

# DANIEL R. ALLEN

## EDUCATION

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**Doctor of Philosophy** (candidate) – Geophysics    University of Wyoming    Laramie, WY

- Anticipated - May 2013

**Master of Science** – Physics    Brigham Young University    Provo, UT

- December 2009
- GPA: 3.93/4.0

**Bachelor of Science** – Physics    Valparaiso University    Valparaiso, IN

- May 2000
- Magna Cum Laude, GPA: 3.71/4.0

## EXPERIENCE

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Aug '09 – Present

**Research Assistant**

Dept. Of Geology and Geophysics    University of Wyoming    Laramie, WY

Advisor – Dr. Robert R. Howell

- Model thermal transport of volatiles on Io's surface.
- Supported by a NASA grant – NASA Jupiter Data Analysis Program (JDAP)

Jan '08 – Aug '09

**Research Assistant**

Dept. Of Geological Sciences    Brigham Young University    Provo, UT

Advisor - Dr. Jani Radebaugh

- Analyzed images of Io from the Cassini spacecraft.
- Supported by a NASA grant – NASA Cassini Data Analysis Program (CDAP)

Sep '06 – Jan '08

**Teaching Assistant**

Dept. Of Physics and Astronomy    Brigham Young University    Provo, UT

Advisors – Dr. Eric Hintz, Dr. David Allred, Dr. Branton Campbell, Dr. Dallin Durfee, Dr. Richard Vanfleet

- Assisted astronomy students with the telescope.
- Graded papers for physics and astronomy classes.
- Held weekly help/question sessions.

Oct '03 – Oct '05

**Ecclesiastical Volunteer**

LDS Church    Eastern France / Western Switzerland

Supervisor – Dr. Stephen D. Nadauld

- Served as a missionary in eastern France and western Switzerland.
- Taught a weekly English course.
- Served as a zone leader over 5 different missionaries in 3 different cities.

Aug '01 – May '03

**Adjunct Instructor/Physics Research Associate**

Dept. Of Physics and Astronomy    Valparaiso University    Valparaiso, IN

Supervisor – Dr. Donald D. Koetke

- Taught the introductory physics lab course.
- Reduced and analyzed data for the Crystal Ball experiment (BNL 913).
- Conducted Monte Carlo simulations of reactions in the TWIST experiment (TRIUMF 614).

Jun '00 – Jun '01

**Physics Research Associate**

Dept. Of Physics and Astronomy/TWIST Collaboration    Valparaiso Univ./TRIUMF    Vancouver, BC

Supervisors – Dr. Donald D. Koetke, Dr. Wayne Faszer

- Worked with an international collaboration on a muon decay experiment.
- Conducted Monte Carlo simulations to analyze the effects of different target geometries on the data to be collected.
- Assembled wire chamber detectors at TRIUMF in British Columbia, Canada

Summer 1999

### **Undergraduate Astronomy Research Assistant**

Dept. Of Physics and Astronomy Valparaiso University Valparaiso, IN

Advisors – Dr. Bruce J. Hrivnak

- Conducted research on variable light objects known as proto-planetary nebulae (PPN).
- Observed and collected data on PPN as part of a continuing project to study their variation.
- Reduced and analyzed the data for future publication.

School '97 – '00

### **Teaching Assistant**

Dept. Of Physics and Astronomy Valparaiso University Valparaiso, IN

Advisors – Dr. Stan Zygmunt, Dr. Shirvel Stanislaus, Dr. Robert Manweiler

- Taught a weekly physics help/question session for students in the introductory physics course.
- Graded papers for the introductory physics course.
- Operated the university telescope for the astronomy students.
- Assisted during public open houses of the telescope and planetarium.

## **HONORS AND MEMBERSHIPS**

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NASA travel grant – Ices, Oceans, and Fire Workshop, Aug. 13-15, 2007.

American Astronomical Society – Junior Member, 2009 – Present

AAS – Division of Planetary Sciences – Junior Member, 2009 – Present

Sigma Pi Sigma - National Physics Honor Society, 2000 – Present

LUMINA Junior Year Honor Award; Semester Honors, 7/8 semesters.

Academic All-Conference Cross Country and Track, 1997 - 2000.

National Eagle Scout Association, 1991 – Present

Salutatorian of high school class, 1996.

## **PUBLICATIONS AND ABSTRACTS**

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**Allen, D.** and Radebaugh, J., Temperature and variability of three Ionian volcanoes, Division of Planetary Sciences of the AAS, Meeting 41, Abstract 288.

Stanislaus, T. D. S., Abaev, V. V., **Allen, D.**, et al., Measurement of the total cross section of the reaction  $K^-p \rightarrow \Sigma^0\gamma$  between 514 and 750 MeV/c, *Phys. Rev. C*, **79**, 015203, (2009).

**Allen, D.** and Radebaugh, J., Ionian volcanoes reveal their temperatures, Lunar and Planetary Science Conference XL, Abstract 1475.

Manweiler, R., Cadman, V., Spinka, H., Abaev, V. V., **Allen, D.**, et al., Measurement of the  $K^-p \rightarrow \Sigma^0\pi^0$  reaction between 514 and 750 MeV/c, *Phys. Rev. C*, **77**, 015205, (2008).

## **ACTIVITIES**

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Brigham Young University Astrofest volunteer – May 2009

Society of Physics Students, 1998 - 2000; Treasurer, 1999 - 2000

NCAA Div. I Cross Country and Track, 1996 - 2000

## LANGUAGES

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Fluent in French.

## REFERENCES

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Available upon request