholarship for scores on Ohio's 12th Grade Proficiency Test

NON-RESEARCH WORK EXPERIENCE:

University of Colorado - Boulder

(303)-735-6141
University of Colorado
Boulder, CO 80309

APS Department

Supervisor: Brian Hynek, Ph.D.
<hynek@lasp.colorado.edu>

Wage: 1/4-Time Graduate Student Stipend

Employed: Spring Semester 2007

Job included: Teaching Assistant for introductory astronomy labs for non-majors - lecture TA

University of Colorado - Boulder

(303)-735-6141
University of Colorado
Boulder, CO 80309

APS Department

Supervisor: Rosalba Perna, Ph.D.
<rosalba.perna@colorado.edu>

Wage: Graduate Student Grader Salary

Employed: Fall Semester 2006

Job included: Graded undergraduate majors astrophysics class

University of Colorado - Boulder

(303)-735-6141
University of Colorado
Boulder, CO 80309

APS Department

Supervisor: John Stocke, Ph.D.
<john.stocke@colorado.edu>

Wage: Graduate Student Stipend

Employed: Spring Semester 2006

Job included: Teaching Assistant for introductory astronomy labs for non-majors - ran two lab sections

University of Colorado - Boulder

(303)-735-6141
University of Colorado
Boulder, CO 80309

APS Department

Supervisor: Doug Duncan, Ph.D.
<dduncan@colorado.edu>
Wage: Graduate Student Stipend

Employed: Fall Semester 2005

Job included: Teaching Assistant for introductory astronomy labs for non-majors - ran two lab sections

Case Western Reserve University

(216)-368-3729
10900 Euclid Avenue
Cleveland, OH 44106

Dept. of Astronomy

Supervisor: Chris Mihos, Ph.D.
<hos@onager.astr.cwru.edu>
Wage: \$8.50 then \$9.50 per hour
salary made possible by NSF grant AST 98-76143

Employed: Spring Semester 2002; Fall Semester 2004 *through* Spring Semester 2005

Job included: web page design, implementation, construction, modification, and expansion; Java programming and creation of educational applets for astronomy

Reason for Departure: job completed; N/A

Case Western Reserve University

rel@cwru.edu
10900 Euclid Avenue
Cleveland, OH 44106

Dept. of Astronomy

Supervisor: Dr. R.E. Luck, Ph.D.
Wage: \$9.50 per hour

Employed: January 2004 *through* December 2004

Job included: TAing and Grading for ASTR 201 - an astronomy class for non-majors

Reason for Departure: N/A

Case Western Reserve University

(216)-368-4125
10900 Euclid Avenue
Cleveland, OH 44106

Dept. of Physics

Supervisor: Charles Rosenblatt, Ph.D.
Wage: \$8.50 per hour

Employed: January 13, 2003 *through* May 8, 2003

Job included: grade student homework

Reason for Departure: job completed

Public Library of Cincinnati and Hamilton County

(513)-369-6028
7200 Miami Avenue
Cincinnati, OH 45243

Madeira Branch

Supervisor: Debbie Hull
Wage: \$50 for job
salary made possible by the Friends of the Public
Library and the Dorothy M.M. Kersten Fund

Employed: June 7, 2002

Job included: display of a multitude of different types of origami; teach people of all ages to create simple origami models

Reason for Departure: job completed

Cincinnati Children's Hospital Medical Center
(513)-636-8098
3333 Burnette Avenue
Cincinnati, OH 45229

Div. of Molecular Cardiovascular Biology
Supervisor: Katherine Yutzey, Ph.D.
Wage: \$300 for job

Employed: June through August 2002
Job included: re-design of a two-page recruitment brochure
Reason for Departure: job completed

Cincinnati Children's Hospital Medical Center
(513)-636-8098
3333 Burnette Avenue
Cincinnati, OH 45229

eHealth
Supervisor: Steve Campbell
Wage: \$12.00 per hour

Employed: May 13, 2002 through August 5, 2002
Job included: web page design, implementation, construction; transfer of print materials to the internet
Reason for Departure: leave for school

Cincinnati Children's Hospital Medical Center
(513)-636-8098
3333 Burnette Avenue
Cincinnati, OH 45229

Div. of Molecular Cardiovascular Biology
Supervisor: Melissa Colbert, Ph.D.
Wage: \$20.00 per hour

Employed: March 2002
Job included: web page design, implementation, construction; transfer of print materials to the internet
Reason for Departure: job completed

Cincinnati Children's Hospital Medical Center
(513)-636-8098
3333 Burnette Avenue
Cincinnati, OH 45229

Div. of Molecular Cardiovascular Biology
Supervisor: Jeffrey Robbins, Ph.D.
Wage: \$20.00 per hour

Employed: August 2001
Job included: web page design, implementation, construction
Reason for Departure: job completed

Public Library of Cincinnati and Hamilton County
(513)-369-6028
7200 Miami Avenue
Cincinnati, OH 45243

Madeira Branch
Supervisor: Alice Penrod
Wage: Start: \$6.96 per hour
End: \$7.42 per hour

Employed: November 1999 through August 11, 2001
Job included: shelving; patron assistance; filling requests; organizing, shifting, and fronting books and other media; extensive computer usage; reference look-ups; phone assistance
Reason for Departure: leave for college

Kroger Company, Inc.

(513)-271-1260
6950 Miami Avenue
Cincinnati, OH 45243

Store #402

Supervisor: Marianna
Wage: Start: \$5.25 per hour
End: \$6.50 per hour

Employed: May 9, 1998 through October 30, 1999 and June 18, 2001 through August 11, 2001

Job included: bagging; maintenance; cashiering; stocking; customer assistance

Reason for Departure: school work (first time); leave for college (second time)

Cincinnati Childrens' Theatre, Inc.

(513-569-8080
2146 Florence Ave.
Cincinnati, OH 45206

Supervisor: Jack Louiso
Wage: \$400 for job

Employed: April 1, 1995 through May 7, 1995

Job included: acting

Reason for Departure: job completed

EDUCATIONAL WORK AND PUBLIC OUTREACH:

Internet-Based

- | | |
|----------------------|---|
| 2008 - present | Write "Exposing PseudoAstronomy" blog that examines popular pseudo-science beliefs relating to astronomy. |
| 2005 | Website "Journey Through the Galaxy" listed in <u>Exploring Earth and Space Systems</u> by Kent Franklin (© 2005) as site to help grades 9-12 students pass proficiency in the Minnesota Earth and Space Systems standards |
| Aug. 6, 2004 | Web site "Journey Through the Galaxy" place in "The Scout Report" (Volume 10, No. 31) (see http://scout.wisc.edu) |
| 2003 | Made graphic describing creation of color composite images from telescope data in use on the Hubble Heritage website: < http://heritage.stsci.edu/commonpages/infoindex/ourimages/color_comp.html > |
| 2003 | Made graphic describing creation of color composite images from telescope data still (as of January 2010) in use on the Hubble Heritage website. |
| 2002 - present | Web site "Journey Through the Galaxy" listed on Encyclopædia Britannica with 5-star "Best of the Web" rating |
| 2002-'03 School Year | Re-created and ran the web sites for: Spectrum, PAC (Physics and Astronomy Club), and Pierce House. |
| 1999 | Created web pages for: Cincinnati Audubon Society, IH Marching Band, IH Research Guide, IH Spanish Club, IH Student Government, and IH Robotics Club |
| 1997 - present | Created, managed, and maintained website "Journey Through the Galaxy" which is an educational astronomy site for the edification of the general public; presently available at < http://jtg.sjrdesign.net > |
| 1997 - '99 | Participated in ThinkQuest (http://www.thinkquest.org) |

Public Lectures

- | | |
|------|---|
| 2010 | Presented talk, "Doomsday 2012: Death by the Mayans, Pole Shifts, or Galactic Alignments?" at various venues. |
| 2009 | Presented talk, "Exposing PseudoAstronomy: Is the Universe 10,000 Years Old?" at various venues. |
| 2008 | Public lecture about Pluto's Planetary Status debate at the CU-Boulder's Fiske Planetarium. |

2007, 2008 Presented talk, "The Apollo Moon Hoax: Why We Did NOT Not Go to the Moon," at various venues, including on-campus planetarium and the world's first "Skepticamp" conference.

Mentoring

2006-'07 School Year Mentored high school student on performing open cluster photometry to derive relative cluster ages as part of the Boulder Valley School District's "Science Research Seminar." Student won 3rd place in the regional science fair in subject.

1999 Tutored sixth-grader for all subjects

Departmental

Fall 2006, '07, '08, '09 Taught an APS-specific Graduate Teacher Program seminar on using the department's CCD camera at the campus observatory.

April 2006, '07 Ran the 16" and 18" Sommers-Bausch Observatory telescopes as part of the Astronomy Day activities at CU-Boulder.

Community - General and Grade Schools

2008-'10 School Years Participating scientist with Project ASTRO-GEO which paired a scientist with a grade school teacher for classroom visits to help connect students with professionals in the field throughout the academic year.

April 2006, '07, '08, '09 Ran the 16" and 18" Sommers-Bausch Observatory telescopes as part of the Astronomy Day activities at CU-Boulder.

May 29, 2007 Led a one-hour "Tour Through the Solar System" interactive program for approx. 25 children (ages 12+) and parents at the Madeira branch of the Public Library of Cincinnati and Hamilton County (PLCH).

June 22 & 26, 2004 Assisted with the National Solar Observatory's TLRIBSE program -- a brief internship for grade school teachers to allow them to experience cutting-edge astronomical research

June & July 2004 Assisted with Kitt Peak Nightly Observing Program (KPNO NOP) -- a nightly public outreach program for members of the general public

Feb 21, 2004 & 26, '05 Proctored and graded MS & HS Astronomy competitions for Science Olympiad, Northeast Ohio Regional; wrote the HS test in 2005

June 22 & 26, 2004 Assisted with the National Solar Observatory's TLRIBSE program -- a brief internship for grade school teachers to allow them to experience cutting-edge astronomical research

2002, '04, & '05 Led four one-hour origami instruction sections for approx. 25 children (ages 6-13) and parents at the Madeira branch of the Public Library of Cincinnati and Hamilton County (PLCH). Programs were on July 25, 2002; January 10, 2004 (two programs); and June 9, 2005.

January 2002 Presented a program about the flute the Madeira Library (Cincinnati, OH).

2000 Participated in IH First Grade Musical

2000 Participated in Pancake Breakfast Fundraiser

1999 - 2001 Helped in IH annual fundraiser "Party on the Hill"

1998 - 2001 Dixie Classic Concert Band Festival

1997 - '98 Volunteered at the American Heart Association

Community - Mass Media

June 2010 Gave a 1-hr interview for the local *Rational Alchemy* radio show and podcast about the 2012 Apocalypse Phenomenon.

Since 2009 Regular guest and "Staff Astronomer" of *The Conspiracy Skeptic* podcast.

June 2009 Gave a 1-hr live interview for the local *Rational Alchemy* radio show about the Apollo Moon Hoax. Was also interviewed by 3 national news outlets for the moon hoax topic.