

International Workshop on Global Dimming and Brightening

- **10–14 February 2008**
- **Ein Gedi, Israel**
- **Hosted by Israel Science Foundation**
- **Meeting summary reported in EOS
(Martin Wild co-author)**

Three Major WGs/Topic Areas

- **Measurements of dimming and brightening components**
- **Trends between aerosols, clouds, precipitation and radiation**
- **Implications for understanding present and future climates.**
- **WGs charged with determining:**
 - **Current state of knowledge**
 - **Gaps in knowledge**
 - **Research recommendations to fill gaps**

GDB Workshop Group



Experienced the local “color”



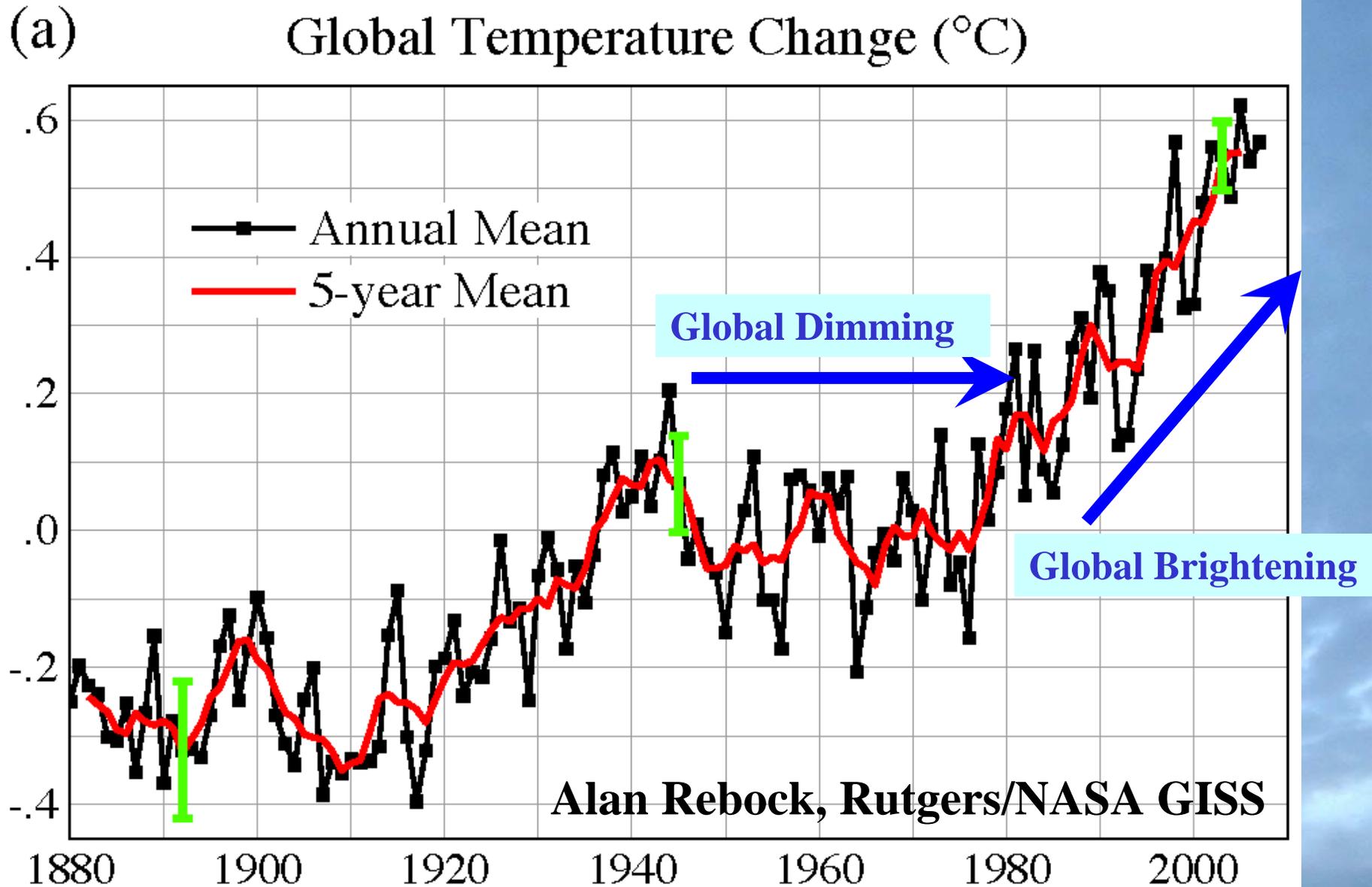
GDB Workshop Outcomes

- Agree on the name “Global Dimming and Brightening”
- Define GDB as: “Decadal changes in downwelling solar radiation reaching the Earth’s surface.”
- Agree that it is a real phenomenon
 - Tendencies from SW, satellite, pan evaporation, earthshine, etc. all agree
- Now need to determine the causes of GDB

GDB Workshop Outcomes

- **JGR Special Issue on Global Dimming and Brightening**
- **Papers currently in review**
- **Should hit print in about a year**

Climate Impact



BSRN Role

- **BSRN recognized as a world leader in surface radiation measurement activities**
- **Agreement that longer, better distributed surface radiation measurement records are needed.**
- **As we have noted, there is a particular lack of measurements over the worlds oceans**

ARM Role

- **GDB is real, it is significant, it is not being well represented in the GCMs**
- **Its cause has a major cloud component**
 - **And is regional in details**
- **ARM is best suited to study these cloud (and aerosol) causes**
- **GDB is a “research gorilla” looming on horizon of community awareness**
- **ARM can not only hop on the GDB bandwagon, I really believe that ARM can lead the parade!**

GDB Talk

- **Tuesday Atmospheric State Breakout**
- **9:30 am**



**10TH BSRN SCIENTIFIC
REVIEW AND WORKSHOP**

7-11 July 2008

De Bilt, The Netherlands

BSRN Workshop

Hosted by KNMI,
Dr. Wouter Knap



BSRN Workshop

- **Over 60 BSRN station managers, data users and experts in the field of surface radiation measurements attended**
- **More than 50 scientific talks and 20 posters were given**
- **As of early 2008, BSRN has 3,941 site-months of data in the archive from 39 ground sites located on all continents; the earliest data start in 1992.**

New BSRN Archive

- **Moved from the Federal Institute of Technology Zurich (ETHZ) to Alfred Wegener Institute (AWI) in Bremerhaven, Germany in June 2008**
- **Under the direction of Dr. Gert König-Langlo**
- **Many issues are being addressed as part of this transition**

Highlights

- **New BSRN sites:**
 - **4 in Brazil - Rolim de Moura, Brasília, Petrolina, and São Martinho da Serra (already Florianopolis and Balbina).**
 - **CENER (Pamplona, Spain)**
 - **Eureka (Nunavut, Canada)**
- **Two new Working Groups:**
 - **Cold Climate Measurement Issues**
 - **Long-Term Data Set Issues and Analyses**

Parting Shots

- **BSRN serves in international incubation of surface radiation observational ideas**
 - anchor point for international efforts
 - strong US support
 - ARM recognized as major, important contributor
- **Enthusiasm around new archive activities**