Greater St. Louis Chapter AMS Meeting Minutes - December 9, 2004

The December 2004 meeting of the Greater St. Louis Chapter of the American Meteorological Society was held on Thursday, December 9, 2004 at the Grappa Grill restaurant in St. Charles, Missouri. Over 20 members were in attendance and enjoyed their off the menu dinners. Cpt. Brad Schrump began the business meeting at 8:20 pm cst.

Reports

Lou Hull read the minutes of the December meeting Guido's Pizzeria and Tapas with Dr. Greg Mann. They were accepted as read.

Ron Przybylinski delivered the Treasury Report and reported revenue exceeding expenses by $110.00 raising the balance to $1214.80 in the checking account and $159.39 in the chapter savings account.

Old Business

There was no old business.

New Business

Ron Przybylinski reported that we moved our February 2005 meeting to early March 2005 to be able to host General Stickford and Dr. Louis Uccellini with two March meetings. The chapter members discussed of having the early March meeting at Scott AFB with a tour of the Tanker Support Group.

Ron made a motion to chapter members to move $300.00 from the AMS local chapter checking account to the local chapter savings account. The membership approved moving $300.00 from the local chapter checking to savings account.

Speaker

Ron Przybylinski introduced the speaker Dr. Ronald Rinehart. His talk was entitled "**Future of Weather Radar."**

Dr. Rienhart has a long history of radar research and discussed its evolution as a meteorological tool. After its conceptual development in the early 1920's by Young and Taylor, its languished until World War II as a practical tool. After the discovery of the magnetron, it emerged as an invaluable airborne instrument.

After World War II, radar evolved into a meteorological tool. In the mid 1950s the WSR-57 conventional radar became the standard for the U.S Weather

Bureau. All analysis was manual.

The Byers/Braham 1950 Thunderstorm Project, the National Hail Research Project (NHRE), and Metromex around St. Louis helped defined many radar to weather parameterizations still used today.

In the 1970s, Doppler radar and polarization deepened our understanding of storms with rotation and multi-phase precipitation. Mobile Doppler radar systems began to track detailed velocity fields with strong and severe thunderstorms. The age of the Storm Chaser also arrived during this period. In the 1980s the National Weather Service, Department of Defense, and Federal Aviation Administration tested and standardized a 10 cm Doppler radar and named it the WSR-88D The system included a graphical interface, time-lapse imaging, and complete digital archiving and retrieval.

Dr. Rinehart projected that future radar systems will incorporate polarization and rapid scan. This will deduce the size, type and orientation of storm hydrometeors. Defining icing and hail accurately may be possible. Rapid scan antennas would consist of phased arrays and multi elevation angles for sector scans. Storm details would be three dimensional in real time.

Before ending his presentation, Dr. Rienhart entertained us with bird false echoes. Many early morning circular expanding rings were evident in his radar images. He showed a dozen rings in some of his composite reflectivity images from the Midwest and Southeast U.S. Dr. Rienhart's last fame was a commercial for his new book and his sundial business. He discussed the unique construction of each sundial and shared the story of his first sale. He also sold all the books he had brought to the members.

Ron thanked Dr. Rinehart for a very informative presentation. Ron ended the business meeting at 9:35 pm CST.

Lou Hull / Secretary