

# Project Atmosphere 2008

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For two weeks in July, 2008 I was given the opportunity to learn about the fascinating world of American meteorology through an annual American Meteorological Society (AMS) Education workshop titled "Project Atmosphere". The Program's new director, Dr. Jim Brey, welcomed the participants: eighteen secondary school teachers from across North America. The workshop, sponsored by the National Oceanic and Atmospheric Administration (NOAA) and the National Science Foundation (NSF), was held at the National Weather Service Training Center (NWSTC) in Kansas City, Missouri. I am a grade 12 geography teacher from École Panorama Ridge Secondary School in Surrey, British Columbia and the thirteenth Canadian to be selected by the Canadian Meteorological and Oceanographic Society (CMOS) and the Canadian Council for Geographic Education (CCGE) to represent Canada at this event. I was accompanied by teachers from California, Oregon, Colorado, Kansas, Minnesota, Massachusetts, New York, Maryland, Virginia, Tennessee, North Carolina and Delaware.

## ***Topics Covered***

AMS staff developed and delivered an intense, interactive fourteen-day workshop covering a variety of subjects. Topics of study included the atmosphere, oceans, solar radiation, weather, climate, weather systems, clouds, the Coriolis effect, El Niño, La Niña, hazardous weather conditions, storms, lightning, hurricanes, tornadoes, automated surface observation systems, aerosondes, radiosondes, radar, weather satellites, satellite imagery, general forecasting, and monitoring for aviation purposes.

Presentations on the topics listed above were delivered by professionals in the meteorology field. Keynote speakers included Dr. Louis Uccellini, Director of the National Center for Environmental Prediction (NCEP); Dr. Joseph Schaefer, Director of the Storm Prediction Center in Norman, Oklahoma; and General David L. Johnson, Director of the National Weather Service (NWS) in Silver Spring, Maryland. Unfortunately, Mr. Max Mayfield, Director of the Tropical Prediction Center in Miami, Florida was unable to present at the workshop as he was detained by Hurricane Fay.

## ***Some Interesting Facts:***

- The folk wisdom that a southwest corner of a structure is the safest place for shelter during a tornado is FALSE (Schaefer, 2008).
- The number one greenhouse gas found in the atmosphere is water vapour (Uccellini, 2008).
- The number one export from Canada is nasty weather (Everyone, 2008).
- The average warning lead time for tornadoes is 16 minutes, but the longer the warning period the public gets the less likely they are to heed it (Schaefer, 2008).

## ***Into the Field***

Educational modules and a summary of classroom application procedures accompanied each lecture or presentation. Evening sessions allowed for collegial discussion, Royals baseball games, listening to Blues music, and sharing of ideas. I had the opportunity to share British Columbia's curricular expectations for

Geography 12 and Earth Science as well as to answer classmates' questions regarding our educational and health care systems.

Daily presentations and lessons were further complemented by a field trip to the National Weather Service (NWS) station in Topeka, Kansas, where we had the opportunity to witness real-time surface chart and satellite imagery analysis, as well as a radiosonde launch. During our visit the office issued a tornado warning for a few adjacent counties, which instantly appeared on CNN and the weather radios of the affected counties. A second field trip took us to the National Aviation Weather Center in Kansas City, Missouri. There we had the opportunity to observe surface and upper level weather conditions via radar and satellite imagery. Meteorologists work at this facility twenty-four hours a day, seven days a week. It was amazing to discover that there is a satellite that provides a live view of the entire Northern Hemisphere.

### ***What I have brought back***

In the end, I learned a great deal about the American education system. I was taught by some amazing teachers and gained new appreciation for the complexities of weather forecasting.

The information and materials gathered during this two-week experience will be shared with fellow teachers and students in the Surrey School District. My goal is to increase their understanding of the science behind meteorology, promote recent technological advances, and encourage them to further explore and possibly pursue this evolving and influential field.

I am truly grateful to CMOS and the CCGE for supporting my participation in the program. Hopefully, Canadian interest and participation will continue for years to come.

**Matteo Babini**



Matteo Babini, holding his breath under the high water mark, in Missouri City, Missouri.



Matteo Babini in front of the National Weather Service building in Topeka, Kansas.