

## **RICHARD A CRUDO**

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### CONTACT INFORMATION

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### EDUCATION

<b>University of Connecticut</b> Ph.D. in Physics <i>in progress</i> <i>Thesis Advisor: Dr. Ronald Mallett</i>	<b>Storrs, CT</b>
<b>University of Connecticut</b> M.S. in Physics	<b>Storrs, CT</b> 2008
<b>University of Arizona</b> B.S. in Physics <i>Magna Cum Laude</i>	<b>Tucson, AZ</b> 2006

### RESEARCH FOCUS

General Relativity and Gravitation

### RESEARCH POSITIONS

<b>Research Assistant</b> <b>University of Arizona: Steward Observatory</b> <i>Adviser: Dr. David Trilling</i> Wrote the priority protocol for photometric calibration of the Kuiper Belt Wrote software to reduce photometric luminosity data	<b>Tucson, AZ</b> 2005-2006
<b>NASA Space Grant Research Internship</b> <b>University of Arizona: Steward Observatory</b> <i>Adviser: Dr. David Trilling</i> Same as above.	<b>Tucson, AZ</b> 2004-2005
<b>Science Intern</b> <b>United States Department of Energy: Space and Defense Power Systems</b> <i>Advisor: Tim Frazier</i> Researched energy conversion technology for use with Plutonium-238 on NASA spacecraft Drafted experimental objectives for neutron flux testing of Icosahedral Boride semiconductor to be performed at Argonne-West National Laboratory in Idaho Falls, ID Proposed new specifications for the General Purpose Heating Units used by NASA	<b>Germantown, MD</b> 2003

## TEACHING EXPERIENCE

<b>University of Connecticut</b>	<b>Storrs, CT</b>
Teaching Assistant for "Physics for Engineers I"	2008-present
Head Teaching Assistant for "Introductory Astronomy"	2007-2008
Helped revise the lab manual to make labs more relevant and concise	
Supervised a team of four graduate teaching assistants	
Teaching Assistant for "Introductory Astronomy"	2006-2008
<b>University of Arizona: University Learning Center</b>	<b>Tucson, AZ</b>
Physics/Mathematics Tutor	2004
Assisted college level students with physics and mathematics	
<b>Tucson Magnet High School</b>	<b>Tucson, AZ</b>
Mathematics Tutor	2003
Spent two days a week at the school, helping students with Geometry and Calculus	

## HONORS

Outstanding Scholars Program Fellowship, University of Connecticut, 2006-2009  
Galileo Circle Scholar, University of Arizona College of Science, 2005  
Vesto M. Slipher Scholar, 2004  
Mayo Clinic Foundation Scholar, 2003  
George Gregson Science Scholar, 2003  
Spirit of Discovery Scholar, University of Arizona, 2002-2006  
Provost Scholarship, University of Arizona, 2002-2006

## PUBLICATIONS

D.E Trilling, A.S. Rivkin, J.A. Stansberry, T.B. Spahr, **R.A. Crudo**, & J.K. Davies, "Albedos and diameters of three Mars Trojan asteroids," *Icarus*, Vol. **192** (2) (2007), pp. 442-447.

C. Roychoudhuri, N. Tirfessa, C. Kelley, C. Basu, & **R. Crudo**, "If EM fields do not operate on each other, why do we need many modes and large gain bandwidth to generate short pulses?", *Proc. SPIE*, Vol. **6468**, 64681N, (2007).

## PRESENTATIONS

"Photometric Calibration of the Kuiper Belt," Presentation for the *NASA Space Grant Undergraduate Research Internship Program Symposium*, April 2005, Arizona State University, Tempe, AZ.

"The Linear Stark Effect," senior project presentation to advanced laboratory class, May 2006, University of Arizona, Tucson, AZ.

"Neutron Flux Testing for Icosahedral Boride Semiconductor," Department of Energy Proposal, June 2004, Argonne-West National Laboratory, Idaho Falls, ID.

## MEMBERSHIPS

American Physical Society  
Sigma Pi Sigma National Physics Honor Society  
Phi Beta Kappa National Honorary  
Bobcats Senior Honorary (University of Arizona, 2006)

## TELESCOPE EXPERIENCE

University of Connecticut's 15.3 cm telescope, Storrs, CT

Teaching Purposes

Cerro Tololo Inter-American Observatory Blanco 4-meter telescope, La Serena, Chile

Kuiper Belt Object Recovery

Kitt Peak National Observatory Mayall 4-meter telescope, Kitt Peak, Arizona

Kuiper Belt Object Recovery

Steward Observatory Kuiper 61" telescope, Mt Bigelow, Arizona

Photometric Calibration of Kuiper Belt

## SKILLS

LANGUAGES: English (native), some experience with French

COMPUTER SKILLS: IDL, PHP, C, familiar with MYSQL Database and L<sup>A</sup>T<sub>E</sub>X

## SERVICE

Student Health Advisory Committee (University of Arizona, 2003-04)

Freshman Class Council (University of Arizona, 2002-03)