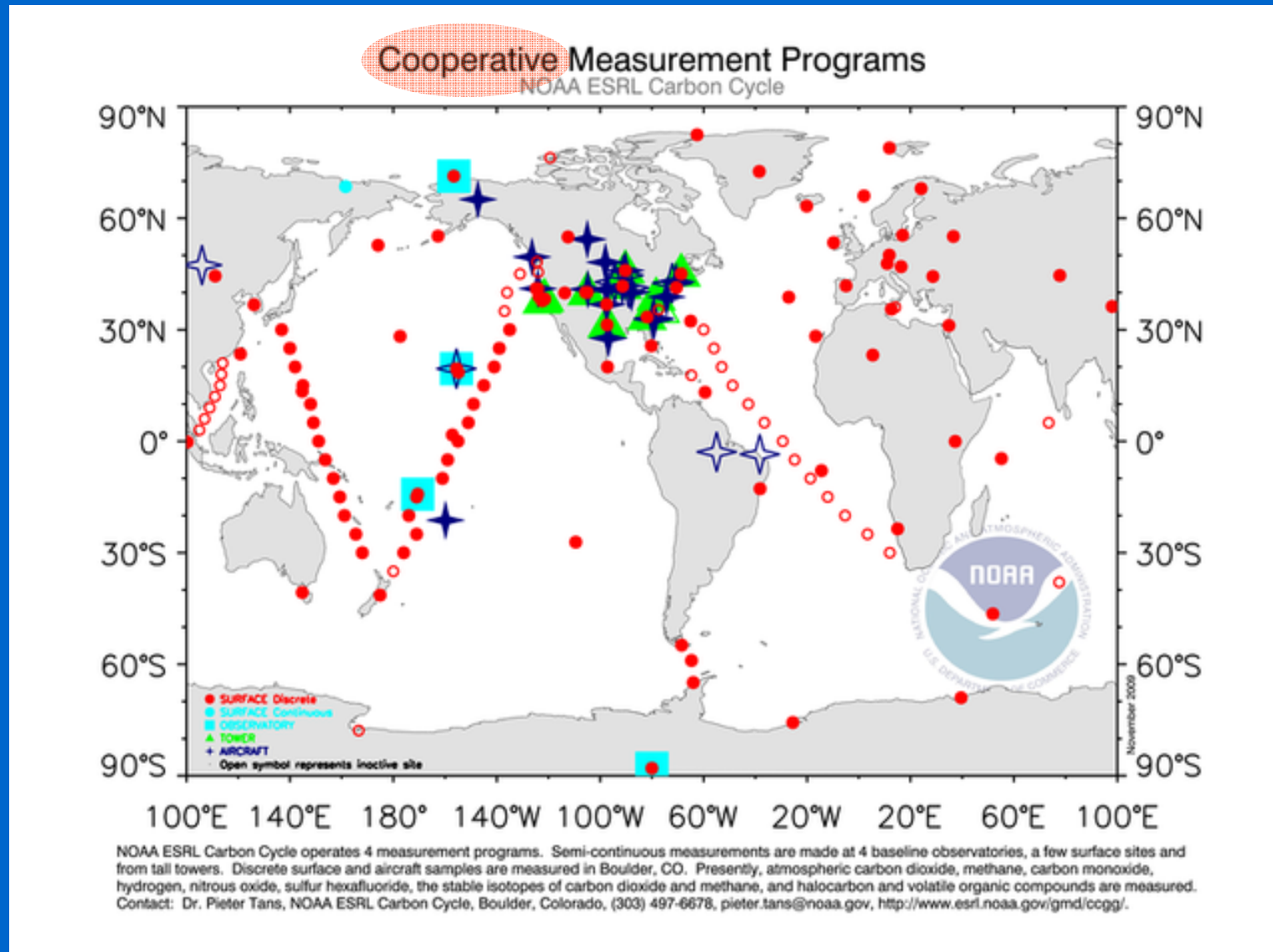


NOAA ESRL Carbon Cycle Observing Network



Discrete Measurements

Surface Network (~10,000 samples yr⁻¹)

CO ₂	1967
CH ₄	1983
CO, H ₂	1988
δ ¹³ C, δ ¹⁸ O (CO ₂)	1990
N ₂ O, SF ₆	1997
δ ¹³ C (CH ₄)	1998
δ ¹⁴ C (CO ₂)	2004
CH ₃ D	2004
ethane, propane, propene, i-butane, methyl-chloride, i-pentane, n-pentane, n-hexane	2004

Aircraft Network (~10,000 samples yr⁻¹)

CO ₂ , CH ₄ , CO, H ₂	1992
N ₂ O, SF ₆	1997
δ ¹³ C, δ ¹⁸ O (CO ₂)	2000
δ ¹⁴ C (CO ₂)	2004

HFC-134a, HCFC-22, CFC-12, methyl chloride, CFC-114 and CFC-114a (combined), HCFC-142b, Halon-1211, methyl bromide, CFC-11 (ion 101), CFC-11 (ion 103), HCFC-141b, methyl iodide, CFC-113, dichloromethane, chloroform, methyl chloroform (ion 97), methyl chloroform (ion 99), carbon tetrachloride, dibromomethane, tetrachloroethylene, bromoform, benzene, carbonyl sulfide, HCFC-21, HFC-152a, HCFC-124, toluene, carbonyl disulfide 2004

493,000 measurements in 2008

Quasi-Continuous Measurements

Observatories, 4 sites

CO ₂	1974
CH ₄	1986
CO	1988

Tall Towers, 8 sites

CO ₂	1992
CO	2003

Daily downloads of high-frequency data from 35 detectors

Data Distribution

- ❑ NOAA CO₂ & CH₄ contributions are ~50% of WDCGG GHG holdings
 - Annual updates of discrete surface data (August)
 - Annual updates of observatory quasi-continuous data (August)

- ❑ Quarterly updates to quasi-continuous tall-tower data

- ❑ Requests for up-to-date data: 71 (2009), 21 (2010)

CHALLENGE: Accommodating users with differing needs

- PIs (logistics)
- PIs and others (research)

Data Distribution: Requests for up-to-date data

The screenshot shows the NOAA CMDL CCGG Data Request web application in a Mozilla Firefox browser. The page title is "NOAA CMDL CCGG - Data Request" and the URL is "https://om.cmdl.noaa.gov/requests/". The interface is divided into several sections:

- Header:** NOAA logo, "ESRL Global Monitoring Division Carbon Cycle", and "Data Request".
- Introduction:** A paragraph explaining that Data Request is a restricted GMD web application for distributing up-to-date ESRL and INSTAAR measurements.
- Data Selection:** A section with a "Project" dropdown set to "ccg_surface" and a "Strategy" dropdown set to "Flask". It includes "Sort by" options (Site, Parameter, Begin Date, End Date) and two lists of data entries. The left list shows all available data, and the right list shows the selected data. Navigation arrows (>> and <<) are between the lists. A "Clear" button and a "Merge Format" checkbox are at the bottom of the selection area.
- Recipient Information:** A section with input fields for "Name" (Michel ramonet), "Affiliation" (LSCE), and "E-mail" (Michel.Ramonet@lsce.ipsl.fr).
- Finalize:** A section with a "File Compression" dropdown set to "zip" and a "Submit" button.

At the bottom of the page, there is a "Done" status indicator and the URL "om.cmdl.noaa.gov".

Acknowledging Collaboration ... in every data file

EXAMPLE 1

File Content:

#

Please refer to the species-specific README file in the
appropriate directory folder at ftp://ftp.cmdl.noaa.gov/ccg.

#

Contact:

#

Compound: CO2

Thomas J Conway

tel: (303) 497-6681

email: Thomas.J.Conway@noaa.gov

#

***** **COLLABORATORS** *****

#

NOAA thanks "Chinese Academy of Meteorological Sciences [CAMS]"
without whom these measurements would not be possible.

#

***** RECIPROCITY AGREEMENT *****

#

Use of these data implies an agreement to reciprocate.

Acknowledging Collaboration ... case-by-case

EXAMPLE 2

```
#  
# ***** COLLABORATORS *****  
#  
# NOAA thanks "DOE Environmental Energy Technologies Division at  
# Lawrence Berkeley National Laboratory" without whom these measurements  
# would not be possible.  
#  
# URL: http://calgem.lbl.gov  
#  
# The program at Walnut Grove is a collaborative effort with  
# the Department of Energy's Lawrence Berkeley National Laboratory.  
#  
# The California Energy Commission is funding the project through  
# its Public Interest Energy Research Program.  
#  
# WGC & STR Principal Investigator:  
# Marc L. Fischer, Staff Scientist  
# Atmospheric Science Dept.
```

Acknowledging Collaboration ... case-by-case

EXAMPLE 2 cont...

Lawrence Berkeley Nat. Lab.
MS 90K-125
1 Cyclotron Rd.
Berkeley, CA 94720 # MLFischer@lbl.gov email
510-486-5539 phone
510-486-5928 fax

If the data are obtained for potential use in a publication
or presentation, LBNL and NOAA should be informed at the outset
of the nature of this work. If the LBNL-NOAA data are essential
to the work, or if an important result or conclusion depends
on the LBNL-NOAA data, co-authorship may be appropriate. This
should be discussed at an early stage in the work. Manuscripts
using the LBNL-NOAA data should be sent to LBNL and NOAA for
review before they are submitted for publication so we can insure
that the quality and limitations of the data are accurately
represented.

***** RECIPROCITY AGREEMENT *****

Ongoing Developments

- **Developments that may impact WDCGG**
 - **Full Disclosure / Open Data**
 - **Explicit acknowledgment of collaborators**
 - **Measurement and sampling Comments**
 - **GMD working with Ted Haberman (NGDC) towards ISO 19115 compliance**

WDCGG and ESRL Distribution Differences

❑ WDCGG provides a subset of information

➤ 2010-03-02 07:00 9999-99-99 99:99 1880.380 -9999 -99999. ...P 0 -999999999

➤ BKT 2010 03 02 07 00 **1139-99 D** ch4 1880.380 ... **H11 2010 04 27 16 08 -0.2020 100.3180 864.50 295506**