Annual Report: 2012 - 2013
American Nuclear Society:
University of Wisconsin - Madison
Student Section

Submitted to the ANS Glasstone Award Committee

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1. Introduction

Throughout the 2012-2013 school year, the American Nuclear Society University of Wisconsin-Madison chapter (UW-ANS) has worked diligently to maintain its track record of planning, organizing, and executing a plethora of events in the areas of service to ANS, public outreach, professional development and community service.

After many years of success, the goal of this year's UW-ANS chapter was to continue that history of excellence and work hard to add to it. This was done by increasing our impact on the surrounding community and adding events and opportunities for our numerous members; all while maintaining excellent preparation and execution of previous years' activities.

As in previous years, UW-ANS continued to participate in such community service and public outreach activities as Adopt-A-Highway, the high school essay contest, Boy Scout Nuclear Science Merit Badge Days, Science Olympiad, and Science Nights for local schools. And as in previous years, these events were incredibly successful. Following the events at the Fukushima disaster, UW-ANS hosted a student-oriented open discussion forum to provide a detailed recap of the events and to answer questions about the event, and was a success with multiple students from multiple disciplines taking part in the discussion.

UW-ANS hosted a variety of professional development events that allowed students the opportunity to network with professionals and to learn more about the prospects available to them upon graduation. These events included general meetings in which professionals from the nuclear industry were invited as speakers, various UW-ANS national and student conferences, and career fairs put on by the College of Engineering in which UW-ANS helped facilitate. We also heavily encouraged students to present at the ANS conference, along with attending many workshops that were provided by other organizations with close ties to UW-ANS.

On the social front, UW-ANS continued with many of its time honored traditions. The bi-annual department picnic “Pic-Nuke” was hosted by UW-ANS, turning out around 150 attendees. UW-ANS members met throughout the year for social events that included movie nights and games nights, which had very strong turnouts this year.

Students networked with professors and amongst themselves at the coffee and donuts event every Wednesday morning. And as they have for over ten years, UW-ANS students, alumni, and professors showed up at Mickie’s Dairy Bar at 7 A.M. every Friday morning for breakfast. Students also occasionally met at the local bar for Friday after Class and card games

As with normal years, UW-ANS hosted many events in cooperation with the University of Wisconsin chapters Women in Nuclear (WIN) and the American Institute of Aeronautics and Astronautics (UW-AIAA) this year. Participating in event planning with these student organizations expanded UW-ANS's involvement with the university as well as provided excellent networking opportunities for its members and the members of the other student organizations.

In summary, UW-ANS continued with many of its traditional programs and events but made a concerted effort to expand and grow. Despite the challenges of maintaining all the events and programs in which UW-ANS currently participates, the current executive committee is confident that next year's officers and members will be able to uphold and possibly develop new traditions for UW-ANS and the Department of Engineering Physics at the University of Wisconsin-Madison.

2. Section Management

The success of the UW-Madison section of ANS is due in large part to the commitment and competency of the executive board, its chairs, and other positions that provide support to the section. The efforts and duties of those students (and in one case, faculty member) are described herein.

Executive Officers

The executive committee consisted of seven officers: the President, the Vice-President, the Public Information Officer, the Treasurer, the Communications Officer, and two Governor positions. Four of these positions, namely the President, Vice-President, Public Information Officer, and Treasurer, are elected positions that last one year in length. The Communications Officer and two Governor positions are one semester appointments.

President

The President's main responsibilities included moderating general member and executive committee meetings, scheduling speakers for general meetings, organizing tours and conferences, managing the section's schedule, appointing the Webmaster and Mentoring Chair, and acting as the liaison and representative for the section both professionally and among other student organizations. The President for UW-ANS this year was Lucas Mynsberge, who served as Public Information Officer last year. Next year's president will be Kalin Kiesling, who served as Communications Officer this year.

Vice-President

The Vice-President's responsibilities are organizing the section's social activities, tours and bookkeeping active membership status of students, acting as President in the President's absence, and providing support for the President. This year, the vice president was Jacob Sager, and he helped prepare general meetings, coordinate Pic-Nuke and the other UW-ANS socials, and ordered new t-shirts. Next year the vice president will be Matthew Jasica--the current Boy Scout Coordinator.

Public Information

The Public Information (PI) Officer's duties were to develop, organize, schedule, and execute the section's public outreach efforts as well as to appoint and oversee the work of the Boy Scouts Workshops, Science Olympiad, and Essay Contest. Included in this responsibility was proper inventorying public outreach supplies, writing and designing presentations to be used at public outreach events, coordinating with teachers and scout leaders to organize events such as Boy Scouts and the Essay Contest, and working earnestly throughout the summer to coordinate both Camp Badger and GPU. The PI for this year was Angela Weier, and next year will be Nathan Vogel, who was highly active and involved in outreach this year.

Treasurer

The Treasurer's responsibilities included drafting budgets for each semester and for the entire year, keeping track of all transactions completed by the organization, writing grant proposals, acting as liaison between UW-ANS and the UW-Madison Student Leadership Center (an organization that oversees the donated funds of College of Engineering student organizations), and advising the other executive officers on how best to spend the section's funds. In addition, the treasurer performed a complete refresh of the position by standardizing all budget-related processes. The treasurer this year was Darius Lisowski, and Ian Jentz, who served as Governor this semester, has been elected for next year.

Communications

The Communications Officers duties are to take minutes at executive committee meetings, to send out weekly announcements, advertise for upcoming events (usually by flyers, by chalking information on sidewalks, or via email), and to maintain and update the UW-ANS announcement mailing list. The importance of this position is to ensure that the members, students, and community are properly informed about the events going on within UW-ANS. Despite the one semester term, Kalin Kiesling was elected and re-elected to serve as Communications Officer throughout the entire year. Next semester's Communications Officer will be Andrew Nigh.

Governors

The main purpose of the Governor position is to get acquainted with the workings and dealings of the UW-ANS executive committee and to develop their leadership skills. Because of this, Governors are preferred to be underclassmen or those just starting to get involved. Some of their responsibilities are planning and facilitating special events throughout the semester, such as Adopt-A-Highway and E-Week. There are two Governor positions, and like the Communications Officer position, are only one semester terms. The Governors in the fall semester were Amanda Lang and Andrea Jedele, and in the spring term were Ian Jentz and Adam Reinicke. Next semester's Governors will be Kelsey Amundson and John Daugherty.

Chairs

The chairs of the UW-Madison ANS section are appointed by members of the Executive committee, and therefore are non-elected positions. As such, chairs are not required to attend executive committee meetings and are more committed to a more focused set of responsibilities. Some chairs are consistent, year-long events, while some appear on an as-needed basis.

Boy Scouts Chair

The Boy Scouts Chair main responsibility is facilitating and organizing UW-ANS's Boy Scouts Merit Badger Workshops, which helps ease the burden of placing too many duties on the Public Information officer. The Boy Scouts Chair should understand the basic operations behind Boy Scouts, the nuclear science merit badge, and the outreach and communication required in order to organize this event. The Scouts Chair this year was Matthew Jasica. The torch was progressively handed over to him from Chris Patterson. By executing a few workshops with joint coordination between Chris and Matt, the transition was performed much more smoothly than in previous transitions.

Expo Chair

The Expo Chair was appointed by the President to oversee the successful execution of the Engineering Expo. This was a special position for this year, since Expo only occurs every other year and sees thousands of visitors to campus ranging from barely walking (or not walking at all!) to senior adults. The knowledge levels vary just as widely. Even already serving his time as the Vice-President officer, Jacob Sager accepted the duties as the Expo Chair this year, and helped create an Expo with such excellent record keeping that it will be used as a reference for years to come.

Science Olympiad Chair

The Science Olympiad Chair is appointed by the Public Information officer, and is charged with coordinating UW-ANS members to coach students at Mount Horeb

Elementary School as they construct projects. This year, Angela Weier took responsibility of Science Olympiad, on top of her current position.

Scholarship Chair

Due to a lack of participation, no Scholarship Chair was required; however, Angela Weier was the one assigned to this position should the need have arose.

Other Positions

In addition to our executive and chair positions, there were several other UW-ANS members that provided support to the UW-Madison chapter in one way or another. Like the Chairs, some of these positions are appointed, and others come based on the need at the time.

Webmaster

The two main responsibilities of the Webmaster are to maintain the UW-ANS website and to provide support for the use of Google. Tasks included in maintaining the website are syncing the website‟s forms with Google Docs, updating pictures and presentations, and ensuring that the website continues to function as intended. To aid the executives in using Google (email, calendar, and docs), the Webmaster organizes information, aids in turnover between administrations, and teaches current users the capabilities of using Google. This year, the Webmaster varied depending on the time of the year through many of the executives. These people were Thomas Eiden, Lucas Mynsberge, and Jacob Sager.

Faculty Advisor

The Faculty Advisor for UW-ANS is there to provided the chapter with advice and act as a liaison between the organization and the department. Often, the Faculty advisor retains his position for many years, so they are able to provide valuable information to the organization, as the Executives and Chairs often are served by people new or just getting involved in UW-ANS. This year, the Faculty Advisory was Paul Wilson, who has served as the faculty advisor for many years and is highly involved with national ANS as well.

Expo Planning Committee

With the scale of the Engineering Expo, UW-ANS also appointed a handful of volunteers with the Expo Chair, to help plan and execute the Engineering Expo. They were each appointed to various tasks the Expo Chair, met throughout the week, and then volunteered their time to ensure that the Expo was a success. The time commitment involved to achieve the success that ANS had at Expo was no small amount. The members on this board were Jacob Sager, Amanda Lang, Mary

Alice Cusentino, Angela Weier, Brian Cornille, Kalin Kiesling, Andrew Maile, Madelyn Wolter, John Daugherty, Nathan Vogel, and Nicoletta Farabullini.

3. Operations

In addition to the contributions of the executive committee and its general members, UW-ANS attributes its success to the administrative procedures and processes that kept it organized. Furthermore, these processes made it possible for turnover to be carried out with relative ease between last years executive committee and this years, and this years executive board is confident that the same success will be realized next year.

Office Hours

This year, UW-ANS hosted office hours in which members of the executive board were available at the UW-ANS office located in the Engineering Centers Building on UW-Madison campus. For ten hours every week, UW-ANS executives were available for questions, t-shirt sales, and even informal tutoring. One hour each week of these office hours included the weekly executive meetings in which the executive board discussed current issues, upcoming events and their logistics, and other items of interest regarding the section. Chairs, the Webmaster, the Polygon Representative, and general members were welcome and sometimes were present at these meetings to provide input for the executive board.

Active Membership

Active membership is a distinguished title that UW-ANS awards to members who demonstrate a strong commitment to the continuation and betterment of UW-ANS and its programs. To attain active membership status, members were required to acquire a certain number of active membership points in order to achieve this status.

These points were accomplished by attending meetings, workshops, outreach events, tours, etc. that UW-ANS hosted or encouraged. The intent of the Active Membership points were to encourage people to help out with UW-ANS and the Community, while also helping themselves develop professionally. Throughout both fall and spring semesters, benefits were realized for active members. In the fall, a laser tag social had a highly discounted price. In the spring, both a paintballing social and stipends for the ANS Student Conference were rewarded. For those members receiving the title of active membership, along with the current and appointed executive board, a catered banquet will be held during the last week of the semester.

Financial Planning

Spending money and obtaining funds is always a challenge for any student organization. UW-ANS applied principles that have worked in previous years in conjunction with lessons learned to allocate funds appropriately and ensure that sufficient funds would be available for next year's administration. The student section has two spending accounts. We have a checking account with Associated Bank-Corp. and an account through the Student Leadership Center (SLC) in the College of Engineering. The SLC requires us to maintain an account with them to apply for certain grants. The account is used to pay for large events such as conferences. The checking account is used to reimburse members and smaller items due to the ease of use. All checks written must be signed by two members of authorized signers which include: the President, Vice-President, Treasurer and Faculty Advisor. This method ensures more responsibility when spending and has worked well.

Budget

As the school year commenced, each member of the executive board submitted a budget detailing the costs and earnings that their respective position could predict for the year. Some activities, such as supporting local Science Olympiad groups, earn money for our section, while some activities, such as food for unfunded meetings and supplies for outreach activities, entail a cost. These budgets were finalized at a designated executive meeting. This meeting enabled a discussion to inform the way in which the money could best be allocated and served to highlight distribution of events that each officer in our organization should prepare to focus on and take responsibility for. This year, the budget compiled from this meeting was made available in our Google Docs account. Thus, members of the executive board had access to the agreed-upon budgets for the events under their supervision and could make appropriate appeals if unexpected expenses arose. This year, our section stayed well within our budget, having generously predicted possible expenses for our events. The first semester we were significantly under budget and the second semester we were just slightly over breaking even.

This year the UW ANS section spent approximately $11,000. To balance our spending, we solicited donations from many companies and organizations in the nuclear field and associated with the University of Wisconsin. By relying on materials from past years and applying lessons learned, our spending this year was slightly lower than previous years' spending, but no events were cut.

Reimbursement

This year a new system for reimbursement and spending was created. The first task was a more robust and complete spreadsheet shared within Google Docs that left a highly detailed account of every cent that went in or out of ANS. This helped us constantly know the current balance of both accounts and allowed easy estimations of where the budget would fall for the end of the semester. In addition, reimbursements to individuals required more concrete details and a more standardized format. Reimbursement sheets were created that required copies of the original receipt, signatures of the Officers giving the reimbursement, and the check number used. This allowed the treasurer to be sure people received their reimbursement and have a paper as well as electronic copy of the information.

Funding

A significant fund-raising effort was put forth to account for the large amount of money spent. The treasurer put many requests out to nuclear and energy related companies for general funding, and several other members put in requests for their individual events. Although not all of these requests received responses, we were pleased to receive support from both Excel Services, Exelon, and the Engineering Physics Department at UW-Madison.

Excel Services has recently been quite involved with UW-Madison ANS Student Section and provided funds for coffee and donuts, and a per student allowance to attend the student conference in Boston, MA. Grant money that we received came from Polygon (College of Engineering's student council) each semester. This money was applied to conference hotels and travel. Other sources of funding came from Science Olympiad volunteering, Boy Scouts Merit Badge Workshops, and the selling of our student section t-shirts. The money received from these sources was used for our semi-annual picnic (Pic-Nuke), food for meetings, and outreach supplies.

T-Shirts

As a means to both raise money for UW-ANS and advertise UW-ANS and the UW Department of Nuclear Engineering and Engineering Physics, UW-ANS sold "I ♥ Nuclear" t-shirts. Vice-President Jacob Sager ordered 100 more t-shirts in various sizes. We then sold these t-shirts for $10 to active members and $15 to everyone else. The t-shirt sales were especially a success at Boy Scouts Workshops. T-shirts were also given to the Expo Committee members who put in such valuable time for our student section.

UW-ANS Website & Google

UW-ANS has now been using the AtomicBadger.org domain and Google Apps for more than four years. While the use of Google Calendar, Google Sites, and

GMail were quickly adopted (and are still heavily used). Google Docs has officially become the primary communication tool for the UW-ANS organization. The word processor, spreadsheet, and presentation software are all used to assemble, coordinate, and disseminate organizational activities and proceedings. A non-exhaustive list of these uses follows:

- Executive committee meeting agendas and minutes
- Expo planning committee and minutes
- Budgetary planning
- Membership rosters
- Active Membership Point Submission
- Conference tour and sign-ups
- General meeting introductions / presentation
- Guest speaker presentations
- Descriptive source inventory
- Chapter logo storage
- Collaborative editing / sharing

In addition to these "standard" document abilities, Google Docs also offers Forms. Forms is a simple tool that allows us to quickly create surveys or applications that can be embedded in a website. When filled out and submitted, the Form sends the information to a spreadsheet and creates summary statistics for all of the submissions. This service from Docs is an important part of the current website.

This year saw UW-ANS commit firmly to communication in the digital age through full utilization of the Google Apps suite of services. Building upon the previous years' careful trek into new ground, we now consider Google Apps as a natural and effective means for effective collaboration amongst current UW-ANS officers and members while providing a steady and promises base for the future.

Social Media: Facebook and Twitter

The utilization of Social Networking sites has been taking off these last few years, and UW-ANS has utilized this opportunity to keep in touch with the community. With students checking their Facebook more often than their email, it is becoming the best way to quickly and readily relay information to a particular group, and can even be utilized to advertise to the general public for the proper times. While we had many individuals advertise these events through their own personal Facebook account, UW-ANS had an alias of “Captain Neutron”, who has 60 friends within UW-ANS. We have also recommended at all the members of UW-ANS become a fan of the UW - Madison Nuclear Engineering Facebook page, which was designed by one of the faculty members in the Engineering Physics Department. Several UW-ANS

executive members were given permission to edit the webpage, which has proven to be a useful tool in helping advertise events, meetings, and keeping others informed about the current events going on in UW-ANS.

Figure 1 The Facebook fan page of the UW - Madison Nuclear Engineering.

New this year was the addition of a Twitter account to keep members apprised of UW-ANS status. Our Twitter feed is found at UW_ANS and we tweet everything from upcoming events, to congratulatory remarks to reward recipients, as well as any nuclear related news. It has seen some success and we hope to increase its use and popularity to provide quick snapshots of current happenings.

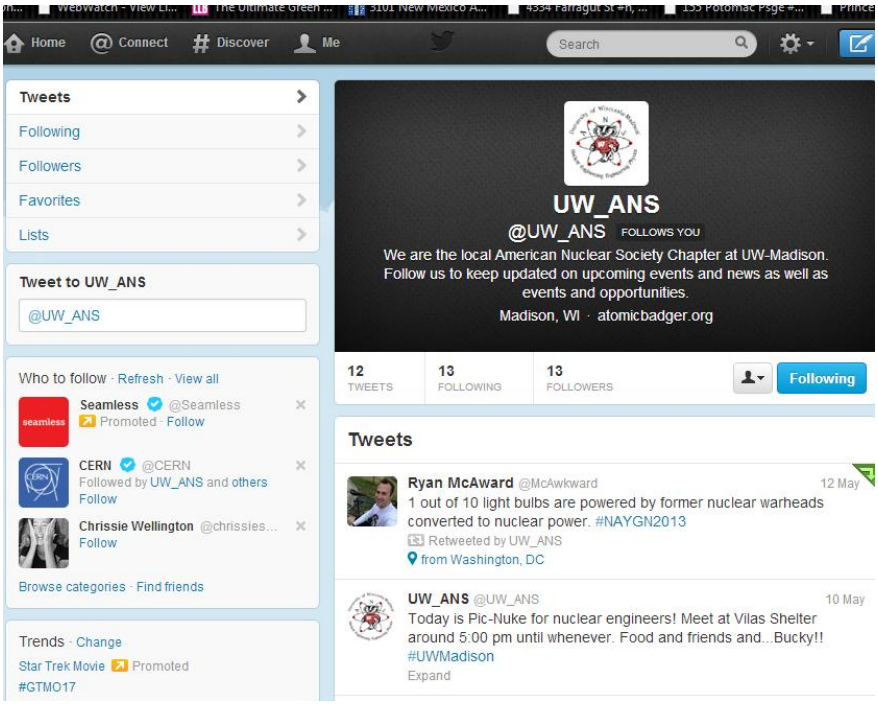

Figure 2 The UW-ANS Twitter page to help advertise events.

We are continuing to expand and utilize all these resources that are out there, such as Google, Facebook, Twitter, and LinkedIn to name a few. Utilizing these can help increase the efficiency of the organization, along with provide the means that will allow everyone to get involved and informed about the workings of UW-ANS.

4. General Meetings and Events

UW-ANS strives to supply professional development options to its members. The chapter continued to provide a wide variety of speakers, opportunities to attend conferences, tours of nuclear and medical facilities, and seminars as it has in past years.

UW-ANS General Meetings

During this past academic year, UW-ANS scheduled, organized, and hosted five general meetings and information sessions, and two elections meetings. General meetings typically included a brief presentation by the President detailing upcoming UW-ANS events followed by a distinguished speaker. The information sessions were short informal presentations given by recruiters or technical professionals to the UW-ANS membership. In addition to these meetings, UW-ANS held two elections meetings in which members elected new executives; the first meeting was on December 6th in which the Communications Officer and Governors for the spring

semester were elected, and the second was on April 25th to elect the new executive committee for the next academic year.

General Meetings & Speakers

Table 1 Summary of all the general meetings, information sessions, and speakers that UW-ANS either hosted or helped advertise for.

Date	Speaker	Company
September 6th, 2012	** No Speaker**	** Fall Kick-Off Meeting **
September 24th, 2012	Ryan Boscow	NNSA Graduate Fellowship
September 24th, 2012	Eric Edwards	KAPL/Bettis
October 25th, 2012	Scott Luchau, Brian Vitiello	Dominion
November 6th, 2012	Ross Radel	Phoenix Nuclear Labs
November 15th, 2012	Janaki K.	CIA Simulation
December 6th, 2012	** No Speaker**	** UW-ANS Elections Meeting **
January 28th, 2013	** No Speaker**	** Spring Kick-Off Meeting **
February 6th, 2013	Amy Lapse	Sandia National Laboratory
March 20th, 2013	Dr. Tsahi Gozani	CEO and President of Rapiscan Systems Neutronics and Advanced Technologies Corporation
April 1st, 2013	Dr. Pete Lyons	Assistant Secretary for Nuclear Energy (DOE)
April 23rd, 2013	Joseph Bisognano	Synchrotron Radiation Center
May 6th, 2013	** No Speaker**	** UW-ANS Elections Meeting **

Coordination with Student Organizations

UW-ANS especially strove to coordinate with other student organizations of UW-Madison this year. As in the past, UW-ANS coordinated events with the Women in Nuclear (WIN) and the American Institute of Aeronautics and Astronautics (AIAA) chapters of UW-Madison. UW-ANS maintained close contact with The Hacker Within (THW) and the Engineering Physics Department, encouraging participation in their respective activities.

Women In Nuclear

WIN and UW-ANS jointly hosted several events, including the games night social, the movie night, and Sandia National Laboratories. Last year, UW-ANS helped WIN start up their Girls Scout Workshops , and the cooperation between the two organizations for scouts workshops has strongly continued this year, with WIN strongly assisting UW-ANS members for Boy Scouts. Unfortunately, no girl scouts signed up for a workshop this year, so one was not held. In order to remedy this, WIN aims to offer a workshop to all girls/women in the area rather than scouts exclusively in order to increase nuclear awareness. They also combined forces for E-Week and the Engineering Expo. Because UW-ANS and WIN are within the same department and share members, cooperation between UW-ANS and WIN will undoubtedly continue next year.

American Institute of Aeronautics and Astronautics

The Engineering Mechanics/Engineering Mechanics and Astronautics (EM/EMA) program is within the same department (Engineering Physics) as the Nuclear Engineering program at UW-Madison. As such, the student organization associated with the EM/EMA degree, AIAA, and UW-ANS commonly coordinate events together, in a very similar manner as WIN.

Figure 3 AIAA pitches to ANS as we attempt to knock one out of the park.

As in past years, UW-ANS and AIAA organized two advising sessions (one each semester) for students and a meeting to brainstorm recommendations for the Industrial Liaison Committee from the students in the department. We also began a rivalry between the two organizations by adding a yearly softball game. It is our hope that this will be a fun addition that will increase cooperation between the organizations and help us branch out. In addition, other sports may be added in the upcoming year.

The Hacker Within (THW)

THW is a student group that has very close ties with UW-ANS, as many members of THW are members of UW-ANS. UW-ANS strongly encouraged it's members to attend many of the workshops and speakers hosted by THW, as they help utilize the computational aspect dealt with in Nuclear Engineering. Active membership points were awarded for those who attended, since THW meetings strongly aid in developing important computer skills. THW hosted a Software Carpentry Bootcamp during winter break, which consisted of 3 days of training and software development.

Coordination with ANS National Sections

The state of Wisconsin is home to a professional section of national ANS in addition to the student section at UW-Madison. Although the events seems sparse, this semester we were able to coordinate an event with this local section. Their section and ours joined together for a tour of the Kewaunee Power Plant. This was a nice opportunity for interaction between professionals and soon-to-be professionals. We hope this collaboration can continue in coming years.

ANS Conferences

UW-ANS was once again in attendance at the ANS Summer, Winter, and Student Conferences this year. These conferences provide excellent opportunities for students to present their research and projects to other professionals, network with other professionals and students, and talk with recruiters at the career fairs.

2012 Summer Conference

Four UW students attend the ANS Summer Conference in Chicago, IL. Darius Lisowski presented at the student conference as well as Ahmad Ibrahim.

2012 Winter Conference

Eight UW students attended the ANS Winter Conference in San Diego, CA. Four students were there on for a competition for having the best Senior Design

Proposal. Two of these members from this group were ANS members: Mary Alice Cusentino and Amanda Lang.

2013 Spring Student Conference

The Spring Student Conference in Boston, MA, had a great turnout by UW-ANS members, in which 16 people attended from our chapter. UW-ANS coordinated the logistics for all the students who wished to drive to Boston. This helped reduce costs for concerned students, but also required giving up more time away from school. The trip was long, but exciting and those traveling together grew much closer. Through a grant from Polygon, the College of Engineering Student Council, and Excel Services, UW-ANS was able to fund the transportation costs of the trip for those who wished to drive, and 7 of the 16 attending people utilized this method. Without the ability to drive, many of those would not have been able to attend. This would not have been possible without help from the Department of Engineering Physics and the Department of Administration, which we would personally like to thank for helping out with this trip.

Figure 4 The group of members who attended MIT's student conference on the docks.

Many of the students attending utilized events such as the career fair and other resources and contacts to help benefit them in their career. We had two people give presentations: Amanda Lang and Angela Weier. Angela Weier was even fortunate enough to meet members of the company that her research had been contracted for!

5. Public Information and Outreach Events

LaSalle Generation Station Joint Tour

For the last two years, UW-ANS, University of Illinois ANS, and Purdue University ANS have begun to rekindle our association and organize joint tours of various facilities across the Midwest. This year, about five students from each section met up in LaSalle, IL in order to tour the nuclear power plant there. Two presentations were given to us--one by Exelon regarding their fuel supply and parent company and one by one of the station workers. This was followed with an extensive tour of the BWR including the actual control room and finally a lunch. The day was beautiful and the different sections mixed nicely as new friends were made.'

Figure 5 UW-Madison, University of Illinois, and Purdue University outside LaSalle.

Kewaunee Nuclear Plant Tour

For the spring semester, on March 9th, 2013, UW-ANS joined up with the WI national ANS section and drove northwest to Dominion's power station in Kewaunee. This trip was very special and will also be the last trip either two of the sections make to Kewaunee. Dominion is shutting down Kewaunee since it couldn't find a buyer. UW-ANS has visited Kewaunee numerous times over its long history and it is sad to see it go. With its leave, we also see Dominion leaving WI; despite this, we still have numerous alumni involved in the company and hope to send more in the future. Attending this tour with the local section allowed many of our members to meet and interact with professionals in the field. This provided networking opportunities and life advice.

Synchrotron Radiation Center

To cap off the spring semester for tours, UW-ANS made the quick drive over to Stoughton, WI to see the Synchrotron Radiation Center (SRC) on April 24th, 2013. The previous day Joseph Bisognano came and gave a talk detailing SRC's capabilities and physics. Many students from the talk were able to make it the next day and enjoyed seeing the various experiments that had been mentioned in the

presentation. To top it all off, the day ended by seeing a pulse of the SRC and watching the monitors in the control room. It was exciting to see the research in action and witness all the components that go into making sound experiments.

Boy Scouts Workshops

At Wisconsin, there is a strong partnership between UW-ANS and the Boy Scouts organization, and that was continued in the 2012-2013 school year. UW-ANS hosted six Boy Scout Nuclear Science Merit Badge Workshops at the University of Wisconsin-Madison campus. Each of these events allowed UW-ANS to reach out to some of the next generation of scientists, engineers, and leaders while they are still developing.

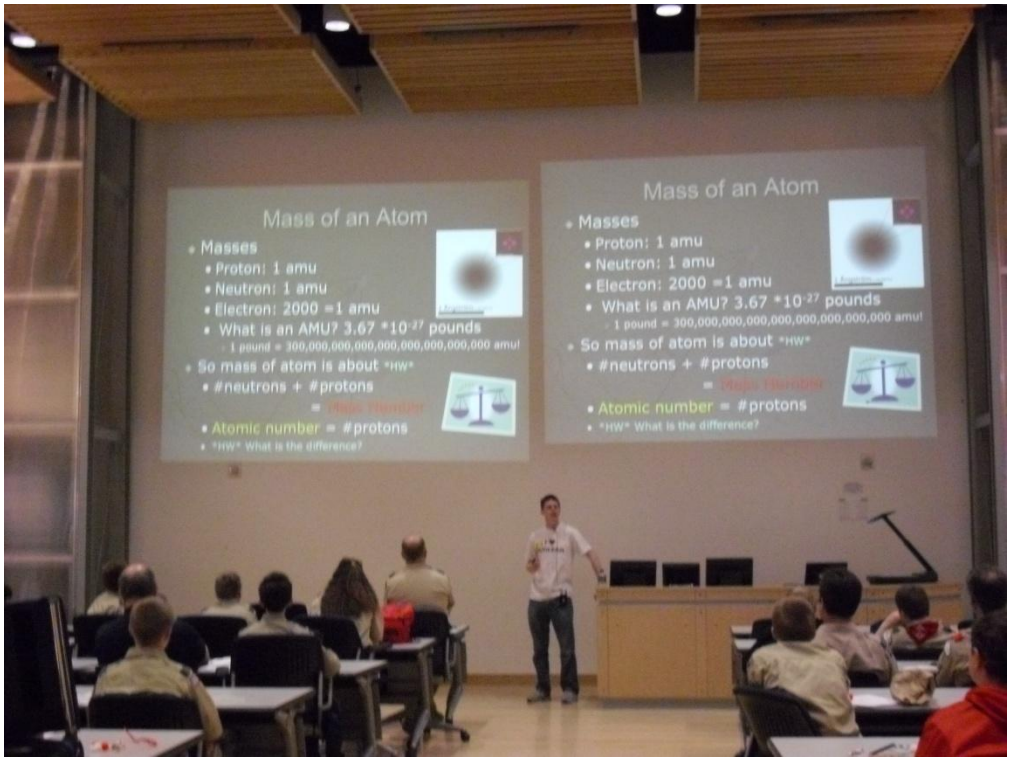

Figure 6 The new coordinator, Matt Jasica, giving the introductory presentation.

As in past years, UW-ANS sets a maximum of 60 -70 scouts per event in addition to usually getting about 20 adults as well. UW-ANS hosted approximately 400 Scouts and 150 Scout leaders at the three fall and three spring semester Boy Scout Nuclear Science Merit Badge Workshops. Workshops were filled to capacity weeks in advance. The workshops were all day events that lasted six hours on Saturdays. To ensure the scouts were prepared for the modules, they were asked to complete several pages of homework before attending the workshop. The homework encompassed nuclear science basics by asking such as “What are electrons, protons, and neutrons?”

Figure 7 A group of scouts and leaders looking into the UW Nuclear Reactor pool.

The scout age range is middle school +/- a year, so usually grade 6-9. Each event requires about 10 volunteers, 2 per station (5 stations). The workshops began with a large group discussion on nuclear and atomic structure models with pipe cleaners and colored cotton balls as visual aids. This was followed by an overview of stochastic and deterministic events as they relate to radiation and then radiation hazard symbol identification. The groups then spread up into groups for the five modules. The modules were: Cloud Chambers, Radiation Shielding with Counters, Inertial Electrostatic Confinement (IEC) lab tour, UW Nuclear Reactor tour, and Nuclear Careers and Myths. This year there UW-ANS was able to collaborate with the Physics Department to host a lunch-time show put on by UW's Wonders of Physics team where scouts watch and interact with the presenter to learn many different physical concepts first-hand. After completing all five modules, the Scouts and Scout leaders reassembled back into one large group. The Scouts then found out if they passed the homework requirements and received their Nuclear Science Merit Badges. Those with insufficient homework scores were given the opportunity to resubmit the homework and have the Nuclear Science Merit Badge mailed to them.

One to two UW-ANS volunteers were needed to staff each module. Despite the significant time commitment, UW-ANS has always had enough volunteers for each Workshop. A new addition this year--and a very obvious one--was splitting the day into before lunch and after lunch volunteer periods. By doing this, UW-ANS gained more volunteers and the modules were almost always staffed to capacity (2-3 people). For some of the workshops, volunteers were turned away even because there were so many! Several UW-ANS members were involved in Boy Scouts when they were younger, and UW-ANS members enjoy the opportunity to talk with youth who are motivated and interested in nuclear science. People journey to Madison from all over Wisconsin and neighboring states to attend the workshop and we always get very positive feedback from the scouts and adults.

The new Boy Scout Coordinator, Matthew Jasica, demonstrated excellent UW-ANS effort and revamped the Boy Scout system. With changing requirements and somewhat outdated materials, Matt spent much of his year making the workshops more modern, interesting, and valuable to the scouts. He remade presentations, the homework, and edited the website. This allowed UW-ANS to adapt and maintain its renowned Boy Scout program that to this day remains recognized as one of the best for all ANS sections.

Table 2 Summary of UW-ANS Boy Scout workshops over the years.

Academic Year	Workshops	Attendee Estimates
’06-‘07	5	500 Scouts and adults
’07-‘08	5	250 Scouts, 150 adults
’08-‘09	6	300 Scouts, 150 adults
’09-‘10	5	229 Scouts, 119 adults
’10-‘11	6	360 Scouts, 150 adults
'11-'12	5	250 Scouts, 115 adults
'12-'13	6	400 Scouts, 150 adults

Science Olympiad

Over the past nine years, UW-ANS has developed a strong relationship with the Wisconsin Young Scientists of America (YSA) Science Olympiad (SO) program. This year UW-ANS has continued working with the same school as it has for the last three years. The UW-ANS was partnered with Mount Horeb Middle School as UW-

ANS members served as mentors for the Mousetrap Vehicle, Egg Drop Rotor, Circuits, and Boomilever events. These are some of the building events that needed the most work done before the competitions. The Mount Horeb Middle School Coach had the least amount of expertise and assistance in these areas, so UW-ANS assisted there. Middle school students working on the building events benefited from having UW-ANS students available to offer suggestions and guidance when requested. Staci Meister was the head coach of Mount Horeb Middle School SO team and was very appreciative of our consistent support of her team.

UW-ANS mentorship took place from early November to late April. Two UW-ANS members were mainly responsible for going to the school and assisting them. Lucas Mynsberge and Brett DuCharme tried to make as many weeks as possible that fit in their schedule. Next year, UW-ANS hopes for even more assistance in the event. The Coach, Deborah Winkler, was extremely grateful for all the help UW-ANS provided over the school year.

The SO mentoring does fulfill another important role for UW-ANS. It is a major source of funding for the chapter and allows us to purchase supplies for other UW-ANS service project and outreach events. This year UW-ANS raised over $500 dollars due to the dedication of the mentors.

Essay Contest

The Essay contest is a way to reach a broad audience of high students by discussing nuclear science and engineering and motivating them to take the next learning step by offering monetary awards to students who write the best essays. Typically, the essay topic switches between nuclear power and radiation sciences issues. This year the essay contest was actually cancelled due to lack of participation by schools. This doesn't, however, come from lack of work on UW-ANS's part.

Lucas Mynsberge and Thomas Eiden traveled to their home high school and gave five to six presentations throughout the day from 7:00 am until 2:30 pm, stopping only for lunch. Despite full class turnout at the speeches and some decent question and answer sessions, we only saw one participant mail an essay. UW-ANS sent her gifts and awards and told her to keep her essay for next year (she was only a sophomore), and resubmit it.

The instructor, Bill Heeren, had this to say about the students' visit:
"We are certain that students' lives have been transformed...by Luke's and Tom's work." The letter is placed in Appendix A.

Science Night

Glenn Stephens Annual Science Night

UW-ANS was approached again this year to participate in the annual Science Night at Glenn Stephen Elementary School. From past experience, it was known that the kids did not want to listen to anything that took more than five minutes in total to explain. Thus, UW-ANS took a few counters and sources and tri-fold along with other information. The kids seemed very attentive when learning about nuclear science. Most of them just wanted to play with the "radioactive beanie-babies" that were brought as sources.
Approximately 200 elementary school children, and about as many parents and teachers, were at the Science Night. Ironically, we were situated adjacent to cockroaches which displayed no effect from our counting sources. Many different members volunteered to help out.

Camp Badger

Camp Badger is a program that allows talented Wisconsin middle school students to visit UW-Madison for a week to learn about science and technology over the summer. A donor provided a sizable grant to Camp Badger so that it could incorporate a module on nuclear science to attending students. Thus, UW-ANS was asked by John Murphy of the Nuclear Engineering Department to provide a series of modules to teach the students about nuclear science after he gave them an overview presentation. UW-ANS agreed to host three modules for all five Camp Badger sessions.

Figure 8 An ANS member instructing the students how radiation is affected by time, distance, and shielding.

The modules for Camp Badger were also used as test runs for activities that would become staples at other UW-ANS outreach activities, such as the stationary M&Ms radioactive decay game. The other primary modules were a basic presentation and Counters experiment. Overall, about 250 middle school students attended the UW-ANS Camp Badger modules.

Grandparent's University (GPU)

Grandparent's University was a new program this year for UW-ANS over the summer of 2012. These are week-long sessions put on by the university where a grandparent and their grandkid select a "major" to obtain over that week. The University requested our student section to host a nuclear science major. To the best of our knowledge, we were the only student organization hosting a major rather than faculty, which is an attribute to the professionalism and outreach capabilities of our student organization relative to the entire UW campus.
Once at the "University," counters, M&M's, fission games, and more were used to teach both ages more than they had previously known. The kids seemed to enjoy it very much except for the background information lectures, but this is where

some of the grandparents were greatly interested. Overall, it went very well. The coordinators of this event were Adam Reinicke and Angela Weier. The two of them dedicated large amounts of time to planning the days and then actually executing them. It is members like them who help make this student section what it is.

Capital Science and Engineering Fair

UW-ANS jointly provided the student volunteers needed to run the Capital Science and Engineering Fair (CSEF) with the Society of Women Engineers (SWE) and the American Society of Materials (ASM). The job of the student volunteers was to support the judges and volunteers as needed. This included printing and organizing the brochures, serving as chaperones during the campus research lab tours, and arranging the display areas to suit CSEF needs. Since the CSEF is part of the Wisconsin State Science Fair, it was a perfect opportunity for UW-ANS members to encourage and support local high school students in math and science. The UW-ANS volunteers who helped with this event were Lucas Mynsberge, Darius Lisowski, and Adam Reinicke.

Luther College Visit

A new occurrence that has not happened this year was a request by Luther College to come visit the UW-Madison Engineering campus. They contacted ANS to help facilitate this visit and learn more about the department for their interested undergraduate students who were interested in graduate school at UW-Madison in the EP Department. The President, Lucas Mynsberge, set up four different tours of research facilities as well as a quick talk about the department in order to give them background. Five students plus a faculty member attended the information session and there was a lot of interest in UW-Madison. With any luck, ANS just helped reach out and not only get more future nuclear engineers to UW-Madison, but also future ANS members.

6. Community Service

Adopt-A-Highway

UW-ANS participated in Adopt-A-Highway for the ninth consecutive year. Members cleaned a two mile stretch of University Avenue between county highway Q and Old Middleton Road. Per the requirements of the program, participants are required to clean the highway a minimum of three times between March and December of every year. Following clean up, participants are typically rewarded with food. This year, the

clean-up was performed less since the stretch of road was under construction and completely redone.

UW College of Engineering Student Council

Polygon is the UW Engineering Student Council. Their responsibilities include allocating funds to the engineering student organizations, organizing and facilitating E-Week, helping Engineering Career Services (ECS) execute a career fair each semester, and providing cohesion between the student organizations. Each student organization is allowed one representative to attend Polygon meetings and provide input. This year Darius Lisowski worked closely with Polygon in order to gain funding by applying three times per semester. This requires a full proposal with good reason. This funding and interaction helped our organization stay relevant.

Engineer's Week

During E-Week (February 17th through 23rd), members of the student organizations of the College of Engineering compete against one another in a series of events hosted by participating organizations. UW-ANS clawed and grabbed to place, but unfortunately, this year, did not come out in the top three spots. Despite this, the section participated strongly in events such as E-Weekopoly, Chubby Bunny, Mario Kart racing, Duct Tape Your Friend to a Wall, and more, as well as a Mr. and Mrs. Engineer Contest.

In place of the events UW-ANS competed in, we also hosted three events: the Scrambler Eating Contest, the Energy Game, and the Tug-of-War Tournament.

- The Scrambler Eating Contest is an event in which participants eat as many scramblers from Mickie's Dairy Bar as they can throughout the entire week. This event is also an excellent community service activity, as Mickie's donates $1 for every scrambler eaten to the American Heart Association. This was the eighth year that UW-ANS has hosted and won this event during E-Week.
- The Energy Game was another event that UW-ANS hosted, and it was an excellent public outreach opportunity as well. The game consists of having student organization teams answer engineering and energy related questions; upon answering these questions correctly, that team can then buy power plants (whether nuclear, solar, wind, coal, etc.) to generate electricity. As UW-ANS makes up all the questions, the organization was not allowed to compete in the game itself; however, hosting the event still helped UW-ANS's standing in E-Week and gave UW-ANS the opportunity to teach other student organizations about electricity generation and review some engineering trivia.
- The final event that UW-ANS hosted during E-Week was the Tug-Of-War Tournament. This was UW-ANS's first year hosting this event, and it went decently well. Numerous teams turned up. Due to the size of the rope, teams were limited to

three participants, but this just allowed more teams to vie for the top position in the competition.

Engineering Expo

The Engineering Expo is a three day event that is held every two years at the Engineering campus in Madison. Run entirely by students, this event brings over 5,000 elementary, middle, and high school students to learn about engineering. On the 3rd and final day the event becomes open to the public, drawing older students from the university and curious adults from Madison and surrounding communities.

Figure 9 The most popular attraction, the Mouse Trap Demo, nearly filled the room every hour it was set off.

During this three day event, UW-ANS hosted an exhibit that presented nuclear engineering in a way that catered to the entire range of students and adults visiting the event. Three months prior, a UW-ANS internal committee was established to organize the logistics and plan the educational displays. Meeting on a weekly basis, three main categories of exhibit displays were planned. Display items from industry, hands on learning activities, and informational posters.

- Industry Display: Some members on the committee used their contacts in order to facilitate the delivery of a full-size fuel assembly from Exelon. This was a cut version about 4 feet tall. There were peeled away sections, so spectators could see all the way down to plastic fuel pellets. In addition, we obtained a fuel bundle from the UW

Nuclear Reactor (UWNR) as well as a mock assembly of the UWNR made out of wood and plastic.

Figure 10 The Radioactive Beanie Baby game being played by some students.

- Hands on Learning: In order to cater to the panoply of ages and experience levels, UW-ANS created hands-on events as soon as an attendee walked through the door. It began with a "Calculate Your Dose" Game that had worksheets based on the ones national ANS places in its outreach materials. From there, attendees could choose to head to the cloud chambers or beanie baby games. Using dry ice, ethanol, and uranium ore, the cloud chambers were housed in wooden boxes so they could be seen despite the fully lit room. The “radioactive Beanie Baby” game consisted of sifting through a box of 25 Beanie Babies, 5 of which had low energy gamma sources sewed inside. These were placed in a radioactive bin and all this was done while donning a Hazmat suit. Lastly, a ping-pong critically demo was borrowed from the Physics department that featured 255 mouse traps contained inside of a Plexiglas's box. On each mouse trap was placed a single “neutron” (ping-pong ball), which after dropping a new “neutron” would set off a chaotic chain reaction representative of a fission reaction.

Figure 11 The calculated dose game where attendees could place their annual dose on an axis.

- Educational Posters: Several educational and informative posters were created specifically for the Engineering Expo and placed on display throughout the exhibit room. Posters on the Basics of Fission, Radiation Shielding, Life of Nuclear Engineering, and details of the Fukuishma event were made and printed on large 3'x5' poster boards. In addition, there was a large nuclear web map. This map connected all uses of nuclear science based on uses and connected them to each other. The examples and details ranged from engine diagnostic uses to radium dials.

Figure 12 The web map of all things nuclear in all its glory.

The Engineering Expo proved to be a huge success for both the College of Engineering and UW-ANS. With over 50 student organizations, each with their own exhibit, and many more independent exhibits of student projects and industry, the UW-ANS was still one of the most successful exhibits. Over 5,000 students visited the Expo, and we believe the majority of which visited our exhibit. We entertained many curious students, teachers, and adults, answering basic questions such as “What is an atom?” to “How waste disposal is affected by the postponement of Yucca Mountain?"

ECB open house

The Engineering Centers Building on campus is a central hub for creative spaces, student organizations, and events in the engineering community. This year, in order to introduce students to the resources available in this space, the Polygon Engineering Student Council organized an alcohol-free Friday night alternative for which UW-ANS was invited to volunteer to advertise our student section to the undergraduate population, assist with running games, and other activities.

Industrial Liason Committee

The Engineering Physics Department hosts a group of high ranking alumni from across the nuclear and aeronautics career fields every year. These alumni form the Industrial Liaison Committee, and the purpose for their visit is to provide the department with advice on how to improve. Part of the time spent at the department is with the students, where the students are given the opportunity to anonymously voice concerns to the committee. Prior to the ILC's visit, UW-ANS and AIAA organize a meeting with their members to brainstorm comments, and the Presidents of the two organizations write up a report detailing those comments.
This year, the ILC visited the department on the evening of April 29th, and met with undergraduate and graduate students of the Engineering Physics Department over dinner. UW-ANS President Lucas Mynsberge, AIAA President Joe Jaeckels, and EP Department Representative Thomas Gage presented their report of the students concerns, and other students present at the meeting added to and brought up other concerns and improvements.

7. Socials

UW-ANS traditionally organizes and coordinates many social events for its members throughout the year. These events give students the ability to relax in a social setting and network and helps build camaraderie between all of UW-ANS, including students, faculty, alumni and friends.

Devil's Lake

For the past three years, UW-ANS has started off the academic year with a camping trip to a place called Devil's Lake in Baraboo, WI. Since this is before the kick-off meeting, it usually ends up being only members from the previous year, but it is still a blast. Devil's Lake boasts hiking, swimming, boating, climbing, running, and anything else that can be imagined for the outdoors. The sights are beautiful and the lake is pristine (no motorboats allowed!). This is a great bonding experience and a good way to get closer with fellow "nukes." This year, we really bonded, facing a torrential downpour that soaked through all of our tents and sleeping gear. It was a rough night, but overall, no one complained and we all worked together to still have fun.

Movie Night

To give members a break from the grind of coursework, UW-ANS hosted a movie night in October. Members brought popcorn, candy, and beverages and we watched

"Blazing Saddles"--a Mel Brooks film. It was an enjoyable time and much less expensive than a movie theatre.

Games Night

In October, UW-ANS hosted a games night to provide the members a chance to relax and socialize with other members. We had a good turnout of approximately 15 members; some of them were younger and it allowed them to get to know some older, more experienced members. The night commenced with a table full of chocolate and vanilla ice cream supplemented with delicious toppings ranging from Hershey's chocolate to marshmallow fluff. Climaxing with a Mario Kart tournament on Nintendo Wii, we also had a plethora of board and card games.

Figure 13 Some members enjoying "Phase 10" at games night.

Laser Tag

To cap off the fall semester and to award those active members, UW-ANS hosted a trip to the local laser tag arena. Here about six ANS'ers sweated and battled for champion of the arena. Bases were taken and in the end a victor was claimed. Then, we would switch teams and begin again. It was enjoyable for all and a nice relaxing break before finals took full control of our lives.

Capitol Brewery Tour

In early March, ANS made the arduous trek to the local brewery. Upon arriving, the ten of us learned how Capitol brewed their beer and also the history of the brewery. The tour guide was excited and extremely into the tour, which made us happy to listen. At the end, we were able to sample their various beers. For the few of us who were under 21, they had a nice rootbeer that we could drink. For classic rock enthusiasts, they name their batches after Frank Zappa songs.

Paintball

The cap to the spring semester for the past two years has been a trip to a paintball field. This year we headed to Apocalypse Paintball about 30 minutes outside of Madison. About 15 of us attended. It was a long day of getting pelted with paint as we ran and dodged around trash cans, piles of brush, through towers, and under drainage pipes. In the end, no one escaped without an assortment of welts and bruises. Despite the seemingly painful time, everyone enjoyed it and there were no complaints. Following the firefights, we traveled to Culver's to enjoy a well-deserved burger. The whole even was spectacular. As of writing this, however, members still have a bruise here and there.

Figure 14 ANS post-paintball. Some members are wearing the glasses from the MIT conference goodie bags!

Pic-Nuke

Semiannually, UW-ANS hosts a picnic for the UW Department of Nuclear Engineering and Engineering Physics members, friends, and family. Pic-Nuke is held in scenic Vilas Park on the first Friday afternoon of the fall semester and the last Friday afternoon of the spring semester. UW-ANS provides and prepares a wide variety of food and beverages for the attendees to enjoy, along with music and activities such as volleyball, softball, and card games. A new tournament is gaining quite some popularity as well. It is the tower-building contest. Participants are limited to the use of only marshmallows and toothpicks and must build the tallest free-standing tower possible within a 5 minute allotment. The true structural engineer comes out in this competition.

The fall Pic-Nuke is especially useful for new or prospective members to talk with current UW-ANS officers or members and professors of the department in a social setting in order to get a feel for what to expect from the section and from their classes in the coming year. The spring Pic-Nuke provides a fun evening for members to relax and socialize for a few hours before final exams begin. As the student population and interest in the department increases, attendance at Pic-Nuke has increased as well. Typically, around 150 people attend every semester. The upcoming spring Pic-Nuke was held on Friday, May 10th.

Coffee and Donuts

On Wednesdays throughout the year, UW-ANS makes coffee and provides donuts from nearby Greenbush Bakery for its members and friends on the second floor lobby of Engineering Research Building (ERB). Ian Jentz has been instrumental in helping to pick up and set up these morning refreshments that everyone appreciates. Wednesday morning coffee and donuts has been a UW-ANS event since 2005 and UW-ANS would like to thank Excel Services. for helping to continue the tradition this past year.

Breakfast at Mickies

On Friday mornings at 7 A.M. UW-ANS student members, faculty and alumni meet at Mickies Dairy Bar for a social breakfast. All in attendance find that it is a great way to start off the last day of the week. Breakfast at Mickies is a UW-ANS tradition that dates back more than a decade.

8. Future of UW-ANS

This year, we have seen a very strong showing of undergraduate students getting involved in UW-ANS. Several years ago, the majority of all executive positions consisted of graduate students, but next year all but one of the executive members will be an undergraduate. With a dedicated group of young students, they should have the ability to attract a younger crowd, which will be extremely beneficial to the future and health of our organization. This coming year we also have two freshman on the executive board, which is very rare. UW-Madison Engineering requires you to go through a year of general engineering before declaring a major, so it's hard to get freshman involved, but this year we've seen increased participation from the younger students.

Another benefit of having a young executive group is that many of them will be around for several more years following this year, and remain very dedicated to UW-ANS. Because of this and a strong turnover for next year, the members of UW-ANS are placing a top priority on placing a bid for the 2015 Student Conference to be hosted here at UW - Madison. With a very near miss for the 2013 Student Conference hosting, the group is eager to take all the positives and improve on the less-perfect areas to make next year's bid a guarantee. UW-ANS would love to welcome all the other student sections to explore our dedicated campus and history.

9. Conclusion

The University of Wisconsin - American Nuclear Society has had over 50 years of experience providing members the opportunity to reach out to the general public, volunteer in the community, increase professional interaction, and even learn a little more about nuclear science themselves. We consistently received thanks and praise from members of the community as well as parents and students at our events. This year was a big success and we were even able to add a few new items to our long-standing repertoire that turned out very successful.

By beginning to meet over the summer before school started, we were able to hit the ground running and start off the year solidly. Speakers were arranged, outreach events were found, and volunteers were numerous and plentiful. Enthusiasm and commitment within ANS was very high. Towards the end of the year, we were fortunate enough to see a large increase in the activity of our younger members. This helped us prepare future years of ANS for even more success. In addition, members who only assisted sporadically in previous years really stepped up and contributed to our section.

In the end, we were able to provide a great atmosphere for members of UW-ANS to develop, learn, socialize, and just have an overall great time with people of similar care. With a young executive committee taking over next year, ANS will have a fresh look at all its events. We would like to thank everyone who helped make our year successful, and wish the best for those who will continue to be a part of the University of Wisconsin - American Nuclear Society.

9. Appendix A

October 12, 2012

Professor James (Jake) Blanchard
Department of Engineering Physics
University of Wisconsin - Madison
1500 Engineering Dr.
Madison, WI 53706

Dear Professor Blanchard,

As we are sure you know, there are moments in a student's life that may be transformational. Moments that inspire not just for a class period, or for a unit assessment, but for a lifetime. Today, at DC Everest High, we probably have had many of those transformational moments for many individual students, in large part because of the work of two of your students/associates, the work of Thomas Eiden and Lucas Mynsberge. Allow us to explain.

Today, Luke and Tom came to our school and as part of the Atomic Badger (ANS) outreach program, and shared with our students some background information involved in their work. In addition to students learning about different aspects of nuclear engineering/engineering physics - sharing topics ranging from elementary nuclear science to various nuclear applications, safety, and political issues – students also acquired information about different opportunities available to them as potential students. Together, Tom and Luke motivated the students to ask wonderful questions about both facets of their presentation. As we are certain you are aware, doing that with a group at 7:35 in the morning is an impressive feat. They were able to do that all day long, presenting before all of our chemistry students (roughly 425 students). We are certain that students' lives have been transformed, their focal points redirected and sharpened by Luke's and Tom's work. Please be certain to extend our sense of appreciation to both Tom and Luke. They did a fantastic job!

We would like to thank you as well for encouraging such outreach programs. They really make a difference.

Sincerely,

Ann Wiernik Chemistry Teacher	Thomas Haulfmann Chemistry Teacher	William Heeren Chemistry Teacher
Thomas Davies Chemistry Teacher	Scot Abel Curriculum Coordinator	Dr. Thomas Johansen Principal

cc. Mr. Thomas Eiden
Mr. Lucas Mynsberge