



44th Global Monitoring Annual Conference

Boulder, Colorado

May 17-18, 2016





Housekeeping



- **Poster session, 5:00-8:00 pm today!**
 - Posters are being collected at the registration table. Poster tubes stored in the "hallway" on the left of the stage.
- **Agendas are available at the desk and are posted outside the room and behind the food table.**
 - We have memory sticks with the full pdf set of abstracts available to borrow.
 - For those without e-access, we do have some printed abstract booklets available as well. Please ask Julie.
- **A few printed abstract books are kept at the desk for quick reference.**
 - Wireless access throughout the building
 - DSRC connection
 - Username: gmac
 - Password: noaagmac
- **Lunches Delivered here.**
 - Sign up and pay at the registration table.
 - Drop-dead time is morning break
- **Toilets, fire alarm, etc.**
- **Silence your phones.**
- **Don't stand in front of coffee and food table during breaks.**
 - Grab what you need and cross the room
- **Side conversations in the hallway . . .**
- **Tour on Thursday**
 - Sign up at desk by noon
- **Questions – see our wonderful staff.**



The 2016 GMAC... by the numbers



Attendance – “In the room”

- 180+ Attendees
 - 33 International guests
 - 18 Nations
 - 6 Continents
 - 10 International agencies & organizations
 - 9 International universities
 - 5 International private sector companies

 - 10 U.S. agencies & programs
 - 13 U.S. universities
 - 13 Private sector companies

Contributing Authors

- 117 Presentations
 - 117 Lead authors
 - and-
 - 440 “unique” co-authors

Representing:

- 17 U.S. agencies & labs
- 32 U.S. universities
- 24 Countries
- 32 International organizations
- 33 International universities



China



Canada



United Kingdom



Kenya



Taiwan



India



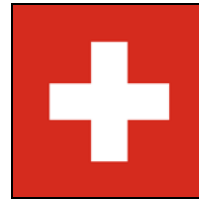
Iraq



Nigeria



Australia



Switzerland



United States



Brazil



Germany



Japan



France



New Zealand

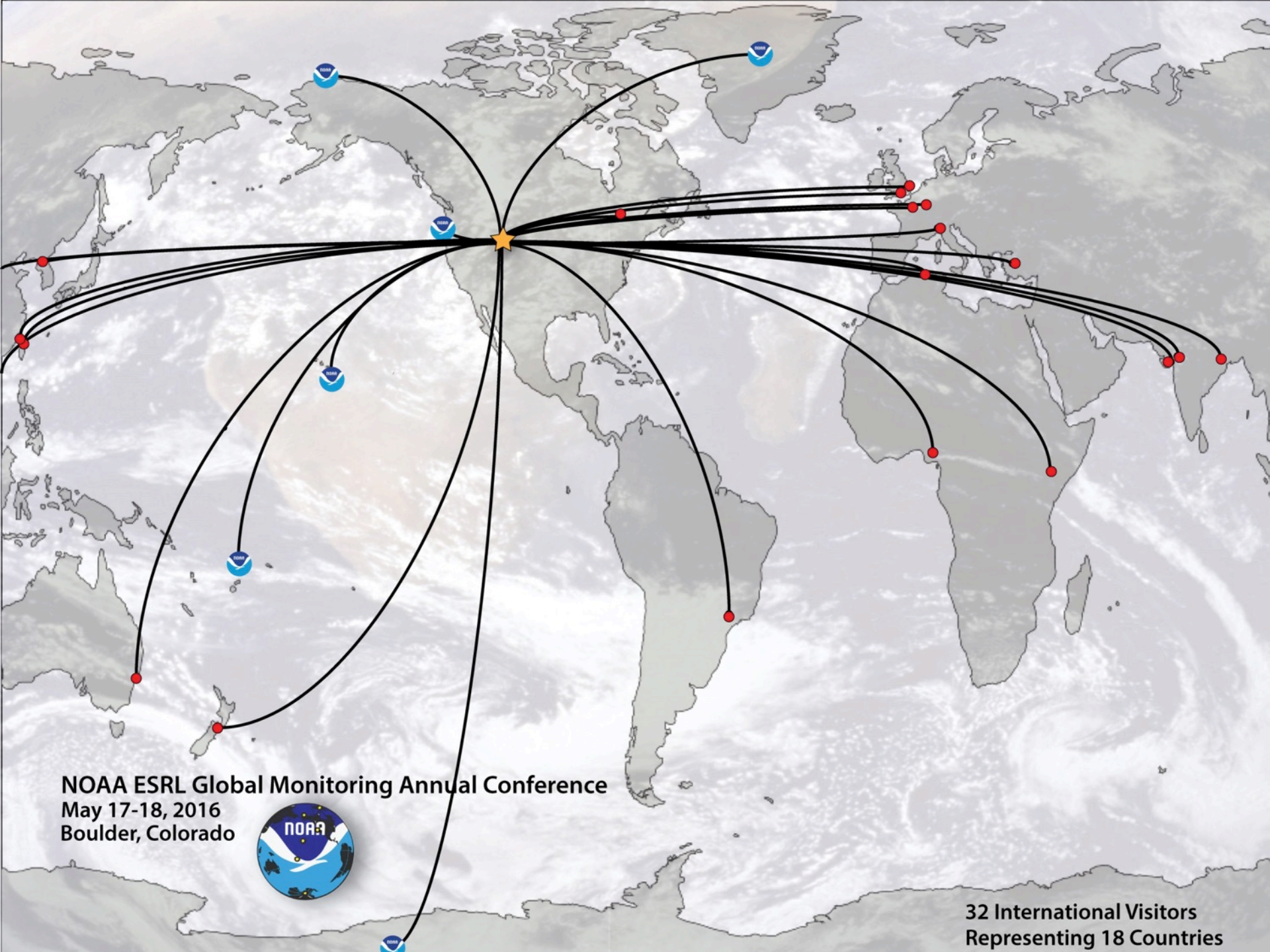


Vietnam



Korea





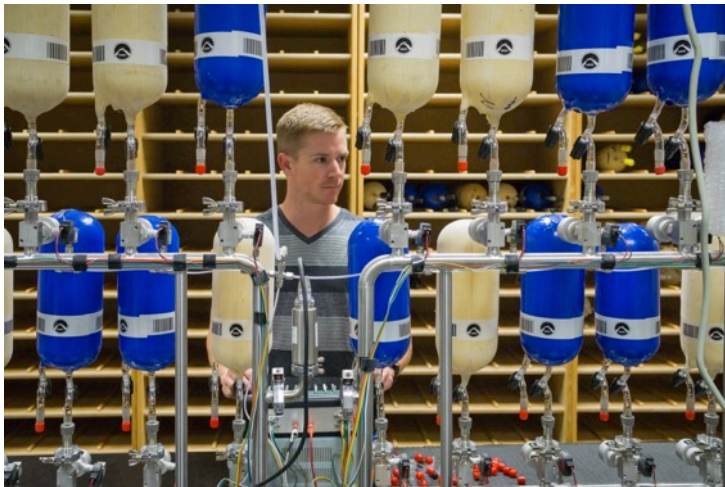
NOAA ESRL Global Monitoring Annual Conference
May 17-18, 2016
Boulder, Colorado



32 International Visitors
Representing 18 Countries

GMAC Oral Sessions

- Tuesday
 - Carbon Cycle
 - Global Observations
 - Carbon Cycle
 - Methane
 - Carbon Cycle
 - Regional Observations
 - (Posters)



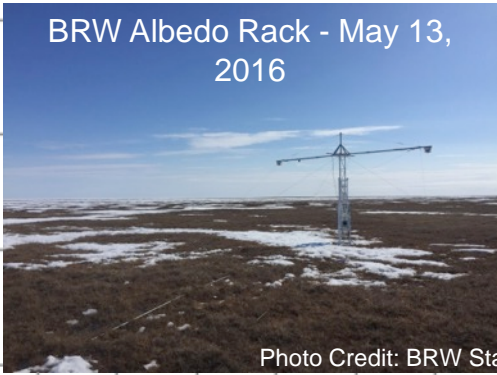
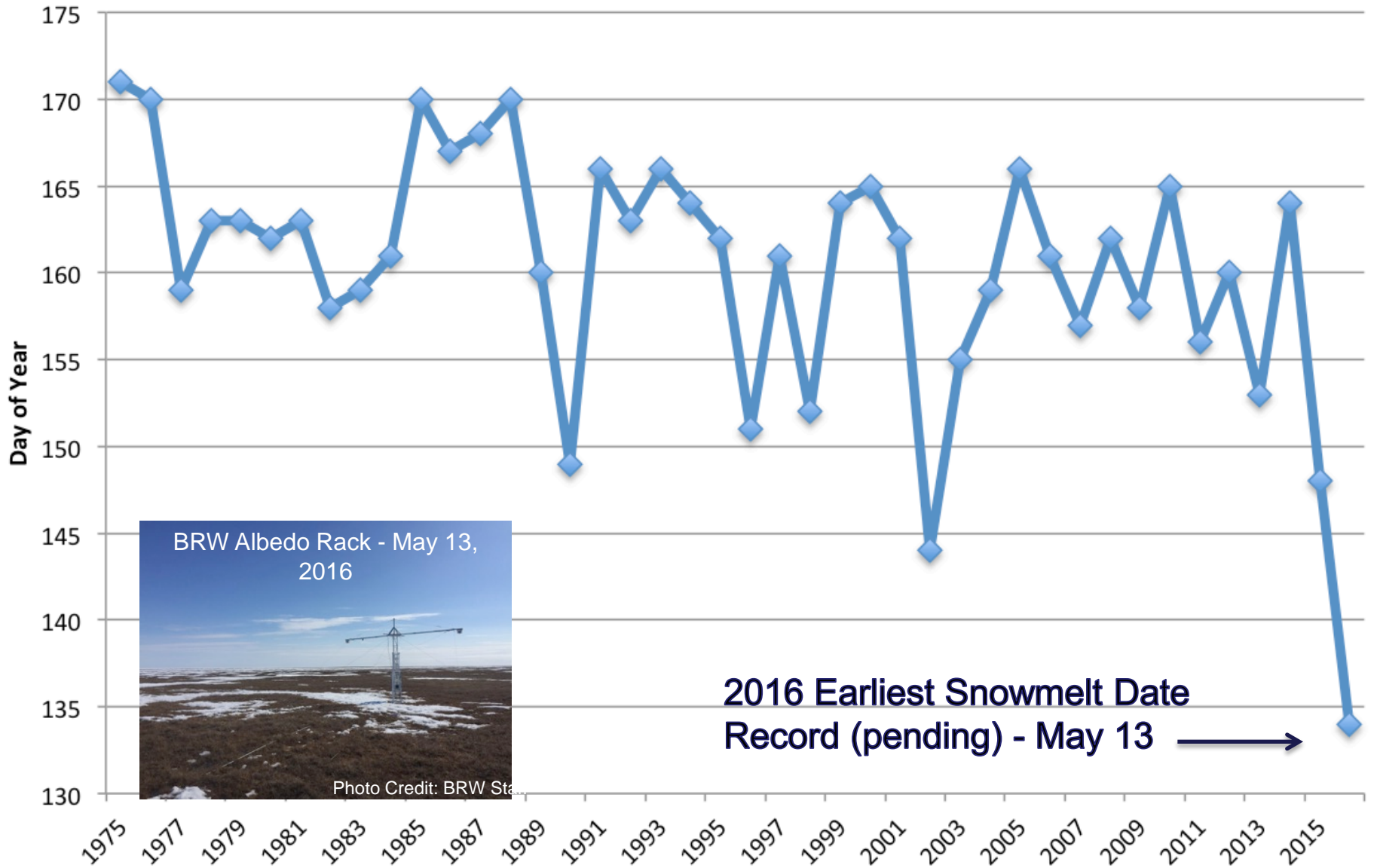
- Wednesday
 - Radiation and Aerosols
 - Halocarbons and other Trace Gases
 - Ozone and Water Vapor
 - Carbon Cycle and Greenhouse Gases
 - Oil and Gas



Poster Session

- Carbon Cycle and GHGs (P1 - P28)
- Ozone and Water Vapor (P29 - P41)
- Halocarbons (P42 - P45)
- Surface Radiation (P46 - P51)
- Aerosols (P52 - P60)
- Meteorology and Partner Stations (P61 - P67)
- SOS Explorer (P68) – **Electronic**

BRW Snow-out Date



**2016 Earliest Snowmelt Date
Record (pending) - May 13** →

Snow-out is defined by a 0.30 albedo threshold.



Opening Speakers



- **Keynote – Ray Weiss, Scripps Institution of Oceanography**

- *Keeping Up the Standards: Building and Maintaining a Global Atmospheric Measurement Network*



- **Arlyn Andrews , NOAA ESRL Global Monitoring Division**

- *In-service Aircraft for Global Monitoring: Status and Perspectives*



- **Christoph Zellweger, Federal Laboratories for Materials Science and Technology, EMPA**

- *Traceability of Measurements Within the Global Atmosphere Watch Programme*



- **Pieter Tans, NOAA/ESRL Global Monitoring Division**

- *Multiple Immediate Benefits of Emissions Mitigation*



Thank you all for coming!



- We look forward to an invigorating 44th Annual Meeting . . .

*GMAC External Meeting
Wed, early afternoon sessions
19 May 2015*





Keynote Speaker

Dr. Ray Weiss

Scripps Institution of Oceanography



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Solubility of Helium and Nitrogen

347 *[Signature]*

The solubility of nitrogen, oxygen and argon in water

MAR. CHEM.

Marine Chemistry, 8(1980) 347-359
© Elsevier Scientific Publishing Company, Amsterdam - Printed in The Netherlands

Technical Memorandum TM 78285, 1980.

694 #

Marine Chemistry, 2 (1974) 215-215
© Elsevier Scientific Publishing Company, Amsterdam

EARTH AND PLANETARY SCIENCES

CARBON DIOXIDE IN SEAWATER: A NON-IDEAL GAS

R. F. WEISS
Scripps Institution of Oceanography
Calif. 92037
(Received March 1975)

ABSTRACT

Weiss, R. F.
Mar. Chem.

No. 1
the 1st
Correspondence
at Scripps Institution of Oceanography

ATMOSPHERIC

by R. F. Weiss
proceedings of the
conference on
CO₂ in the
atmosphere and
oceans
small islands
Advisory
glaciers

1. Introduction

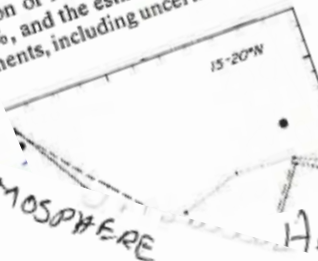
The concentration of atmospheric CO₂ has increased by 15% since 1750. In recent years, considerable attention has been given to the transport of nitrous oxide from the stratosphere to the natural sources. McElroy and Salameh (1975) have proposed that the increase in atmospheric CO₂ is due to the melting of permafrost and the release of methane from the oceans. The concentration of atmospheric CO₂ has increased by 15% since 1750. In recent years, considerable attention has been given to the transport of nitrous oxide from the stratosphere to the natural sources. McElroy and Salameh (1975) have proposed that the increase in atmospheric CO₂ is due to the melting of permafrost and the release of methane from the oceans.

Surface Water and Atmospheric Carbon Dioxide and Nitrous Oxide Observations by Shipboard Automated Gas Chromatography: Results From Expeditions Between 1977 and 1990

R. F. Weiss · F. A. Van Woy · P. K. Salameh

CO₂
N₂O
OCEAN

ATMOSPHERE



SIO 92-1
NDP-04

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GAGE

AGAGE

