

**Spring 2010 NMSGC Scholarship Students  
Service Report**

Student Name	# Hours	Service Report	What has participating in SG done for you?
Arrigo, Christopher	5	International Symposium for Personal and Commercial Space Flight – distributed responsive surveys in regards to ISPCS in order to make the symposium a success in future years	I believe the Space Grant scholarship has taken my research and education to greater depths than I thought imaginable. Thanks to the scholarship, I have been more successful in my studies and research
Arrigo, Christopher	5	NMSU FFA Contest – volunteered for forestry contest where students participated in career development activities to better prepare them for future opportunities; oversaw forestry survey, plant identification and test.	
Arrigo, Christopher	2	Mayfield High School Science Fair judge	
Burkemper, Laura	3	NM Academy of Science Family Day I worked at “Meteorite Hunt” booth that allowed the families to learn about meteorites and try to pick them out from a group of rocks. I provided information about meteorites; where they come from; and how to identify them from other terrestrial rocks.	The Space Grant scholarship allowed me to attend the Lunar and Planetary Science Conference this past March where I presented my research and networked with colleagues. The Space Grant program also introduced me to other Space Grant Scholars so that we could network with each other. Participating in the Space Grant Program has been a very valuable experience and has strengthened my research and education.
Burkemper, Laura	7	NM Museum of Natural History and Science Teacher Workshops. I helped the Adult Programs Coordinator set-up for various teacher workshops throughout the year. These workshops give local science teachers new ideas for activities to do with their students. I helped put information packets together and prepare the activities.	
Chavez, Phillip	10	NMSU Science and Engineering Fair – judged the seniors engineering section of the fair and delegated with other judges to rank the experiments	Huge impact as it has allowed me to focus on my research at school without having to be worried about my financial obligations.
Chizek, Malynda	2	NMSU Campus Observatory – Gadsden Elementary School 3 <sup>rd</sup> graders – showed telescopes to students, explained and	Space Grant scholarship has enabled me to attend four meetings this year to present my research and a workshop on the latest news and techniques related to my

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		demonstrated their operation; showed solar telescopes and explained the differences with others, looked at the sun using the telescopes.	research. I am now in the process of writing my first paper to publish later this year.
Chizek, Malynda	2	North Tama 3 <sup>rd</sup> Grade: Life in the Universe – presented information on humanity’s search for life on Mars; what is needed for life to exist (as we know it); and what it will take for man to travel safely to Mars	
Chizek, Malynda	2	NMSU Observatory: Sky Safari – opened the NMSU observatory telescopes for the public to observe the night sky objects	
Cooper, Benjamin S.	15	NM Tech Mechanical Engineering Department tours – gave tours to prospective students and their parents of the mechanical engineering department in order to encourage students to pursue mechanical engineering and its related fields	The Space Grant Scholarship has allowed me to explore more advanced options that would not have been available otherwise. The space grant has pushed me to research more professionally with a social purpose in mind. My interests have become more focused on the engineering challenges that are facing the world in the near future. It has led me towards an integration of aerodynamics and control systems.
Coughlin, Jeffrey L.	3	NMSU Astronomy Open House – we showed off the telescopes and various celestial objects to the general public	It has allowed me to attend conferences and publish papers I could not normally afford to do so. This has greatly enhanced my career and job prospect for when I graduate.
Coughlin, Jeffrey L.	5	NMSU Campus Observatory – helped run the campus observatory where we open up the telescopes to introductory Astronomy students	
Coughlin, Jeffrey L.	3	Sky Safari – brought telescopes to a local park to show off celestial objects to the general public in partnership with the Las Cruces Museum of Natural History	
Elardo, Stephen M.	4	UNM “Find a Major” day for area high school seniors – worked a table for the Department of Earth and Planetary Sciences, talked to interested high school seniors about geology	The graduate scholarship has not only made covering the cost of living in grad school far more painless, but it has provided extra funds to attend conferences and successfully complete and present research. The

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		and planetary science with the hopes of them potentially choosing EPS for their major.	professional connections made at such conferences are invaluable. It has allowed me extra flexibility to complete the research and complete it well, which is a contributing factor to my being accepted to continue on in the PhD program at UNM. A number of professional publications will come out of this research and the NMSGC graduate scholarship will be rightfully recognized in that work.
Elardo, Stephen M.	4	Science Fair at Jefferson Middle School – helped the middle school with judging their annual science fair.	
Elardo, Stephen M.	2	Carlsbad High School – assisted Carlsbad high school students with activities in the EPS department designed to stimulate their interests in science. Also, provided them with a tour of the meteorite museum and the EPS collection.	
Hathaway, Jennifer	2	UNM GPSA Scholarship Database Input – entering data for SRAC scholarship applications to database for review process	The Space Grant has been invaluable in allowing me to finish my research on nitrogen cycling in lava tubes. I was able to determine that land use above the lava tubes influences the diversity of both nitrogen fixation and ammonia oxidation bacteria within. I successfully defended my Master's these in March and will be graduating with distinction in May.
Hathaway, Jennifer	2	UNM Biology Research Day BGSA sales table – sold items to raise money for the UNM Biology Graduate Student Association	
Hathaway, Jennifer	6	Methods Seminar – conducted seminars on analysis methods for microbial community analysis	
Hutchins, Karen	2	UNM Museum in Northrup Hall – conducted a tour of both the Geology and Meteorite Museums for a Continuing Education class.	The Space Grant scholarship enabled me to attend the Lunar and Planetary Science conference in Houston, TX so that I could present my research (in the form of a talk) and interact with people that work in my field. It's a great way to make people aware of the research that I'm

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			doing and also to network. Making contacts could help me later when it comes to finding a post-doc position. The scholarship enabled me to pay off the remainder of my car loan, which alleviates a huge financial stress on me. Thank you so much!
Luketa-Hanlin, Amanda	10	Fetchapalooza – I was helping with animal care and adoptions for the Espanola Valley Humane Society.	Participating in the Space Grant has inspired me to pursue independent research in subjects I am interested in (outside of the classroom), and has helped confirm my decision to go to graduate school.
Kirk, Michael	8	NMSU Campus Observatory – Setting up and running telescopes, describing celestial objects, and answering general questions about astronomy for NMSU students.	The NM Space Grant scholarship has allowed me the financial freedom to attend workshops and professional meetings to meet the leaders in my field and promote my research among my colleagues. Without Space Grant, I would not have been able to attend the NASA ILWS Heliophysics Summer School back in July. This is a highly selective summer school where the leaders in their field teach students from around the world about the latest research in Heliophysics. This experience put me in contact with several scientists that I am now collaborating with in my research.
Kirk, Michael	3	NMSU Observatory Open House – Setting up and running telescopes, describing celestial objects, and answering general questions about astronomy for Las Cruces community members	
Klimek, Elizabeth	10.5	Alma de Arte High School visit to Animas – presented lectures about various astronomy topics to a group of high school students visiting the Dark Sky Community of Animas, NM; also pointed out night sky objects and helped operate telescopes for the students to look through.	Space Grant funding has allowed me to focus more of my time on my research. It has also enabled me to present some of my results at a professional meeting in my field.
Klimek, Elizabeth	2.5	Alameda Elementary Astronomy Presentation – did hands-on astronomy activities with elementary school kids (@70); activities	

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		included making comets and viewing the sun through a solar telescope.	
Nyland, Kristina	7	VLA Open House – I was stationed at the Visitor Center where I directed visitors and answered science questions.	The Space Grant helped supplement my stipend (I only needed a half-time TA position) so that I could move forward with my current project and develop viable thesis topic choices.
Nyland, Kristina	3	Etscorn Observatory Star Party - I assisted with interacting with the school group and answered students' questions. I also helped set-up/shut-down observatory equipment and received some telescope training for future, similar events.	It also encouraged me to more strongly pursue public outreach opportunities (such as the VLA open house) which have been very (personally) rewarding.
Patterson, Maria	11	Sierra Middle School 6 <sup>th</sup> grade science class – I taught 6 <sup>th</sup> grade science classes over a 2-day period about the Sun and stars; we also looked at the sun through solar telescopes and talked about sun safety.	Space Grant has allowed me to research interesting astronomical issues and to present my research at conferences which I would otherwise be unable to attend. I have made contacts and built collaborations that will help further my research and my career.
Rinehart, Alex J.	10	New Mexico Geological Society (NMGS) – I entered abstracts from the pdf copies from the NMGS Guidebooks 27-34 into an html form in order to make them available free for the public on-line.	The Space Grant scholarship has allowed me to pursue the research that interests me and that I feel will have a significant impact on our knowledge of Quaternary climate records. It funded my field expenses and will also fund most of the laboratory analyses that I need to complete my Ph.D. The generous support of the Space Grant is almost unique among student research money. Without it, I would not be able to afford the laboratory and field analyses that I need to make my work meaningful to the broader community. Because of the impact of the Space Grant scholarship on my research, I have become increasingly focused on Quaternary stratigraphy and on understanding the role of paleoclimate researchers in the broader climate science community. The knowledge I have gained while pursuing my research has led me to begin focusing on becoming a civil servant rather than a professor. The

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			emphasis on community support and networking placed by the requirements of the Space Grant scholarship have similarly brought me to appreciate the importance of service activities and being involved in the scientific community to my development as a scientist and member of society. Without the Space Grant scholarship, some of these realizations would have come, if at all, much later in my career.
Rising, Michael	8	Watermelon Mountain Ranch Animal Shelter – helped support New Mexico’s largest no-kill animal shelter in many of their day-to-day activities. These activities included: cleaning the facility, running laundry, walking dogs, feeding and watering animals.	Participation in this program has allowed me to continue pursuing my PhD in Engineering. I have recently completed all of my required courses and my research has been very productive. I expect that in a short amount of time from now, without a heavy course load, several of the projects I have been working on will become much more visible by publishing some upcoming results.
Rising, Michael	3.5	LHP Community Outreach, Department of Senior Affairs – giving assistance to seniors with house work such as: pulling weeds, mowing grass, painting, trimming trees and bushes.	
Sobien, Helen	12	Tutored Math Student – I prepared a student to take the math placement test at Santa Fe Community College	Without this grant, I would not likely be delving into the depths of intermolecular forces and surface energy. This grant has enabled me to take my studies down an amazing path!
Sobien, Helen	4	AAUW Career Curiosity Fair – I prepared scientific toys, demonstrated them, and talked to 500 children about careers in engineering.	
Swanson, Matthew	12	NMIMT Mechanical Engineering Department tours – helped give tours of the department to prospective student during Research@Tech day and at other small tours of the department. The purpose was to show what research is being conducted through the Mechanical Engineering Department and peak their interest	Participating in the Space Grant has allowed me to more fully concentrate on the courses that I took and the research projects that I worked on without having to worry about working at another job. After I earn my degree I plan to work for the Air Force Research Labs, currently I have a summer internship with the Kirtland AFB AFRL on a project entitled Spacecraft Integration

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		in engineering fields.	Testing. I greatly appreciate everything that the Space Grant has done for me and everyone else who has been given a scholarship.
Tyra, Mark	2	Jefferson Middle School Science Fair – helped judge at Jefferson Middle School’s annual science fair. Some of the science fair displays covered topics I would never have dreamt of at their age – fun and informative.	Monies from the Space Grant scholarship funded my trip to Lawrence Livermore National laboratory to use their state of the art NanoSIMS, which greatly augmented my research. It also paid for equipment and research at UNM – including user fees for laboratory equipment (electron probe micro-analysis). This semester it has supported my travel to the Lunar and Planetary Science Conference, and a research trip to Caltech in Pasadena, California to use their Secondary Ionization Mass Spectrometer.
Tyra, Mark	4	2010 Lunar and Planetary Science Conference Session Chair – Chaired Friday morning (3/5/10), Thermal and Aqueous Processes on Chondrite Parent Bodies session. Kept speakers on time to keep sessions on schedule and student speaker scholarship judges where they needed to be when they needed to be there.	The Space Grant allowed me to pay for different analyses that will greatly enhance my research’s impact as the work goes to journal publication. It has been a great boon to my work, has given me freedom to pursue different research methods, and can only help my future career ambitions.
Tyra, Mark	2	UNM Meteorite Museum – two groups of students from Ernie Pyle Middle School (6 <sup>th</sup> graders, 2 classes each group) came to UNM and I gave tours of the Meteorite Museum.	
Tyra, Mark	6	American Cancer Society Albuquerque Gala fund-raiser – helped register donors for the event, distributed donated-item auction winner notifications, helped donors pick up their items, and facilitate cleaning up after the event.	
Virk, Selene	3	Graduate Research and Arts Symposium – served as judge for student presentations and gathered information to help organizers of this year’s event based on my experience organizing the event the prior year.	This scholarship has given me the opportunity to explore a research area that can increase our knowledge of gene expression in the vestibular system, a system that is affected by changes in gravity conditions. Additionally I have become aware of career options for biological

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			researchers at NASA.
Virk, Selene	2	Bio Symposium – served as a poster judge	
Yurchyk, Stephanie	15	Laguna Middle School Science Fair – Served as a mentor prior to and judged for the school wide (6 <sup>th</sup> – 8 <sup>th</sup> grade) annual science fair.	The NM Space Grant allowed me to travel to two conferences to collaborate with and learn from colleagues in my discipline. I also utilized the monies allotted to help pay for sample analyzes related to my thesis. This grant made a significant contribution to my success as a graduate student.
Ziarnick, Melissa	2	GRAS – Session Chair in charge of afternoon presentation block	I have been able to work under experts in aviation human factors and learn about advances in aviation human factors and new models utilized in implementing the NextGen system.
Ziarnick, Melissa	12+	Elephant Butte Chamber of Commerce – prepared and organized community documents, greeted visitors, disseminated information for community events.	I have learned about industry needs and research and have been able to incorporate that in my own research.

Space Grant scholars provided over 237.5 hours of service to the following organizations:

❖ Service to pre-college students: 71 hours

- Laguna Middle School
- North Tama 3<sup>rd</sup> Grade
- AAUW Career Curiosity Fair
- Etscorn Observatory
- Gadsden Elementary 3<sup>rd</sup> Grade
- Dark Sky Community of Animas
- Sierra Middle School
- Mayfield High School
- Alameda Elementary School
- NMSU FFA contest
- UNM “Find-a-Major” Day

- Jefferson Middle School
- Carlsbad High School
- UNM Meteorite Museum
  
- ❖ Service to general public: 82.5
  - NM Museum of History and Science
  - NMSU Observatory
  - New Mexico Geological Society
  - NASA Academy of Science
  - Fetchapalooza
  - ISPCS
  - VLA
  - Elephant Butte Chamber of Commerce
  - NMSU Astronomy Open House
  - Sky Safari
  - LHP Department of Senior Affairs
  - Watermelon Mountain Ranch Animal Shelter
  - American Cancer Society
  
- ❖ Service to college students: 74
  - Santa Fe Community College
  - UNM Museum of Geology and Meteorites
  - NMSU Campus Observatory
  - UNM GPSA
  - NMIMT Mechanical Engineering Department
  - NMSU Science and Engineering Fair
  - UNM Biology Graduate Student Association
  - UNM Biology
  
- ❖ Service at academic conferences: 11
  - NMSU Graduate Research and Arts Symposium
  - 2010 Lunar and Planetary Science Conference
  - NMSU Bio Symposium