

DC3 Outreach & Communications



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DC3 Outreach & Communications Report

1.0 Goals & Objective

The Deep Convective Clouds and Chemistry (DC3) field project Public Information Program (PIP) was lead by the Earth Observing Laboratory (EOL) in collaboration with NASA, UCAR, and several universities to develop and implement a multifaceted program of education and outreach activities.

The primary goal of the PIP was to engage students into the field of atmospheric science by exposing them to field research methods and operations by means of online communications and experiential learning opportunities. The secondary goal was to increase public awareness on a local, national and international level of the DC3 science objectives and societal benefits.

A variety of methods for disseminating and circulate information to targeted audiences were used for the DC3 outreach efforts. These included the use of the Web 2.0 platforms and websites; public speaking engagements; a public open house and media events; targeted student enrichment activities; printed materials for enhanced visibility of the project; and collaborations with UCAR and other involved agencies.

2.0 Student Activities

Student involvement was the primary goal of the education & outreach activities. Facilitated by several DC3 university professors, both undergraduate and graduate level students had the opportunity to be directly involved with research activities. Due to the timing of the project, it was difficult to coordinate with K-12 school groups as they were out on summer vacation. In all, there were 34 undergraduate students, 77 graduate students, and 30 postdoctoral fellows involved with the project (*Appendix A*).

Gretchen Mullendore, a professor at the University of North Dakota, taught an undergraduate course during Spring 2012, called *Forecasting/verification of convective regimes for the Deep Convective Clouds and Chemistry (DC3) field campaign.* The course examined of the objectives and motivation of the DC3 field campaign, and included discussions about particular challenges involved in making chemical transport measurements as well as hands-on forecasting exercises for all three DC3 regions.

Six University of North Dakota (UND) undergraduate students traveled to University of Alabama, Huntsville (*Figure 1*), to work with UND graduate student Brandon Bigelbach and the DC3 University of Alabama - Huntsville team, lead by Dr. Larry Carey. During the campaign Dr. Jeff Tilley led a hands-on forecasting internship that was also held at UND, that provided both graduate and undergraduate students a chance to do forecasting for the campaign and listen in on live forecast discussion. Additional student comments about the course can



Figure 1 :: Students from UND prepare balloon for launch while in the field with the UAH science team

be found on the DC3 Blog :: Exemplifying Experiential Education.

"Being able to be a part of the DC3 field project has been a very valuable experience, especially as an undergraduate. The majority of my work at UND has been computer based research, so being able to be a part of the field work was great exposure to valuable skills that I will be able to use in future career opportunities."

- Melissa Becker, UND, Environmental Geography major, expected graduation May 2013

3.0 Teacher Enrichment Activities

The DC3 field project was in a unique position to be able to provide teachers with an opportunity to see firsthand how atmospheric science is conducted, to explain the relevance of climate research, and to explore the aircraft and

instrumentation involved in doing such research (*Figure 2*). Pedagogical practices suggests that well-informed and inspired teachers are likely to teach their students more effectively.

"The districts are pushing climate science in the K-12 curriculum so much these day, and after todays workshop I finally understand why!"

- Middle School Science Teacher form Wichita, KS



Figure 2 :: Salina Middle School science teacher, Laura Borough, got a first hand look at the NASA DC-8.

Two teacher workshops were held at the DC3 Operation Center, with one group of middle school science teachers from Salina, and another group of science teachers from Wichita. The teachers took part in a full-day of activities that included attending the morning planning meetings; touring of the operations center and aircraft; and talking one-on-one with scientists. The workshop ended with hands-on demonstrations of DC3-related Earth science classroom activities,

viewing of several short videos to use in their classrooms, and a demonstration of available online resources. A notebook of classroom activities from UCAR, CSU, NOAA, and NASA were provided for each represented school to share with other teachers once the school year begins, as well as thumb-drives loaded with the resources that were covered during the workshop.

An Alabama high school science teacher, Kelly Ford, was introduced to Dr. Larry Carry of UAH, through UCAR staff networking and was able to participate in some of the field research. Kelly spent a day in the field with the UAH team launching weather balloons, gaining invaluable experience to share with her students. A full account of her experience can be found on the <u>DC3 Blog :: Teacher Postcards From the Field</u>.

4.0 Internet-based Outreach

Internet-based outreach activities are crucial to any informal education program because it allows users to investigate and learn about the project at their own pace and interest level. Both the DC3 outreach website and Web 2.0 technologies use 21st Century skill sets that are being emphasized in classrooms today, to prepare the next generation of professionals effectively. Skills such as accessing useful and reliable information online; collaborating with others to share, advocate and compromise on critical issues; and using technology for global awareness in and outside of the classroom are all desirable to future employers ¹.

The content on the DC3 Internet-based outreach platforms were designed to provide multiple levels of information ranging from a broad synopsis to in-depth scientific objectives, allowing students of all ages and backgrounds to follow researchers as they pursued their scientific ambitions and gained new insights into relevant science questions related to the chemistry of the atmosphere. The ultimate goal was to get students interested and excited about atmospheric science, and to gain a better perspective of how the research provides critical information and benefits to society.

4.1 Outreach Website

The DC3 outreach website (*Figure 3*) provided a comprehensive survey of the project including science objectives, societal benefits of the research, project locations, and the research facilities. Unfortunately, website traffic metrics were unavailable and would have provided data to analyze on such metrics as most visited pages, traffic sources, and average number of pages viewed per visit.

The outreach site consisted of 7 informational pages, and one page that linked viewer to the blog.

DC3 Outreach Home Page :: http://www.eol.ucar.edu/dc3/outreach

The landing page for the DC3 outreach website provided a public-friendly description of the research objectives, so viewers could grasp the main reasons for conducting the research. The other DC3 websites (e.g. Main Project Site, Field Catalog and DC3 Science site) linked back to the outreach website and brought viewers here.



Figure 3 :: Screen shot of the DC3 outreach website, with links to the other DC3 websites prominently displayed in the black bar on top

6 Quick Questions :: <u>http://www.eol.ucar.edu/field_projects/field-projects/dc3/6-quick-questions</u>

This page was designed to be an informal way to answer basic questions that readers may have regarding the project. The questions and answers covered topics such as what layer of the atmosphere is being studied; how thunderstorms play in important role in transporting ground-level pollutants; how lightning is involved in their study; why the research locations were selected; and how the ground-based and airborne interments work together. The questions themselves were informative, enticing viewers to read more.

Platforms & Instruments :: http://www.eol.ucar.edu/field_projects/field-projects/dc3/platforms-instruments

This page provided a comprehensive outline of the research platforms and facilities used for the project, and the three base locations around the country.

Follow the GV Live :: <u>http://www.eol.ucar.edu/field_projects/field-projects/dc3/follow-the-nsf-ncar-gulfstream-v-in-real-time</u>

Viewers have commented that this was one of their favorite pages. It allowed them to download a KML file so they could e.g., watch the NSF/NCAR GV research flights in real-time on Google Earth.

¹Center for 21st Century Skills at Education Connection <u>http://www.skills21.org/</u>

Science Team :: http://www.eol.ucar.edu/field_projects/field-projects/dc3/science-team

Providing information about the broad scope of backgrounds, interests and skills of the DC3 staff involved with a project of this caliber helped the public to make a human connection with the research.

Educational Resources :: http://www.eol.ucar.edu/field_projects/field-projects/dc3/educational-resources

The Educational Resources page is a compilation of downloadable and online resources mainly for students in middle school through graduate school, provided by several groups including UCAR's Spark, MetEd, NOAA, and NASA.

In the News :: http://www.eol.ucar.edu/field_projects/field-projects/dc3/in-the-news

The public media outlets did a wonderful job of producing articles about DC3 and featuring the research objectives. The *In the News* page is one-stop location to find links to the articles and publications.

DC3 Blog :: <u>http://dc3blog.wordpress.com/</u>

See section 4.2 for a full description of the DC3 blog.

4.2 Web 2.0 Technologies

Web 2.0 technology places the user at the center of a learning experience and facilitates collaboration by sharing information. As a result, users are able to interact and engage with each other in a social media dialogue rather than a passive, one-way stream of information from the content provider to the viewer.

All DC3 outreach web-based material was designed to drive traffic to each other, creating a network of media platforms. Each online location could be successful on its own, however driving traffic from one platform to another made each individual location stronger. For example, the website clearly promoted links (*Figure 4*) the social media outlets; while the Facebook page included posts that contained links back to the website and to the blog. Each platform served a purpose and certain content was better positioned on a particular platform. For example, an article that referenced DC3 would be an



Figure 4 :: Social media links on the DC3 outreach website

appropriate post for the Facebook page, whereas *A Day in Life of a Scientist* write up from a DC3 staff member was well positioned on the blog, and then the link to the blog was posted on Facebook. In many cases, links within these articles would also drive traffic back to the website.

Facebook

https://www.facebook.com/ncareol

There were 41 DC3 related posts on the EOL Facebook page (*Figure 5*), with the first post on 27 April 2012.

While it is difficult to attribute a direct correlation between the increased number of Facebook *Likes*, and the DC3 outreach efforts, there was an increase of 61 *Likes* from 10 May - 5 August 2012, a period just before the start of the outreach efforts to several weeks after the field project.

Facebook members can selectively *Like* an organization's page, which establishes a connection between the viewer's page and the organization's page. When the organization adds a new post, it is displayed on the viewer's page for the viewer's friends to then see as well, gaining exposure to additional viewers, hence the networking aspect of social media.

Twitter

https://twitter.com/dc3_operations/

The DC3 Operation Twitter feed (*Figure 6*) was used to communicate and post updates regarding daily operations to followers allowing them to keep track of aircraft operations, easily locate interesting images from aircraft cameras, and keep track of the overall progress of the project.

During the project there were 238 tweets, or Twitter posts, followed by 127 followers. The success of this was largely due to having a dedicated operations manager posting several times a day throughout the project.

DC3 Blog

http://dc3blog.wordpress.com/

The DC3 Blog was successful in that it had close to 1300 views of 13 posts in less that 5 months (*Figure 7*). Most posts were submitted by NCAR/ACD's Frank Flocke; however several people contributed and there was wide range in topics from educational to scientific to lifestyle. The blog was also widely shared by professors and others who were involved with the project, and provided content.

Several of the blog entries were posted on the EOL Facebook page, which helped to drive traffic back to the blog, along with a link to the blog from the DC3 outreach website. The blog was hosted on Wordpress, which is an easy to use and free blog hosting service.



DC3 Research Flight 02 | 05.19.2012 (3 photos) Photos by Chris Cantrell, DC3 Principal Investigator, flying on the NSF/NCAR Gulfstream V over Oklahoma



Figure 5 :: Example of DC3 post on the EOL Facebook page.



Figure 6 :: Screen shot of the DC3 Operations Twitter account - @DC3_Operations

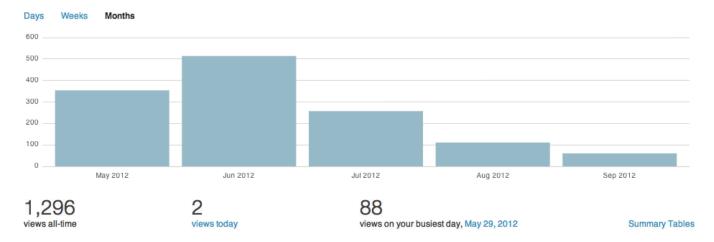


Figure 7 :: DC3 blog metrics from May - September 2012, with a total of 1,296 views.

5.0 Events

http://www.eol.ucar.edu/field_projects/field-projects/dc3/outreach-calendar

Outreach events are an important aspect of any field campaign because it creates an environment where people can interact directly with project scientists, engineers, technicians, project managers, and a host of others involved with the project. These personal interactions are vital in connecting with taxpayers, voters and the next generation of the U.S. workforce. Several outreach and public engagement activities were organized during the DC3 field campaign in Salina, Kansas to foster connections with the community and media, including a public open house and seven public speaking engagements.

Working with a local public affairs coordinator during field projects has proved to be successful in past field projects, as well with DC3. Melissa McCoy, Manager of Public Affairs at the Salina Airport Authority played a key role in organizing events because she had previously established connections within the community. She new times and days of recurring meetings of community groups, who to connect with to arrange presentations, and connections with the local media. Additionally, being manager of Public Affairs at the Salina Airport, where the DC3 Operation Center was located, she took the lead in advertising and setting up the DC3 Public Open House.

5.1 Public Open House & Media Hour

11 May 2012 :: Salina, Kansas

The Salina-area public was invited to visit the DC3 Operations Center a few days before the start of the project, to tour the aircraft, learn about the research, get a better understanding of the societal benefits of the study, and talk with DC3 project staff.

It was estimated that approximately 300 people visited during the three-hour Open House. Visitors were greeted and offered informational brochures on the project and research aircraft. Project scientists gave tours of the aircraft, discussed research objectives, and answered questions from visitors. This provided a valuable opportunity for the Principal Investigators (PIs) to talk directly with the public.



Figure 8 :: Open House visitors volunteer to help with a weather balloon launch

The MISS and MGAUS were on site for the Public Open House to do three balloon launches (*Figure 8*), with about 20 visitors at each launch. Volunteers

from the crowd were able to help with the launch by holding the balloon and sonde, releasing them when the air traffic control tower gave clearance.

Five media teams came for the media hour which was held just before the Public Open House. Scientists and staff were available for interviews, and tours of the aircraft were provided. The media teams ranged from a single journalist for a small community based television show to larger crews of journalists from the local CBS channel. Throughout the field project there was a significant amount of media coverage, all of which can be found referenced in *Appendix B*.

5.2 Radio Talk Shows

Wednesday, 9 May & Tuesday, 5 June 2012 :: Salina, Kansas

Salina-area public radio station KSAL aired talk shows that hosted the DC3 PIs twice during the campaign to heighten public awareness of the project and to invite listeners to the available public events. The first interview took place just before the project started, to increase awareness of the project within the community, as well as to specifically announce the upcoming DC3 Public Open House. The second interview at the same radio station was held a few weeks later to inform the community about an upcoming public speaking engagement at The Smoky Hill Museum.

5.3 SAFECON

14 - 19 May 2012 :: Salina, Kansas

A booth was set up at the week-long SAFECON event and vendor expo (*Figure 9*). SAFECON is a national collegiate aircraft safety competition for collegiate pilots, hosted by Kansas State University. The expo provided an opportunity to reach potential research aircraft pilots and others who may be drawn to atmospheric science and the related engineering careers. Approximately 800 students attended the vendor expo that was held in the main hangar, that also functioned as the events central meting location.

The SAFECON event was held during the first week of DC3 operations so there was much interest to see the research aircraft, which were parked out on the hangar ramp creating excitement among the SAFECON participants. An EOL/DC3 booth was displayed at the expo, providing information on the project, EOL, NCAR, NASA and DLR; and when feasible, tours of the aircraft were given to students who signed up at the booth. Throughout the week 75



Figure 9 :: Inside the SAFECON Expo hangar, where approximately 800 students used as their main meeting area

SAFECON students were able to tour the GV and DC-8 aircrafts; the DLR Falcon had yet to arrive.

5.4 Community Presentations to Civic Organizations

The Salina community was very eager and interested to hear about DC3, and the associated research aircraft. The welcoming nature of midwesterners and their quest to understand as much as they can about the weather, finding groups who were interested in hosting a DC3 speaker was relatively easy. Approximately 250 enthusiastic adults were reached by giving presentations to local civic organizations.

Presentations were given by willing and dedicated DC3 staff at seven different civic organizations in Salina including:

The Lion's Club :: Wednesday, 16 May 2012

Steve Rutledge gave a 45-minute presentation about DC3, including a question and answer session to 40 members of The Lion's Club in Salina.

The Rotary Club :: Monday, 04 June 2012

Mike Daniels gave a presentation that provided an overview of UCAR, and concluded with a summary of the science objectives of DC3, to approximately 75 members of the local chapter of the Rotary Club.

The Smoky Hill Museum :: Wednesday, 05 June 2012

Steve Rutledge gave a DC3 presentation to about 45 adult visitors at the Museum's monthly public presentation. This event was also promoted on the KSAL radio talk show by Bill Brune earlier in the week.

Men's American Business Club :: Friday, 08 June 2012

Chris Cantrell braved the early morning presentation to the Men's American Business Club Meeting, also known as the Breakfast Bandits, Salina's largest civic organization.

The Retired Enlisted Association :: Friday, 08 June 2012

Mary Barth gave a lunchtime presentation to a group of 30 senior adults who were formerly in the military.

The North Central Kansas Chapter of the American Red Cross :: Wednesday, 20 June 2012

Bill Brune was asked to speak at the local chapter of the American Red Cross' Annual Dinner. In an email exchange with the woman who coordinated this presentation, she said:

"Be sure to thank Bill again. He was great and everyone enjoyed his presentation."

Women's American Business Club :: Thursday, 21 June 2012

Mary Barth gave the final DC3 presentation to Salina's largest women's civic organization during their weekly luncheon.

5.5 Media Visits

Journalist from several sources visited the DC3 Operations Center (*Figure 10*) throughout the project, along with the journalists who visited during the Media Hour (*Section 3.1*). Accommodating their requests and scheduling interviews with the project scientists was integral in the PIP, as it resulted in several media pieces which can be found on the DC3 webpage <u>In the News</u>. See the full list of DC3 related media pieces in *Appendix B*.



Figure 10 :: Film team from Spain interviews José Meitîn in Spanish

6.0 Printed Material

Printed material served an important role in the DC3 outreach efforts because it provided information that people were able to take away and read at their convenience. Often times this material provided a link to the website where people could learn more about the project at their own pace. Printed material may also serve as a reminder to look into additional information once internet access is more convenient.

6.1 Brochure

A trifold brochure (*Figure 11*) was created to hand out to the general public as an informative overview of the DC3 project. The brochure was provided at each outreach event; public speaking engagements; the UCAR Mesa Lab Visitor Center; and the Foothills Laboratory Main Entrance. The exterior pages provided some scientific background on DC3, while the interior pages provided a brief description of the research and the critical need for this project.

A sticker for DC3 was designed for public outreach, and were a great token to



6.2 Sticker

Figure 11 :: The outside cover of the trifold DC3 brochure

hand-out at different events because it prominently displayed the domain name which helped drive traffic to the website, resulting in increased awareness of the DC3 project.

7.0 Collaborations

A key to the success of the DC3 outreach program was the ability to effectively collaborate with groups both internal and external to UCAR. Collaborating with other groups and agencies not only benefited the DC3 program by being able to link to relevant material on their sites, but they could link back to and use the content on the many pages of informational content on the DC3 outreach website.

7.1 UCAR Comms

DC3 had widespread coverage in the media, largely due to support from the UCAR Communications Office. The Communications staff is dedicated to providing news about NCAR field research, and related educational and community engagement to the broader research community, the NCAR and UCAR staff, the media, and the public.

The initial DC3 news release, *Scientists across US launch study of thunderstorm impacts on upper atmosphere*, published on 30 April 2012, primed the global media channels for follow up

coverage. Numerous articles, blog posts, public news channel videos, and other public media were as a result of that initial new release. The UCAR Communications Office was an essential driver in reaching out to many of the large-scale media channels.

7.2 UCAR Spark

Spark's overarching goal is to make an impact on public understanding of atmospheric science concepts and processes through alliances and partnerships to a national audience. Collaborating with and aligning outreach efforts with Spark benefits both program.

The Educational Resources page on the DC3 outreach website largely consists of links to educational pieces that the Spark team has developed. All activities related to the science of

DC3, which enhanced the DC3 online educational efforts, while exposing Spark's work to the general public and driving traffic to their website.

7.3 NASA

Collaborating with the NASA DC3 team was easy and proved to be very successful. As initial outreach steps were taken, a connection with the NASA outreach team was established and they provided ample information about their involvement with DC3; information about their aircraft and instruments; and helped to make connections with their staff while in the field.

The size and layout of their DC-8 aircraft allowed for small group tours, which was a highlight in the outreach efforts. The NASA staff were more than helpful and willing to guide people through, even with short notice, when they could. This kind of hands-on experiential educational opportunity for students, teachers and the public provided wonderful insight into how the atmospheric science research is conducted.





8.0 Summary

The two main objectives of the PIP, to engage students into the field of atmospheric science; and to increase public awareness of the DC3 science objectives and societal benefits, were met and exceeded by the collaborative efforts that were implemented. The mix of internet-based outreach efforts; public and media events; targeted student and teacher enrichment activities; and printed materials proved to be an effect outreach campaign for communicating DC3 science.

8.1 Lessons Learned

Deployed in the United Stated, the DC3 field project made for a very different outreach planning experience than international and global field projects. The increased interest and accessibility of groups in the community provided a plethora of opportunities. It was challenging to meet the requests of so many groups for speaking engagements and tours. There were a few groups that were politely declined due to operational and research duties. It is important to prioritize and organize events that have the greatest impact and reach the target audiences for the invested time an energy.

Establishing a relationship with a public affairs specialist in the local community in which planned outreach efforts will take place is essential. Being able to tap directly into and communicate with the local civic groups, school districts, and media outlets, is a critical resource that saves weeks of time and preparation.

This was the second campaign that offered a teacher's workshop, DYNAMO being the other. The idea to offer the workshop did not develop until the beginning of the field project, but the attendance was still strong, with the need to hold two different workshops. Teacher workshops in and around the community where field projects are located should be standard events in the education and outreach efforts for field campaigns

8.2 EOL Education & Outreach Strategic Plan Goals

Goal 1 :: Train and entrain new users to request Lower Atmospheric Observing Facilities (LAOF)

Close to 150 undergraduate and graduate students, and postdoctoral fellows had the opportunity to participate in and gain valuable experience by being involved with DC3. They were exposed to project management; interagency coordination and collaboration; data collection and management; instrument maintenance in the field; flight planning and execution; and logistics coordination, among other things. The opportunity to be immersed in an experiential learning environment of this magnitude is a very powerful and effective way to train and entrain early career scientists to potentially request the available NSF lower atmospheric observing facilities.

Goal 2 :: Establish EOL as a trusted source of education and outreach

The DC3 outreach program established EOL as a trusted source of education and outreach materials by offering a variety of opportunities to the general public, a range of students, and teachers. Again, the Public Information Program provided valuable information and opportunities to those who would otherwise probably have access to the learning opportunities. There was a high level of student involvement, partly due to the project being conducted in the U.S. providing relatively easy access to the project locations, which exposed many students to the services of EOL and the requestable facilities.

An EOL Technical Internship Program (TIP) intern was also able to go to Salina and help with computer networking in the Operations Center.

Goal 3 :: Increase the understanding of and public appreciation for observational research in the atmospheric sciences and its relevance to society

Goal 3 was clearly met by the shear numbers of people that were engaged both online and during outreach events. The nature of this field campaign allowed for exciting and captivating opportunities to engage the public.

9.0 Appendix

9.1 Appendix A :: Student Involvement Table

Deep Convective Clouds and Chemistry (DC3) Student and Postdoctoral Scientist Involvement (prepared by Mary Barth)

Undergraduate Students:		
8	U. Oklahoma	
1	UC-Irvine	
1	U. Northern Colorado	
1	U. Alabama-Huntsville	
1	Lafayette College	
1	Georgia Tech	
9	U. Oklahoma / CIMMS	
2	CIMMS / NOAA	
6	U. North Dakota	
1	Princeton U.	
1	NCAR/EOL	
1	U. California-Berkeley	
1	Deutsches Zentrum für Luft- und Raumfahrt (DLR), Germany	
34	Total	

	Graduate Students:		
3	Georgia Tech		
8	U. Colorado		
9	U. Oklahoma		
2	NOAA/NSSL		
5	U. California-Irvine		
1	State Key Laboratory for Geosciences, Guangzhou, China		
3	Pennsylvania State U.		
2	Texas Tech U.		
7	U. Alabama-Huntsville		
4	U. California-Berkeley		
3	U. Maryland		
1	U. Maryland-Baltimore County		
2	U. Rhode Island		
6	U. North Dakota		
9	Colorado State U.		
1	U. Arizona		
1	California Institute Technology		
2	Princeton		
1	U. New Hampshire		

3	Deutsches Zentrum für Luft- und Raumfahrt (DLR), Germany
4	NCAR Atmospheric Chemistry Division
77	Total

	Postdoctoral Fellows
5	NASA / Oak Ridge Associated Universities
5	U. California-Irvine
3	NOAA/ESRL and U. Colorado / CIRES
1	NOAA/GFDL
2	U. Colorado
3	U. Oklahoma / CIMMS
1	US Naval Academy
2	NCAR/ACD
2	Colorado State U.
2	Princeton U.
4	Deutsches Zentrum für Luft- und Raumfahrt (DLR), Germany
30	Total

9.2 Appendix B :: DC3 Media Release Coverage Summary



DC3 Media Release Coverage Summary Report

News Date	News Headline	Contact Name	Outlet Name
04/25/2012	Boulder scientists gear up to chase thunderstorms	Camera, Laura Snider	Daily Camera, The
04/26/2012	Boulder scientists gear up to chase thunderstorms	Laura Snider Camera	Colorado Daily - Online
04/27/2012	Boulder scientists gear up to chase thunderstorms	Laura Snider Camera	Daily Camera - Online, The
05/01/2012	Scientists across US launch study of thunderstorm impacts on upper atmosphere		EurekAlert!
05/01/2012	Scientists across U.S. launch study of t…		Supercomputing Online
05/01/2012	DC3 :: Deep Convective Clouds & Chemistry Senior Scientist Chris Cantrell talks about the NCAR project to study http://t.co/BUqv5cmX	ncareol (Earth Observing Lab)	Twitter
05/01/2012	DC3 :: Deep Convective Clouds & Chemistry Senior Scientist Chris Cantrell talks about the NCAR project to study http://t.co/UjucicQo	ncareol (Earth Observing Lab)	Twitter
05/01/2012	Scientists study of thunderstorm impacts on upper atmosphere		PhysOrg.com
05/02/2012	Study of thunderstorm effects on upper atmosphere, climate		EarthSky.org
05/02/2012	Thunderstorms and the Upper Atmosphere		Environmental News Network - Online
05/02/2012	Thunderstorm Effects on Upper Atmosphere, Study Is On		Kansas City infoZine
05/02/2012	Scientists launch nationwide study of thunderstorm effects on upper atmosphere		R&D Magazine - Online
05/02/2012	Scientists To Study Thunderstorm Effects On Upper Atmosphere		RedOrbit
05/03/2012	Thunderstorms and the Upper Atmosphere: Scientists at the National Center for Atmospheric Research (NCAR) and ot http://t.co/ADUck5ul	EnnNews (ENN News)	Twitter
05/03/2012	Thunderstorms and the Upper Atmosphere: Scientists at the National Center for Atmospheric Research (NCAR) and ot http://t.co/mUjMRoud	EnvironNewsNet (armin kaspar)	Twitter
05/03/2012	Thunderstorms and the Upper Atmosphere: Scientists at the National Center for Atmospheric Research (NCAR) and ot http://t.co/h4sm81Ob	GulfCoastSpill (Gulf Oil Spill)	Twitter
05/03/2012	Thunderstorms and the Upper Atmosphere: Scientists at the National Center for Atmospheric Research (NCAR) http://t.co/dmQGcxSS #green	PreciousPixie4U (Resa Harrison)	Twitter
05/03/2012	Thunderstorms and the Upper Atmosphere: Scientists at the National Center for Atmospheric Research (NCAR) and ot http://t.co/Rcq0E2qR	repurposeearth (repurposetheear th)	Twitter
05/04/2012	Thunderstorms and the Upper Atmosphere	Rashid Aziz Faridi	Earthy Matters
05/04/2012	Scientists Study Thunderstorm Impacts on Upper Atmosphere	Daniel L. Schiller	Pennsylvania Ag Connection

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News Date	News Headline	Contact Name	Outlet Name
05/04/2012	RECENT ADVANCES IN THE UNDERSTANDING OF NEAR-CLOUD TURBULENCE [Bulletin of the American Meteorological Society]	Todd P. Lane	TMCnet.com
05/04/2012	Thunderstorms and the Upper Atmosphere: Scientists at the National Center for Atmospheric Research (NCAR) and ot http://t.co/vQ7YqChP	gharaujo (Gustavo)	Twitter
05/06/2012	Thunderstorms Could Be Ozone Factories		Yahoo! News
05/06/2012	Thunderstorms Could Be Ozone Factories		OurAmazingPlanet.com
05/07/2012	Thunderstorms And Ozone Examined In National Center For Atmospheric Research Study	Joanna Zelman	Huffington Post, The
05/07/2012	Do thunderstorms make ozone? Researchers to map the clouds for the answer		Mother Nature Network
05/07/2012	Thunderstorms Could Be Ozone Factories	Becky Oskin	MSNBC.com
05/08/2012	Thunderstorms And Climate Change: Seeking An Ozone Connection	Nathan Heffel	KUNC-FM - Online
05/08/2012	DC3: Chemistry of Thunderstorms	Michael Finneran	NASA - National Aeronautics and Space Administration
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		FreshNews.com - San Diego/Orange County
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		Interest!ALERT
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KAIT-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KHQ-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KLTV-TV - Online
05/09/2012	KMEG 14 - News, Weather, Sports for Sioux City and Siouxland NASA Researchers Fly Into Thunderstorms in the Name of Science		KMEG-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KPHO-TV - Online
05/09/2012	KPTH FOX 44: Local News and Entertainment for Sioux City and Siouxland NASA Researchers Fly Into Thunderstorms in the Name of Science		KPTH-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KPTM-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KPTV-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KTTC-TV - Online
05/09/2012	KFXL, Fox NebraskaNASA Researchers Fly Into Thunderstorms in the Name of Science		KTVG-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KVVU-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KWES-TV - Online
05/09/2012	KWQC-TV6 News and Weather For The Quad Cities - NASA Researchers Fly Into Thunderstorms in the Name of Science		KWQC-TV - Online
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News Date	News Headline	Contact Name	Outlet Name
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KYTX-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science	NASA via PR Newswire	Markets.financialcontent.com
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		PR Newswire - Online
05/09/2012	Quincy Herald-Whig Illinois & Missouri News, SportsNASA Researchers Fly Into Thunderstorms in the Name of Science		Quincy Herald-Whig - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		RedOrbit
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science	NASA via PR Newswire	RenewableEnergyWorld.com
05/09/2012	'Hold on to your hamburgers'	Unruh, Tim	Salina Journal
05/09/2012	DC3: Chemistry of Thunderstorms		ScienceDaily
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		SpaceRef.com
05/09/2012	DC3: Chemistry of Thunderstorms	Michael Finneran for NASA Langley Research Center	Terra Daily
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WAFF-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WCAX-TV - Online
05/09/2012	WCWG 20 - Greensboro CW NASA Researchers Fly Into Thunderstorms in the Name of Science		WCWG-TV - Online
05/09/2012	21 News Now, More Local News for Youngstown, Ohio - NASA Researchers Fly Into Thunderstorms in the Name of Science		WFMJ-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WHNS-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WIS-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WLBT-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WLOX-TV - Online
05/09/2012	WLTZ 38 Columbus Georgia Regional News & CommunityNASA Researchers Fly Into Thunderstorms in the Name of Science		WLTZ-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WOIO-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WQOW-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WREX-TV - Online
05/09/2012	WRIC Richmond News and Weather - NASA Researchers Fly Into Thunderstorms in the Name of Science		WRIC-TV - Online
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05/09/2012	WSFX - FOX Wilmington, NCNASA Researchers Fly Into Thunderstorms in the Name of Science		WSFX-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WSHM-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WTLH-TV - Online
05/09/2012	WTRF 7 News Sports Weather - Wheeling SteubenvilleNASA Researchers Fly Into Thunderstorms in the Name of Science		WTRF-TV - Online
05/09/2012	Beckley, Bluefield & Lewisburg News, Weather, SportsNASA Researchers Fly Into Thunderstorms in the Name of Science		WVNS-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		WWBT-TV - Online
05/09/2012	Northern Michigan's News LeaderNASA Researchers Fly Into Thunderstorms in the Name of Science		WWTV-TV - Online
05/09/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		Sacramento Bee - Online, The
05/10/2012	NASA Researchers Fly Into Thunderstorms		AEROMORNING.COM (SITE INTERNET)
05/10/2012	'Hold on to your hamburgers'		Individual.com
05/10/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		KCAU-TV - Online
05/10/2012	'Hold on to your hamburgers'		Salina Journal - Online
05/10/2012	NASA Researchers Fly Into Thunderstorms in the Name of Science		Webnewswire.com/
05/11/2012	NASA, scientists study weather in central Kansas skies		KWCH-TV - Online
05/11/2012	Thunderstorm study based in Salina	Hunter, Chris	Salina Journal
05/12/2012	Thunderstorm study based in Salina		Individual.com
05/12/2012	NASA, scientists study weather in central Kansas skies		KSCW-TV - Online
05/12/2012	Thunderstorm study based in Salina		Salina Journal - Online
05/13/2012	Salina airport to host 6-week thunderstorm study		KIRO-TV - Online
05/13/2012	Salina airport to host 6-week study of how thunderstorms suck up and distribute pollution		Republic - Online, The
05/13/2012	Salina airport to host 6-week thunderstorm study		Times Union
05/13/2012	Salina airport to host 6-week thunderstorm study		WFTV-TV - Online
05/13/2012	Salina airport to host 6-week thunderstorm study		WJTV-TV - Online
05/13/2012	Salina airport to host 6-week thunderstorm study		WSLS-TV - Online
05/13/2012	Salina airport to host 6-week thunderstorm study		WHIO-TV
05/14/2012	NASA Researchers Fly Into Thunderstorms In The Name of Science		Aero-News Network
05/14/2012	Salina airport to host 6-week study of how thunderstorms suck up and distribute pollution		Daily Journal - Online

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News Date	News Headline	Contact Name	Outlet Name
05/14/2012	NOAA, PARTNERS KICK OFF MULTI-STATE STUDY OF HOW THUNDERSTORMS AFFECT UPPER ATMOSPHERE		Federal News Service
05/14/2012	Salina airport to host 6-week thunderstorm study		San Antonio Express-News - Online
05/14/2012	Salina airport to host thunderstorm study		Topeka Capital-Journal - Online
05/15/2012	Salina airport to host 6-week thunderstorm study		El Dorado Times - Online
05/15/2012	NOAA, Partners Kick Off Multi-state Study of How Thunderstorms Affect Upper Atmosphere	shirkop4@shirew eb.biz (Press Release)	eNews Park Forest
05/15/2012	NASA to study chemistry of thunderstorms		KOLD-TV - Online
05/15/2012	DC3: Chemistry of Thunderstorms	Paul Douglas Updated	Star Tribune - Online
05/15/2012	NASA to study chemistry of thunderstorms		WOIO-TV - Online
05/16/2012	NASA to study chemistry of thunderstorms		KFVS-TV - Online
05/16/2012	NOAA, partners kick off multi-state study of how thunderstorms affect upper atmosphere		WBOY-TV - Online
05/16/2012	MT @DC3_Operations: Follow the thunderstorm mission & be part of the action! We've made it easy: http://t.co/uhDzJl2w #weather #wx #research	AtmosNews (NCAR+UCAR Science)	Twitter
05/17/2012	NASA campaign studying chemistry of thunderstorms		Aerotech News and Review - Online
05/17/2012	Major New Project Targets Mystery of Thunderstorms	Andrew Freedman	Climate Central
05/17/2012	RT @AtmosNews MT @DC3_Operations: Follow the thunderstorm mission & be part of the action! http://t.co/EoGMI2St #weather #wx #research	sarahpmaxwell (SarahPerfaterM axwell)	Twitter
05/17/2012	May 17, No flight operations today, please check the DC3 data catalog for today's plan of the day. http://t.co/WQLyax9q	DC3_Operations (DC3 Operations)	Twitter
05/19/2012	May 19 Operations plan of the day, GV and DC8 to SW Oklahoma. http://t.co/rYfPnkbo	DC3_Operations (DC3 Operations)	Twitter
05/21/2012	May 21 - Today's Operations call for a flight to Alabama http://t.co/rYfPnkbo	DC3_Operations (DC3 Operations)	Twitter
05/21/2012	RT @DC3_Operations: May 21 - Today's Operations call for a flight to Alabama http://t.co/rYfPnkbo	cschultzwx (Chris Schultz)	Twitter
05/21/2012	RT @DC3_Operations: May 21 - Today's Operations call for a flight to Alabama http://t.co/rYfPnkbo	NSSL (NSSL)	Twitter
05/21/2012	RT @DC3_Operations: May 21 - Today's Operations call for a flight to Alabama http://t.co/rYfPnkbo	J_Brasher (John Brasher)	Twitter
05/21/2012	May 21, Here we go Alabama!, follow our research flight in real time http://t.co/It5oVZ6C	DC3_Operations (DC3 Operations)	Twitter
05/21/2012	What scientific #stormchasing looks like: @DC3_Operations: Here we go Alabama!, follow our research flight in real time http://t.co/uhDzJl2w	AtmosNews (NCAR+UCAR Science)	Twitter

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05/21/2012	RT @DC3_Operations: May 21, Here we go Alabama!, follow our research flight in real time http://t.co/lt5oVZ6C	cschultzwx (Chris Schultz)	Twitter
05/21/2012	Follow DC3 research aircraft flying north Alabama & central Tenn today: http://t.co/NAOzb7X1 #alwx @simpsonwhnt @Spencer_Denton	uahsevere (UAH Severe Weather 斥)	Twitter
05/21/2012	RT @DC3_Operations: May 21, Here we go Alabama!, follow our research flight in real time http://t.co/lt5oVZ6C	NSSL (NSSL)	Twitter
05/21/2012	RT @DC3_Operations: May 21, Here we go Alabama!, follow our research flight in real time http://t.co/lt5oVZ6C	J_Brasher (John Brasher)	Twitter
05/22/2012	May 22 - Day off for DC3 aircraft facilities, May 23 will be a maintaenance day, check daily plan http://t.co/rYfKPKau	DC3_Operations (DC3 Operations)	Twitter
05/24/2012	Weather research conducted in Tennessee Valley » The News-Courier in Athens, Alabama		News-Courier - Online, The
05/25/2012	Salina-based planes aid in study of thunderstorms, ozone	Finger, Stan	Wichita Eagle
05/26/2012	Salina-based planes aid in study of thunderstorms, ozone		Individual.com
05/26/2012	Salina-based planes aid in study of thunderstorms, ozone		Middle East North Africa Financial Network (MENAFN)
05/26/2012	Riders on the storms	Unruh, Tim	Salina Journal
05/27/2012	Riders on the storms		Individual.com
05/27/2012	Salina-based planes aid in study of thunderstorms, ozone		PredictWallStreet.com
05/27/2012	Riders on the storms		Salina Journal - Online
05/28/2012	每日卫星照:飞机高空取样超级单体雷暴(图)		Jiangmen Daily
05/29/2012	Scientists suspect storms polluting		Gannett
05/29/2012	每日卫星照:飞机高空取样超级单体雷暴(图)		hinews.cn
05/29/2012	每日卫星照:飞机高空取样超级单体雷暴(图)		Jiangmen Daily - Online
05/29/2012	飞 机高空取 样超级单体雷暴(图)		Yahoo! Tech China
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Alexandria Daily Town Talk - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Battle Creek Enquirer - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Baxter Bulletin - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Bucyrus Telegraph-Forum - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Cincinnati Enquirer - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Daily Advertiser - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Daily News Journal - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Daily Record - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit		Daily Times - Online, The

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News Date	News Headline	Contact Name	Outlet Name
05/30/2012	Scientists suspect thunderstorms as climate culprit		Daily World - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Democrat and Chronicle - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Des Moines Register - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Desert Sun - Online, The
05/30/2012	Pollution Thunderstorm Chasers on the Hunt		Discovery News
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Florida Today - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Fremont News Messenger - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit		Great Falls Tribune - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Guam Pacific Daily News - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Hattiesburg American - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Herald Times Reporter - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Jackson Sun - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Journal & Courier - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Journal News - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Lancaster Eagle-Gazette - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Lansing State Journal Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Leaf-Chronicle - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Livingston County Daily Press and Argus - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Mansfield News-Journal - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit		Marshfield News-Herald - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	myCentralJersey.com
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	News Press - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	News-Herald - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	News-Star - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit		Oshkosh Northwestern - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Port Huron Times Herald - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Poughkeepsie Journal - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit		Reporter - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Sheboygan Press - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	St. Cloud Times - Online

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05/30/2012	Scientists suspect thunderstorms as climate culprit		Stevens Point Journal - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Tallahassee Democrat Online
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Times - Online, The
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Times Recorder - Online
05/30/2012	Scientists suspect thunderstorms in pollution	Doyle Rice	TucsonCitizen.com
05/30/2012	Scientists suspect storms polluting	Rice, Doyle	USA Today
05/30/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Visalia Times-Delta - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit		Wausau Daily Herald - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit		WBIR-TV - Online
05/30/2012	Scientists suspect thunderstorms as climate culprit		Wisconsin Rapids Daily Tribune - Online
05/31/2012	Scientists track pollution spread by thunderstorms		Associated Press (AP) - Atlanta Bureau
05/31/2012	Scientists track pollution spread by thunderstorms		Associated Press (AP) - Denver Bureau
05/31/2012	Scientists track pollution spread by thunderstorms		Associated Press (AP) - Montgomery Bureau
05/31/2012	Scientists track pollution spread by thunderstorms		Associated Press (AP) - Oklahoma City Bureau
05/31/2012	Scientists suspect thunderstorms as climate culprit	Doyle Rice	Detroit Free Press - Online
05/31/2012	Scientists Suspect Thunderstorms as Climate Culprit Sci-Tech Today		Sci-Tech Today
05/31/2012	Les orages pourraient contribuer au réchauffement climatique		SLATE.FR (SITE INTERNET)
05/31/2012	Scientists Suspect Thunderstorms As Climate Culprit		WUSA-TV - Online
05/31/2012	New research program hopes to learn more about thunderstorms and their impact on upper- atmosphere chemistry: http://t.co/02PFv9IO	WunderAngela (Angela Fritz)	Twitter
05/31/2012	New research program hopes to learn more about thunderstorms and their impact on upper- atmosphere chemistry: http://t.co/8C8vbqE7	angelafritz (Angela Fritz)	Twitter
06/01/2012	Scientists track pollution spread by thunderstorms		al.com
06/01/2012	Scientists track pollution spread by thunderstorms	Anderson Independent Mail	Anderson Independent-Mail - Online
06/01/2012	Scientists track pollution spread by thunderstorms		Cedartown Standard - Online
06/01/2012	Scientists track pollution spread by thunderstorms		Cherokee Tribune - Online
06/01/2012	Scientists track pollution spread by thunderstorms		Columbus Ledger-Enquirer - Online
06/01/2012	Scientists track pollution spread by thunderstorms		Daily Comet - Online, The
06/01/2012	Scientists in Alabama, other states explore how thunderstorms spread pollution		Daily Journal - Online
06/01/2012	Scientists track pollution spread by thunderstorms		Denver Post - Online, The
06/01/2012	Scientists track pollution spread by thunderstorms	Associated Press	Enid News & Eagle - Online

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News Date	News Headline	Contact Name	Outlet Name
06/01/2012	Scientists track pollution spread by thunderstorms		Gadsden Times - Online, The
06/01/2012	Scientists track pollution spread by thunderstorms		KFDA-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms	Copyright 2012 The Associated Press. All rights reserved. This	KGWN-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		KIRO-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms	Associated Press	KKCO-TV - Online
06/01/2012	Scientists Track Pollution Spread By Thunderstorms		KMGH-TV - Online
06/01/2012	Minneapolis News and Weather KMSP FOX 9Scientists track pollution spread by thunderstorms		KMSP-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		KOAM-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		KOKH-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		KOTV-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		KRMG Online
06/01/2012	Scientists track pollution spread by thunderstorms		KSWO-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		KTEN-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		KTUL-TV - Online
06/01/2012	Scientists Track Pollution Spread By Thunderstorms In 3 States Including Oklahoma	Associated Press	KWTV-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		Ledger - Online, The
06/01/2012	Scientists track pollution spread by thunderstorms		Marietta Daily Journal - Online
06/01/2012	Scientists track pollution spread by thunderstorms	Associated Press	Montgomery Advertiser - Online
06/01/2012	Scientists track pollution spread by thunderstorms	Associated Press	Prattville Progress - Online
06/01/2012	Scientists track pollution spread by thunderstorms		Press-Register
06/01/2012	Scientists in Alabama, other states explore how thunderstorms spread pollution		Republic - Online, The
06/01/2012	Scientists track pollution spread by thunderstorms		Rome News-Tribune - Online
06/01/2012	Scientists track pollution spread by thunderstorms		Telegraph - Online, The
06/01/2012	Scientists in Alabama explore how thunderstorms spread pollution		Times Daily - Online
06/01/2012	Scientists track pollution spread by thunderstorms	Associated Press	Tulsa World - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WAFF-TV - Online
06/01/2012	Atlanta News, Weather, Traffic, and Sports FOX 5 Scientists track pollution spread by thunderstorms		WAGA-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WAKA-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WBRC-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WDEF-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WFTV-TV - Online
06/01/2012	CBS Atlanta 46Scientists track pollution spread by thunderstorms		WGCL-TV - Online

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News Date	News Headline	Contact Name	Outlet Name
06/01/2012	Scientists track pollution spread by thunderstorms		WHIO-AM - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WHLT-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WIS-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms	Associated Press	WJCL-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WJSU-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WJTV-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WKRN-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WLOX-TV - Online
06/01/2012	New York News New York Breaking News NYC HeadlinesScientists track pollution spread by thunderstorms		WNYW-TV - Online
06/01/2012	Scientists Track Pollution Spread by Thunderstorms	Associated Press	WPMI-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WRCB-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WSB-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WSFA-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WTOC-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms	©2012 Associated Press. All rights reserved. This material	WTVA-TV - Online
06/01/2012	Scientists track pollution spread by thunderstorms		WTVM-TV - Online
06/01/2012	Scientists Track Pollution Spread by Thunderstorms		www.wjtc.com
06/02/2012	Scientists track pollution spread by thunderstorms		Greenfield Daily Reporter - Online
06/02/2012	Scientists Suspect Thunderstorms as Climate Culprit	Doyle Rice	Top Tech News
06/03/2012	Scientists track pollution spread by thunderstorms		Daily Journal - Online
06/03/2012	Riders of the storm		Watertown Daily Times - Online
06/09/2012	UAH students, scientists study thunderstorms up close	McLaughlin, Budd	Birmingham News
06/10/2012	When storms roll in, University of Alabama in Huntsville researchers roll out		al.com
06/11/2012	Scientists track pollution spread by thunderstorms		Foster's Daily Democrat - Online
06/18/2012	ILA 2012: Mit dem DLR in die Zukunft fliegen		Fair-news.de
06/18/2012	ILA 2012: Mit dem DLR in die Zukunft fliegen		innovations-report
06/18/2012	ILA 2012: Mit dem DLR in die Zukunft fliegen		Presseportal.de - Online
06/18/2012	ILA 2012: Mit dem DLR in die Zukunft fliegen	News Aktuell	Prestige Cars Magazin

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