

# NOAA ESRL GLOBAL MONITORING DIVISION REVIEW

3-5 April 2013

David Skaggs Research Center, Room GC-402  
325 Broadway, Boulder, Colorado 80305

## *Morning AGENDA* *Wednesday, April 3<sup>rd</sup>, 2013*

- **06:45 - 07:45** *Millennium Hotel, informal breakfast buffet, Thyme on the Creek, Reviewers and Steve Fine*
- **07:45** Transportation, front door of hotel, NOAA van will leave promptly at 7:45  
*DSRC check-in, Proceed to Room GC-402 (Multi-Purpose Room)*
- **Session 1** ***Welcome and Overview (08:30-09:30)***
  - 08:30 – 08:40 Welcome & Introductions  
*Dr. Alexander MacDonald, Director, NOAA Earth System Research Laboratory*
  - 08:40 – 08:45 Logistic Details, Updates  
*Dr. Russ Schnell, Deputy Director, GMD*
  - 08:45 – 09:05 Overview of NOAA/OAR Research (OV-1)  
*Dr. Steve Fine, OAR Deputy Assistant Administrator*
  - 09:05 – 09:30 GMD Overview (OV-2)  
*Dr. James Butler, Director, GMD*
- **Session 2** ***Theme 1: Climate Forcing (09:30-10:10)***
  - 09:30 – 09:50 Overview – Climate Forcing (CF-1)  
*Dr. John Miller, Carbon Cycle Group*
  - 09:50 – 10:10 Development of the Global Greenhouse Gas Reference Network (CF-2)  
*Dr. Pieter Tans, Chief, Carbon Cycle Group*
- **10:10 - 10:30 Morning Break**
- **Session 3** ***Theme 1: Climate Forcing (10:30-12:15)***
  - 10:30 – 10:45 The Carbon Cycle and Anthropogenic Carbon Emissions (CF-3)  
*Dr. John Miller, Carbon Cycle Group*
  - 10:45 – 11:00 Vertical Profiles (CF-4)  
*Dr. Colm Sweeney, Carbon Cycle Group*
  - 11:00 – 11:15 CarbonTracker (CF-5)  
*Dr. Andy Jacobson, Carbon Cycle Group*
  - 11:15 – 11:30 Methane (CF-6)  
*Dr. Ed Dlugokencky, Carbon Cycle Group*
  - 11:30 – 11:45 Detection and Monitoring of Changing Methane Emissions in the Arctic (CF-7)  
*Dr. Lori Bruhwiler, Carbon Cycle Group*
  - 11:45 – 12:00 Greenhouse Gas Measurement Program Future Directions (CF-8)  
*Dr. Arlyn Andrews, Carbon Cycle Group*
  - 12:00 – 12:15 Summary – Climate Forcing Gases and the Annual Greenhouse Gas Index (CF-9)  
*Dr. Steve Montzka, Halocarbons and Trace Species*

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## *Afternoon AGENDA* *Wednesday, April 3<sup>rd</sup>, 2013*

- **Session 4**     ***Lunch and Poster Viewing (12:15-14:15)***
  - 12:15 – 13:15     Lunch: Room GB-124 with Review Committee, Steve Fine, Sandy MacDonald, Rick Rosen, Jim Butler, Russ Schenell, Mike Uhart, Pieter Tans
  - 13:15 – 14:15     Poster Session 1: Atrium, Climate Forcing
  
- **Session 5**     ***Theme 1: Climate Forcing (14:15-15:15)***
  - 14:15 – 14:30     Long-Term Monitoring of Water Vapor in the Upper Troposphere and Lower Stratosphere (CF-10)  
*Dr. Dale Hurst, Ozone and Water Vapor*
  - 14:30 – 14:45     Aerosol Direct Climate Forcing (CF-11)  
*Dr. John Ogren, Group Chief, Aerosols*
  - 14:45 – 15:00     Radiation Contributions to Climate Forcing, Ozone, and Air Quality (CF-12)  
*Dr. Joe Michalsky, Group Chief, Radiation*
  - 15:00 – 15:15     Summary – Climate Forcing (CF-13)  
*Dr. James Butler, Director, GMD*
  
- **15:15 - 15:30**     ***Afternoon Break***
  
- **Session 6**     ***GMD Tour and Reviewer Work Session (15:30-17:45)***
  - 15:30 – 16:45     Tour of Global Monitoring Division Boulder Operations for reviewers
  - 16:45 – 17:45     Reviewer closed session in room GB-124
  - 17:45             Adjourn, sign out, and shuttle for hotel
  
- **18:30 - 20:30**     ***Dinner at Carelli's Ristorante Italiano,***  
645 30<sup>th</sup> Street, Boulder, – Anne Thompson, Bev Law, Ken Jucks, Oystein Hov,  
Carl Brenninkmeijer, Mike McElroy, Steve Fine, Sandy MacDonald, Rick Rosen, Jim Butler,  
Russ Schnell, Mike Uhart

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## ***Morning AGENDA*** ***Thursday, April 4<sup>th</sup>, 2013***

- **07:00 - 08:00** *Millennium Hotel, informal breakfast buffet, Thyme on the Creek*
- **08:00** *Transportation, front door of hotel, NOAA vans  
DSRC check-in, Proceed to Room GB-124 (Outreach Classroom)*
- **Session 7** ***Stakeholder Telephone Calls, Room GB-124 (08:30 - 09:40)***  
***(Closed session with reviewers and phone assistants)***
  - Climate Forcing, 3 calls (~30 min)
    - 8:30 – 8:40 - Dr. Steven Wofsy, Professor of Atmospheric and Environmental Science, Harvard University; (Also Ozone)
    - 8:40 – 8:50 - Dr. Deon Terblanche, Director, Atmospheric Research and Environment, Global Atmospheric Watch Programme (Also Ozone)
    - 8:50 – 9:00 - Chris Sloop, Chief Technical Officer, Earth Networks (for Bob Marshall)
  - Ozone, 3 calls (~30 min)
    - 9:00 – 9:10 - Dr. Mack McFarland, Global Environmental Manager, Dupont Chemicals and Fluoroproducts
    - 9:10 – 9:20 - Dr. Ron Prinn, Professor, MIT (Also Climate Forcing)
    - 9:20 – 9:30 - Dr. Paul Newman, Senior Scientist, NASA/Goddard Space Flight Center
  - Air Quality, 1 call (~10 min)
    - 9:30 – 9:40 - Brock LeBaron, Deputy Director, Division of Air Quality, State of Utah
- **Session 8** ***Observatories and Common Elements, Room GC-402 (09:40-10:30)***
  - 09:40 – 09:55 *Global Monitoring Division Observing Facilities and Operations (OC-1)*  
*Dr. Russ Schnell, Deputy Director, GMD*
  - 09:55 – 10:10 *Calibration and Standards Activities (OC-2)*  
*Dr. Brad Hall, Halocarbons and Trace Species*
  - 10:10 – 10:30 *Data management and quality control (OC-3)*  
*Ken Masarie, Carbon Cycle Group*
- **10:30 - 10:45** ***Morning Break***
- **Session 9** ***Theme 2: Ozone and Ozone Depleting Gases (10:45-12:00)***
  - 10:45 – 11:00 *Overview – Ozone and Ozone Depleting Gases (OD-1)*  
*Dr. James Elkins, Group Chief, Halocarbons and Trace Species*
  - 11:00 – 11:15 *Measurements and Analysis of Stratospheric Ozone (OD-2)*  
*Dr. Irina Petropavlovskikh, Group Chief, Ozone and Water Vapor*
  - 11:15 – 11:30 *South Pole Ozone (OD-3)*  
*Dr. Bryan Johnson, Ozone and Water Vapor*
  - 11:30 – 11:45 *Stratospheric Transport (OD-4)*  
*Dr. Fred Moore, Halocarbons and Trace Species*
  - 11:45 – 12:00 *Ozone Depleting Gas Index and Summary (OD-5)*  
*Dr. Steve Montzka, Halocarbons and Trace Species*

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## *Afternoon AGENDA* *Thursday, April 4<sup>th</sup>, 2013*

- **Session 10**     ***Lunch and Poster Viewing (12:00-13:45)***
  - 12:00 – 12:50     Lunch: Room GB-124 with review committee and GMD Scientists
  - 12:50 – 13:45     Poster Session 2: Atrium, Ozone and Air Quality
  
- **Session 11**     ***Theme 3: Air Quality (AQ) and Regional Studies (13:45-14:45)***
  - 13:45 – 14:00     Overview of GMD AQ and Regional Studies (AR-1)  
                         *Dr. Russ Schnell, Deputy Director, GMD*
  - 14:00 – 14:15     Tropospheric Ozone (AR-2)  
                         *Sam Oltmans, Ozone Group*
  - 14:15 – 14:30     Aerosol Optical Depth Measurements and Related Research (AR-3)  
                         *John Augustine, Radiation Group*
  - 14:30 – 14:45     Methane and Volatile Organic Compounds Emissions from Oil and Gas Operations (AR-4)  
                         *Dr. Gabrielle Petron, Carbon Cycle Group*
  
- **Session 12**     ***Conclusion and GMD Review Summary (14:45-15:00)***
  - 14:45 – 15:00     Review summary (RS-1)  
                         *Dr. James Butler, Director, GMD*
  
- **15:00 - 15:15**     ***Afternoon Break – End of Public Review Sessions***
  
  
- **Session 13**     ***Reviewer Closed Session (15:15-17:45)***
  - 15:15 – 16:00     Reviewer closed session with GMD and OAR Management, Room GC-402
  - 16:00 – 17:45     Reviewer closed session, Room GB-124
  - 17:45             Adjourn and shuttle for hotel
  
- **18:30 - 20:30**     ***Dinner***
  - Reviewer's executive dinner – please see Boulder restaurant map for selections.

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## *Morning AGENDA Friday, April 5<sup>th</sup>, 2013*

- **07:00 - 08:00** *Millennium Hotel, informal breakfast buffet, Thyme on the Creek*
- **08:00** *Transportation, front door of hotel, NOAA vans  
DSRC check-in, Proceed to Room GB-124 (Outreach Classroom)*
- **Session 14** *Reviewer Comments*
  - 08:30 – 11:00 Review team formulates recommendations and begins writing, GB-124
  - 11:00 – 12:00 Review team provides preliminary feedback to OAR and GMD Management, GC-402
- **12:00** *Adjourn*