MESO Monthly Newsletter

Welcome to the dog days of summer. Yes, we're in that wonderful period of slow moving weather systems, high humidity and high heat...with only intermittent relief. Of course, there are and will be occasional severe weather outbreaks, but most of us that chase the land stuff are lazing around dreaming of spring with its warm air/cold air clashes, or looking to that briefer period of time in the early autumn when they revisit many parts of the country.

Dog days. What are they? It's really kind of interesting how the term evolved. Webster's dictionary defines the term as: the period between early July and early September when the hot sultry weather of summer usually occurs in the northern hemisphere. However, to go back to the origins of the term Dog Days, we must go back a bit further. We are all familiar with the constellations, and most of us know of the constellation Canis Major. The brightest star in this constellation is Sirius. Sirius becomes absorbed in the suns light during July and August, depending on one's location. It was once believed in ancient Roman times that Sirius was actually a heat giving body, and that when it "rose and set" with the sun, (technically termed in "conjunction with the sun" its heat was added to the heat radiated by the sun, causing the hot weather of mid summer. Over the years, this time frame evolved into the period of time between July 3 and August 11, and the term Dog Days is still applied.

Many MESO members chased long and strong in June and July, and Chris Rozoff and his lady, as well as Josh Jans tagged that storm in Nebraska that yielded the all-time record hailstone. The June 22 storm produced a hailstone 7 inches in diameter and 18.75 inches in circumference in Aurora, NE. Jay Lawrimore of the climate data center said the Aurora hailstone didn't break the record for the heaviest hailstone, however. 'It was hard for us to get an accurate weight for this stone because a chunk of it hit the gutter of a house and 40 percent of it was lost," he said. "Also, we think some of the stone's mass might have melted before it was preserved in freezing conditions."

Though the traditional "storm season" slows this time of the year, there are plenty of things just now firing up. Hurricane season is well underway, and for fans of those tropical weather giants, it has been a dynamic season. At the close of July, we have already had 7 Depressions, 4 named storms, and 2 hurricanes… and the peak of the Tropical Atlantic season is yet to come!

You may have also heard the word "lightning season" bantered about. To the best of our ability to understand this, a convenient frame of reference would probably be "lightning DANGER season". This would be the period of time when people are most often outdoors coinciding with a period of high thunderstorm potential. Lightning is the one area of severe weather that seems to render steady or even increasing injuries and fatalities, as there are more and more outdoor and water related activities than ever before. There is a huge movement towards athleticism, and more and more people are golfing, jet skiing, parasailing, jogging, bike riding, hang gliding, rock climbing, surfing, boogie boarding, etc. For those of you who have not read our Lightning article at *www.mcwar.org*, you owe it to yourselves and your families to read it. It offers not only an introduction to understanding what lightning IS, but lightning safety. Please, if you are one of those people who think that wearing rubber soled shoes will prevent you from being harmed by lightning, drop in at *www.mcwar.org*, hit the ARTICLES button, and read “Intro to Lightning and Lightning Safety”. (Sorry, but an electric spark that has just punched through a few miles of insulated air will have no problem finding you in your Nikes).

And of course, we have Fire Weather to watch, Fire Weather's definition combining the weather that produces wild fires as well as the weather wild fires produce. An introduction to understanding Fire Weather is also posted in the ARTICLES section at *www.mcwar.org*

There have been reports of wonderful displays of Aurora Borealis, and we have the mid August Perseids meteor shower to watch as well. One of our newer members, Shawn Hitner, unearthed the following article related to the subject of "other things to look for in the sky until next spring" :

> This month and next, Earth is catching up with Mars, an encounter that will culminate in the closest approach between the two planets in recorded history. Never again in our lifetime will the Red Planet be so spectacular. The next time Mars may come this close is in 2287. Due to the way Jupiter's gravity tugs on Mars and perturbs its orbit, astronomers can only be certain that Mars has not come this close to Earth in the last 5,000 years but it may be as long as 60,000 years. The encounter will culminate on August 27th when Mars comes to within 34,649,589 miles and will be (next to the moon) the brightest object in the night sky. It will attain a magnitude of -2.9 and will appear 25.11 arc seconds wide. At a modest 75-power magnification Mars will look as large as the full moon to he naked eye.
>
> Mars will be easy to spot. At the beginning of August Mars will rise in the east at 10 p.m. and reach its azimuth at about 3 a.m. But by the end of August when the two planets are closest, Mars will rise at nightfall and reach its highest point in the sky at 12:30 a.m. That's pretty convenient when it comes to seeing something that no human has seen in recorded history. So, mark your calendar at the beginning of August to see Mars grow progressively brighter and brighter throughout the month. No one alive today will ever see this again.

For those of you unfamiliar with light magnitude, Mars usually shines at magnitude +0.1 on a scale used by astronomers to denote brightness. Brighter objects get lower numbers. (Overhead in the evening, for example, is Jupiter, the brightest point of light in the night sky at magnitude -2.1. The full moon is –13.)

Other weather related news: The Bush administration has launched an international conference to learn more about, among other things, severe weather, in a daylong conference comprised of scientists from over 30 nations. Secretary of State Collin Powell: "Think of ... the lives that could be saved and the misery avoided if disaster managers in earthquake, flood or hurricane-prone regions could have many days or even weeks of advance warning." Well, though we applaud any progress in the area of early warning, we at MESO fervently hope that someone from one of those 30 nations comes up with a way to make people actually PAY ATTENTION to not only the warning systems they hope to achieve, but those already in effect.

MEMBER NEWS

Chris Rozoff spent the last three weeks of July at UCLA, where he was invited to attend a prestigious summer short-course on various aspects of advanced mathematics and computational numerics. We await his return so he can regale us with tales from his experience.

Josh Jans tagged another tube on July 14. Josh writes "A long lived supercell was responsible for producing a number of tornado touchdowns in south central Minnesota. The majority of the damage reports came out of Brown and Blue Earth County including areas in and near Searles, Lake Crystal, Mankato, St.Clair and Waseca. Josh, as you know, heads up our university affiliate group in Minnesota. We're really proud of them, and you can catch their web site at www.mnchasers.com

Brian McNoldy has been cranking out the Tropical Update emails. Don't forget the resource available at http://www.mcwar.org/gallery/tropics/tropics.html, where you can find everything you'd need to satisfy your thirst for tropical Atlantic knowledge, and archives of all the tropical updates. You can view a 4-hour radar loop that he made of Hurricane Claudette making landfall (from the HGX and

CRP NEXRADs) at http://www.mcwar.org/gallery/tropics/claudette_radar_1227-1642.gif . On July 23, Brian was invited to a small retreat in the mountains of north central Colorado at Bill Gray's cabin (what better place to study tropical weather??). The seven attendees spent the day pondering tropical cyclones and swapping stories and memories of storms past. Okay, and eating. People in the photo are: Ray Zehr, Stacey Seseske, Matt Eastin, Bill Gray, John Knaff, Brian McNoldy, and Phil Klotzbach. *Editors note: OK, I'm a bit star struck here. Professor Gray has worked in the observational and theoretical aspects of tropical meteorological research for more than 40 years. Most of this effort has gone to the investigation of mesoscale tropical weather phenomena. He has specialized in the global aspects of tropical cyclones for his entire professional career. Dr Gray received his Ph.D. from the University of Chicago, Dept. of Geophysical Sciences in 1964. He has been with Colorado State University's Department of Atmospheric Science since 1961, and has been a professor since 1974. Dr. Gray's hurricane forecast has gained international attention, and won him the Neil Frank Award of the National Hurricane Conference in 1995. He publishes his yearly hurricane forecasts for the Gulf of Mexico, Florida, and the East Coast to the web. His current forecast may be viewed under at http://hurricane.atmos.colostate.edu/Forecasts*

Congratulations to Chris Howell on his presentation on severe weather safety to a church group of over 100 kids from age 5 to 18, and accompanying adults. Chris writes: "Got a chance to do a presentation for the first time, and to say the least I had a blast. There were approximately 75 grade school children there, and I must have answered at least 2 questions from each one of them. This was a group of scouts from a friend's church, and they were doing a section on weather. They were amazed at the damage photos I showed them, as well as a couple prints of the satellite data we use, and the different types of radar images. I would recommend anyone that hasn't done this yet to do it. Nancy was right. You will have a good feeling about the group and what we stand for…" This was Chris' first public presentation, and he got rave reviews. Great job, Chris.

Nancy Bose has been dividing her time between trying to get pictures and text together for a MESO PowerPoint presentation that Randy is going to produce, putting the finishing touches on a storm safety article for children, and random acts of fundraising.

On the subject of fundraising, Jason Sebastian had some emergency repairs to ECHO, and requests that anyone wishing to send a tax deductible donation to MESO to be applied to helping defray those expenses can do so by sending it to him at:

Jason Sebastian
185 Blange Rd.
Highland Heights, KY 41076

ECHO is currently serving the community as a research vehicle, and also as a mobile classroom for school children who visit it and learn from it.

Thanks to Randy Denzer for making the dream of MESO team shirts a reality. We now have team shirts with the new MESO logo emblazoned on each one of them. Many thanks to Jeff Basalyga at *fanciwork.com* for his patience and help in putting our logo to its most recent good use.

Congratulations to Deb Kuhl (McKay) on her marriage to John Kuhl. We're all very happy for them and both their families and wish them the best for years to come.

Deanna Hence has another month left at her internship at NCAR in Boulder, CO. Her work has focused on previous VORTEX data and some new data from BAMEX. After the internship is over, she returns to Univ. of Michigan to finish her senior year of college, then plans to attend graduate school for atmospheric science (maybe CSU??).

So as you can see, most of us are staying active and involved, working hard as always, but enjoying it immensely. There is nothing more invigorating than exhausting yourself on that which you love, with those that you care about.

MESO
www.mcwar.org