



DC - AMS Newsletter



Science Fair Banquet: 20 Students are winners !

TV-9 Meteorologist Kim Martucci an example of perseverance

Broadcast meteorologist Kim Martucci, of the WUSA-TV-9 news team, highlighted this year's DC-AMS Science Fair banquet on 13 June 2006. Science Applications International Corp. (SAIC) in Tyson's Corner, Virginia, hosted the chapter's final meeting of the year.

The primary role of the DC-AMS chapter is education and outreach, and in that role Science Fairs and scholarships are paramount, according to Chair Jason Samenow. The chapter invited winners having projects dealing with environmental issues in local Science Fairs to the Science Fair Banquet, along with their parents. This year 20 student winners attended (*see names and projects on page 5*). Some 15 chapter members contributed sponsorships that paid for the meals of all the students.

After dinner, guest speaker Kim Martucci described the path that brought her into a weather career, as well as her current position as on-air Meteorologist for WUSA-TV-9 News, in the morning slot from 5 to 7 AM. Ms Martucci said she was always curious about the weather, and had teachers that encouraged her love of meteorology. Her budding love of everything to do with the weather was also fed by the birth and explosive growth of the Weather Channel.

Kim received her meteorology degree from Cornell University. While there, she did an internship as a broadcast meteorologist at a local TV station, and decided that being an on-air Meteorologist was a good fit. Before

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joining the channel 9 team, Kim was the chief meteorologist in Wilkes-Barre, Pennsylvania for two years, then at a station in Boston. Before that, she worked as a weekend meteorologist in Buffalo, New York, in Huntsville, Alabama, and in Chattanooga, Tennessee.

As the morning weather broadcaster, Ms Martucci's day starts at 4:00 AM. She begins by assessing the environment on her 45-minute drive to work. There she assesses the weather observations and computer models, working with Topper Shutt, chief meteorologist at TV-9, and the rest of the team. She works on the weather graphics just before going on air. Her forecasts bear the seal of approval of the National Weather Association, of which she is a member.

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Welcome the New Officers

Vice Chairman Bryon Lawrence announced the results of the election of Chapter Officers for the year 2006-2007:

Chairperson:	Jason Samenow
Vice-Chairperson:	Michael Fortune
Treasurer:	Mark Gunzelman
Newsletter Editor and Corresponding Secretary:	Kevin Ambrose
Recording Secretary:	Camden Walker
Science Fair Coordinator:	Nancy Lee

Chair's Corner

By Jason Samenow

On the Science Fair Banquet

The Science Fair Awards banquet was a stellar conclusion to another great year for the DC Chapter. Nearly 20 students selected by our judges from across the region attended with a parent. The students' projects were among the best in recent memory, according to many of our members. Several of them were not only winners at the school and county level, but achieved national recognition.

WUSA-9 Meteorologist Kim Martucci was keynote speaker, with solid advice for students in science (*page 1*). She brought a film crew who interviewed several students as a feature about the Science Fair banquet that aired on WUSA two mornings later.

Thank all of you who sponsored student meals. This year we had more sponsors than ever -- a tribute to your generosity. I'd like to thank long-time member John Lasley, who enabled us to hold the Banquet at SAIC -- a wonderful venue. I would be remiss if I did not thank Nancy Lee, who worked tirelessly as our Science Fair Coordinator, and made the entire event possible.

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While giving thanks, I'd like to thank two retiring officers Bryon Lawrence and Lauraleen O'Connor. Both have volunteered years of service to the Chapter and made invaluable contributions during their respective tenures. Both will be missed. We will honor them and other recently retired officers at an event in the fall.

While the Banquet officially closes this Chapter year, next year's Officers will be busy planning the next Chapter year over the summer. I'll look forward to working with our new officers -- Kevin Ambrose and Camden Walker -- taking on the respective positions of Corresponding Secretary (Newsletter Editor) and Recording Secretary. And, of course, I'm happy to be working again with Michael Fortune (who steps up to the role of Vice Chair), Mark Gunzelman (Treasurer) and Nancy Lee (Science Fair Coordinator).

- Jason Samenow

Thanks to our Student Dinner sponsors!

The Chapter thanks these members for their generous contributions toward defraying the costs of dinners for winning students at the June Science Fair Banquet.

Grant Aufderhaur	2 meals
Tony Baltz	4 meals
Duane Cooley	2 meals
Kenneth Campana	1 meal
Laura Cutrer	3 meals
Stanley Doore	1 meal
Mark Gunzelman	1 meal
Floyd Hauth	1 meal
Bryon Lawrence	2 meals
Craig Nelson	2 meals
Lauraleen O'Connor	2 meals
Roger Pierce	3 meals
David Rodenhuis	1 meal
Jason Samenow	1 meal
Dian Seidel	2 meals

(Continued from page 1)

Martucci's involvement in the science of meteorology extends to her off-the-job pursuits. Her number one hobby is tornado chasing. Kim recounted a most exciting excursion into tornado alley during which she spotted and filmed twelve tornados on one trip. The story about that trip helped her to earn an Emmy Award nomination as best weather-caster in New England.

Kim has helped to produce two projects for teachers and students. The "Learning Math" program is a set of five college-level math courses for teachers of elementary and middle schools, produced by WGBH in Boston. In videos, she shows the teachers how to solve the statistical problems of predicting the weather. For students in grades 9 through 12, Kim teaches the secrets of a meteorology broadcast in the DVD, "Weather at 5:00."

Before the DC-AMS meeting and dinner, students set up and talked about their projects, and chapter members rated the three best projects via a secret ballot. Following Kim Martucci's remarks, chair Jason Samenow announced the three winners, who received cash prizes:

- First Place: **Mariana Cruz**
Project "Wind Resistance - Analyzing House structures"
- 2nd Place: **Michelle Denny**
Project "Solar Energy: a bright idea"
- 3rd Place: **Austin Toner**
Project "New Orleans soil - what went wrong?"

The name of the **DC-AMS Annual Scholarship winner was also announced: Charlotte Seid, who** graduated from Thomas Jefferson High School for Science and Technology, and who will attend Harvard University next fall.

-- Lauraleen O'Connor, Recording Secretary

DC-AMS Newsletter

is the organ of the Washington, DC Chapter of the American Meteorological Society, an autonomous local chapter of the national AMS. Membership is open to everyone interested in the atmospheric and related sciences. . Dues are \$15 per year, \$25 for 2 years, or \$35 for 3 years. The rate for teachers and students is \$10 per year. The Chapter year runs from September 2005 to August 2006. Please print the membership form from the website:

<http://www.dc-ams.org>

then mail in your form and payment to: DC / AMS, P.O. Box 13557, Silver Spring, MD 20911-3557. You may contact the Officers via e-mail at dc.ams.chapter@gmail.com .

Area Where Hurricanes Develop Is Warmer: Noaa Scientists

May 1, 2006 — The region of the tropical Atlantic where many hurricanes originate has warmed by several tenths of a degree Celsius over the 20th century. New climate model simulations suggest that human activity may contribute significantly to this warming. This finding is reported in a study by scientists at the [NOAA Geophysical Fluid Dynamics Laboratory](#) in Princeton, N.J., published in the *Journal of Climate*.

The region, extending from 10°N to 20°N in the area of the Cape Verde Islands, has been identified as the origin for a large portion of major hurricanes in the tropical North Atlantic, and is known as the "Main Development Region." Ocean surface temperatures in this region warmed over the 20th century, roughly tracking the global mean temperature. The results suggest that the century-scale warming tendency in the Main Development Region may have been caused largely by anthropogenic forcing.

Earlier NOAA studies have concluded that a warmer sea surface is one of several important factors affecting Atlantic hurricane activity. Other findings extend beyond the North Atlantic. An example is in the Indian Ocean and western tropical Pacific, where a regional warming trend has emerged particularly clearly during the past half century.

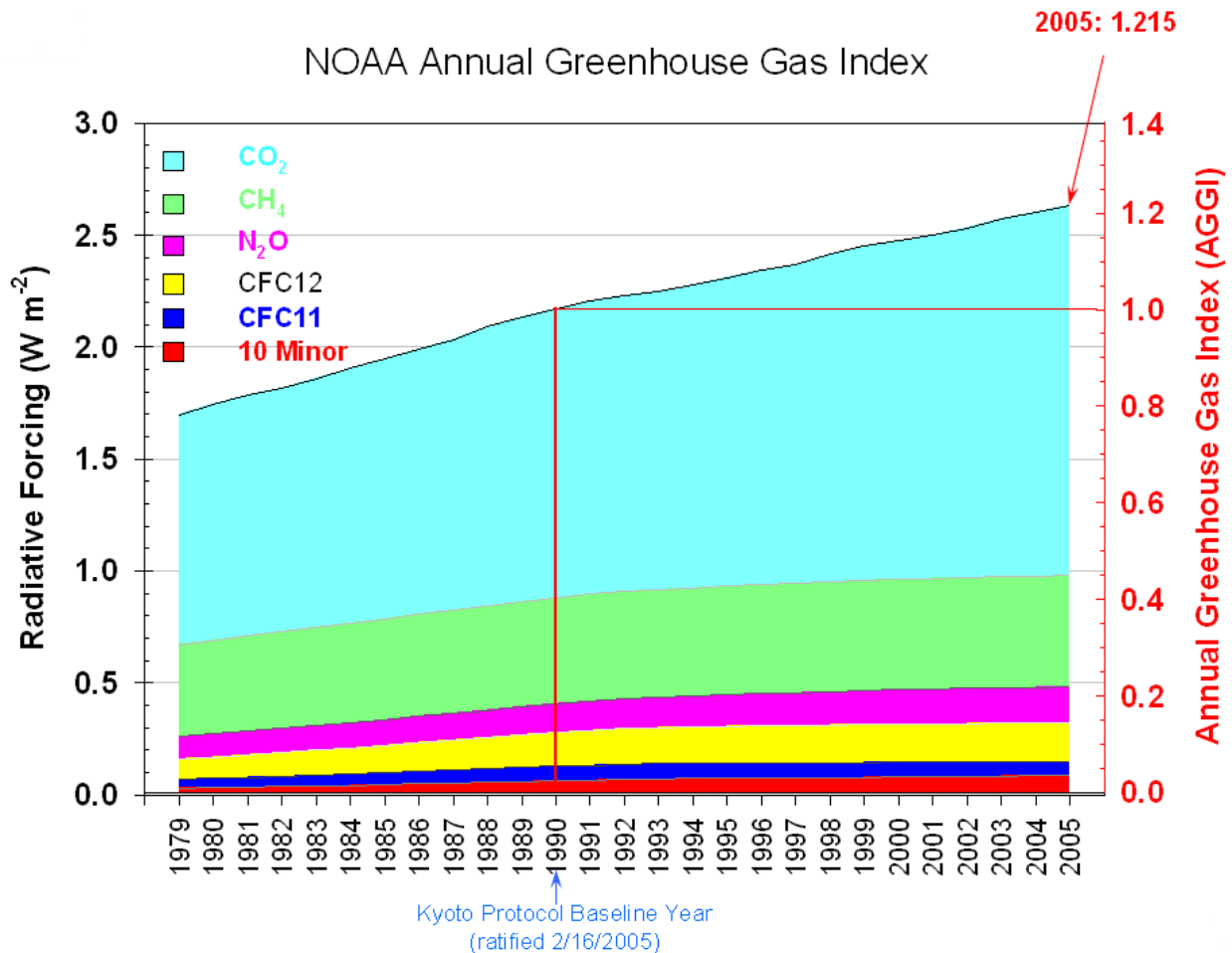
THE NOAA ANNUAL GREENHOUSE GAS INDEX

David J. Hoffman, of the Earth System Research laboratory of NOAA in Boulder, CO, designed an annual Greenhouse Gas Index (AGGI) which was recently publicized on the NOAA web site. NOAA's new AGGI index enhances the connection between scientists and society by providing a normalized standard that may be easily understood and followed. The contribution of long-lived greenhouse gases to climate forcing is well understood by scientists and has been reported by NOAA through a range of national and international assessments. Nevertheless, the language of scientists (for example, Watts per square meter per year) often eludes policy makers, educators, and the general public. This index is designed to help bridge that gap.

The figure below depicts the radiative forcing — the change in the balance of energy into and out of Earth, since a base year of 1750 — of the major greenhouse gases. The units are Watts per square meter, not a unit easily understood by the public.

Of the four major groups of long-lived greenhouse gases that contribute to radiative climate forcing, CO₂ and N₂O are the only ones that continue to increase.

An Annual Greenhouse Gas Index (AGGI) has been defined as the ratio of the total forcing to that present in 1990. This index, shown on the right-hand side, has increased by 20% since 1990, and by 40% since 1979.



Winners of environmental Science Projects in regional Science Fairs in 2006 — judged by DC-AMS

Student	School	Project Title
Labiba Ahmed	St. Charles	Evaporating Water
George Arnold	Eleanor Roosevelt	Aircraft Measured Cloud Particle Phase
Lindsa Bottos-Sewell	Bull Run Middle	Can a Bird be a Meteorologist?
Mariana Cruz	Westfield High	Wind Resistance: Analyzing House Structures
Michelle Denny	Calvert County	Solar Energy: A Bright Idea
Danielle DeRosa	Oakton High	Effect of Different Locations on Wind Speed
Erin Eve	Hammond High	Do You Need an Umbrella? Accuracy of Precipitation Predictions
Nate Fanzone	Wild Lake High	The Effects of Color on Solar Energy
Joshua Gloster	Patuxent High	See Sunspot Run
Patrick Gould	Williamsburg	The Effect of Angle and Direction of Solar Panels on the Amount of Sun Received at Different Times of the Day
Margaret Gratian	EWM	Bean Growth vs. Air Composition
Kevin Hia	West Potomac	Risk Anticipation of Tsunamis
Theresa How		
Karin Hung		
Chayla Jackson	Oxon Hill	Ozone: Understanding Pollution in MD
Saleh Karaman	Marshall High	Atmospheric Haze
Sofia Karod	Lee High	Help Prevent Another Katrina
Yew Kin		
Erik Klontz	BCH	Do Asthmatics of Different Ages Respond Differently to Weather & Air Quality
Tom Kohlbrenner	Osburn Park High	Blown in the Wind
Justin Lane	Scotchtown Hills	Color, Color, What's Your Temp!!!
KaVon Lassiter	Lake Arbor	Creating Cool Crystals
Von Le	Freedom High	The Effect of Acid Rain on Plant Growth
Griffin Lerner	SLM	Solar Energy: Playing the Angles
Briana Lynch	Rosaryville	Sunsational Energy
Kira Maker	WHO	Solar Flares and Sudden Ionospheric Disturbances: The Effect of Class vs. Solar Zenith Angle
Emma Marie-Joseph	Dominion High	Slowing Disasters: Changing Hurricane Winds Via Acoustics
Sara Marron	Stone Bridge	The Effect of Freshening on Movement of Saline Dense Currents
Mike McMullan	Loudoun County High	The Effects of El Nino, Neutral, and La Nina Years on Snowfall Totals on the East Coast of the United States
Tracey Meepagala	Berwyn Heights	The Accuracy of Local Weather Forecasts
Kharlin Miles	Woodmore	The Battle of Condensation
Lynn Montgomery	Mother Jones	Moon Mania
Luis Nataniel II	Jericho Christian	Predicting the Weather
Steven Overly	SWH	Carbonic Acid and Our Modern World: Homo Sapiens from an Atmospheric Perspective
A.P. Parvathi	Fairfax High	Building vs. Tornado: Measuring Roof
Mariah Peters		
Sophia Rizvi	MGH	The Effects of Human Activities on the Greenhouse Effect
Kevin Robertson	Long Reach High	
A.P. Sitalakshmi	Uplift Forces	
Danny Solow		
Sydney Taylor	Battlefield High	The Effect of Location on the Concentration of Tropospheric
Michael Tippett	Stone Bridge High	The Effect of Large Explosive Tropical Volcanic Eruptions on the Number and Intensity of North Atlantic Hurricanes 1851-2004
Austin Toner	T.C. Williams	New Orleans Soil - What Went Wrong?
Allison Tse		
Devin Zhang	TPM	Using Carbonate Dissolution to Reduce Atmospheric Carbon Dioxide

