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From: ilana@kiowa.scd.ucar.edu (Ilana Stern)
Subject: Sources of Meteorological Data FAQ
Summary: Weather and research data available via Internet, CD-ROM, and tape.
Supersedes: <1993Jan19.171546.15873@ncar.ucar.edu>
Organization: NCAR/UCAR
Date: Mon, 1 Feb 1993 20:36:52 GMT
Expires: Tue, 16 Feb 1993 07:00:00 GMT

Archive-name: weather-data
Last-modified: 21 January 1993

Recent changes:
  Added crosspost to sci.answers
  Addition of delocn.udel.edu telnet facility
  Addition of glis.cr.usgs.gov telnet facility
  Updated MN Climatology Working Group gopher information
  ---
  Deleted pioneer.unm.edu FTP site (SPIF):  this site no longer exists,
    but may be restarted if a sponsor and a machine is found.
  Rearrangement of introductory information into new section 0.
  Addition of gopher information to section I (data over the Internet)
  Changed location of stormfest data to storm.ofps.ucar.edu

                        C O N T E N T S
          0. Introduction
          I. Data available over the Internet
         II. CD-ROM source list
        III. Research data on tape and other media
         IV. Weather-related mailing lists

This is a guide to various sources of meteorological, oceanographic,
and geophysical data.  Some of these data types are intended for enjoyment
or hobbyist use;  other data are more research-oriented.  Much of the
research data is not free.

If you are reading this document after 2 Feb 1993, you are reading an
outdated copy. A current copy can be obtained by anonymous FTP to
pit-manager.mit.edu, from the (compressed) file weather-data.Z in the
directory /pub/usenet/news.answers.  A current copy is also maintained in
vmd.cso.uiuc.edu in the file wx/sources.doc.  These files are updated every
two weeks, when a new copy is posted to sci.geo.meteorology and to
news.answers.

If you can't use FTP, send email to mail-server@pit-manager.mit.edu with
send usenet/news.answers/weather-data
as the only text in the message (leave the subject blank).

Corrections, additions, and comments should be sent to Ilana Stern at
ilana@ncar.ucar.edu.  Please include in your message where you read
this document.  Note that if I know about it, it's in this document.

This article is copyright (c) 1993 by Ilana Stern.  It may be freely
distributed provided that this copyright notice and the above information
on retrieving a current copy are not removed.  I prefer that archives
maintain current copies, since this information changes rapidly.

########################################################################

Subject: Data available over the Internet
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                        C O N T E N T S

        1. How to use anonymous FTP
        2. How to use telnet
        3. Index of FTP and Telnet sites by topic
          A. Current weather images via FTP
```

1. How to use anonymous FTP

FTP (File Transfer Protocol) allows transfer of files between two computers which are on the Internet. To access the FTP areas listed here, at your system prompt type "ftp" followed by the name or IP number (the number in brackets next to the system name in the listing below) of the desired system. For example, to access vmd.cso.uiuc.edu you'd type

```
        ftp vmd.cso.uiuc.edu
or
        ftp 128.174.5.98
```

Use "anonymous" as your login and your email address as the password (if requested).

[Note: quotes ("like this") are used to set off names of directories and files, or commands you'd type, and are not part of these names.]

Not all FTP systems accept the same commands, but here's a list of the most useful:

```
        ls      list files in the current directory.
        cd      change directory, e.g. "cd wx" changes to the wx directory.
        binary  sets binary mode; USE THIS FOR RETRIEVING IMAGES!
        ascii   sets ascii mode (the default).  Use for retrieving text.
        get     retrieves a file, e.g. "get readme" gets a file called readme.
        bye     exits FTP.
```

If you can't FTP from your system, I can't help you -- sorry.

2. How to use telnet

Type "telnet" followed by the name or IP number (the number in brackets next to the system name in the listing below) of the desired system. These publicly accessible systems generally allow you to log in but put you in a restricted shell, from which only a certain menu of commands is available.

3. Index of FTP and Telnet sites by topic

This index lists the names of FTP and Telnet sites of interest, with only a brief blurb as to their contents. Section 4 gives more information about each of these sites. Some sites appear more than once under different subject headings.

A. Current weather images

ats.orst.edu	GOES vis/IR images of North, Central America
aurelie.soest.hawaii.edu	SST data from AVHRR on NOAA-11, NOAA-12
cumulus.met.ed.ac.uk	Meteosat vis/IR images of Europe
liasun3.epfl.ch	Meteosat vis/IR images of Europe
marlin.jcu.edu.au	GMS-4 images of Australia, TOGA/COARE area
spot.colorado.edu	Surface maps, radar summaries, vis/ir US
unidata.ucar.edu	Surface maps (US, Europe, China), soundings
uriacc.uri.edu	NOAA-11 images of the northeast US
vmd.cso.uiuc.edu	GOES-7 vis/IR images, surface analyses over US
wilbur.stanford.edu	Meteosat vis/IR images of Europe, vis/ir US

B. Current weather data

```
ats.orst.edu                    Some US city and Oregon weather forecasts
hermes.merit.edu                US weather forecasts, global reports
downwind.sprl.umich.edu 3000    US weather forecasts, global reports
ncardata.ucar.edu               Colorado weather forecasts
```

C. Meteorological, oceanographic, and geophysical research data

```
cdiac.esd.ornl.gov              Info on climate change topics
delocn.udel.edu                 Info on ocean data available from many sources
glis.cr.usgs.gov                Info on datasets available from USGS
ncardata.ucar.edu               Info on datasets available from NCAR
nssdca.gsfc.nasa.gov            Info on datasets available from NSSDC
storm.ofps.ucar.edu             STORM-FEST data
```

D. Other satellite images

```
ames.arc.nasa.gov               Various earth-from-space images
sanddunes.scd.ucar.edu          AVHRR images of USA via telnet
snow.nohrsc.nws.gov             Snow cover maps of US from GOES
sseop.jsc.nasa.gov              Pictures taken from the space shuttle
```

E. Map data

```
csn.org                         Mapping software and datasets
hanauma.stanford.edu            CIA World Bank database, 0.5 deg elev dataset
ncardata.ucar.edu               Elevation data
spectrum.xerox.com              Various USGS data
```

F. Other stuff

```
csn.org                         Information on other Internet resources
cumulus.met.ed.ac.uk            Software for computer-aided learning (CALMET)
delocn.udel.edu                 Software for oceanographic computations
ncardata.ucar.edu               Script to retrieve vmd.cso.uiuc.edu GIFs
vmd.cso.uiuc.edu                Documents on weather-related topics
```

G. Special images

```
spot.colorado.edu               Hurricane Andrew images
unidata.ucar.edu                Hurricane Hugo images
```

4. Alphabetical list of FTP and Telnet sites, with information

This section provides expanded listings of the sites in the previous section. Remember to set the transfer type to "binary" when retrieving images!

ames.arc.nasa.gov (FTP)

Change directory to "SPACE/CDROM". Images from Magellan and Viking missions, other stuff.

ats.orst.edu [128.193.120.19] (FTP)

GOES IR and VIS images over North and Central America, plus a "floater" image which "could be anything." Also Oregon and US city forecasts.

aurelie.soest.hawaii.edu [128.171.151.121] (FTP)

Sea-Surface-Temperature data (near-real-time) in the directory "pub/avhrr/images". AVHRR images within the radius of reception of the university's HRPT station, approximately 5 S to 45 N and 125 W to 165 E. The processed images are available usually within 30 min. of NOAA-11 and NOAA-12 passages. Data are compressed binary in TDF format labelled by satellite name (n11/n12) and time. Also GMS images of the TOGA-COARE area. More info available from sat_lab@soest.hawaii.edu.

cdiac.esd.ornl.gov [128.219.24.36] (FTP)

Contains data and information on general and technical aspects of carbon dioxide, methane, and other trace gas emissions; the carbon cycle; and other climate-change topics from CDIAC (the Carbon Dioxide Information

Analysis Center, address in section 3). The data for CDIAC's "Trends 91: A Compendium of Data on Global Change" is also available here. (Contact CDIAC at cdp@stc10.ctd.ornl.gov to obtain a copy of the book.)

```
csn.org                 [128.138.213.21]                (FTP)
```

Change directory to "COGS". A large, frequently updated file containing detailed information on FTP sites, Bitnet and Usenet discussion groups, and data sources is located in the file "internet.resources.earth.sci". This file contains more information on mapping, GIS, remote sensing, and geology, subjects which are mostly outside the scope of this meteorology-oriented FAQ. Mapping software and datasets are also available in this directory. Contact bthoen@csn.org (Bill Thoen) for more information.

```
cumulus.met.ed.ac.uk    [129.215.168.19]                (FTP)
```

Change directory to "images". IR and visible images of Europe from Meteosat, twice daily, in 1152 x 900 GIF format (size of Sun root window). The subdirectory "gifs" has smaller 3x daily images of the Nordic areas, the UK, and Europe.

The directory "calmet" contains software and documents in support of computer-aided learning in meteorology; it is associated with the CALMET mailing list described in section IV of this document. The file "intro_to_calmet" in the "documents" subdirectory describes how to find what's available.

```
delocn.udel.edu         [128.175.24.1]                  (FTP or Telnet)
```

FTP: Change directory to "FORTRAN". Programs to do various oceanographic computations. Inquiries and calls for help can be addressed to walt@delocn.udel.edu.

Telnet: Use "info" as a login. Menu-driven system presents information about ocean-related data from various sources, other oceanography information.

```
downwind.sprl.umich.edu 3000    [141.212.196.177]       (Telnet)
```

Include the "3000" when connecting to the machine. This is a menu driven system which has a large variety of information, including US and Canadian weather forecasts, ski conditions, earthquake reports, severe weather reports, and current weather conditions for some international cities.

```
glis.cr.usgs.gov        [152.61.192.54]                 (Telnet)
```

This is a menu driven system (Global Land Information System) which allows users to search a list of research datasets available from the EROS Data Center at USGS, and order data if desired. Most of the data are ecosystem maps and elevation/depth maps.

```
hanauma.stanford.edu    [36.51.0.16]                    (FTP)
```

The CIA World Bank database contains coastlines, rivers and political boundaries. An 0.5 degree elevation dataset is also there. A program for decoding the CIA data can be found as "mfil" on pi1.arc.umn.edu [137.66.130.11] (Info from ken@msc.edu)

```
hermes.merit.edu        [35.1.48.150]                   (Telnet)
```

Type um-weather at the "Which Host?" prompt and use menus. (Connects to downwind.sprl.umich.edu)

```
liasun3.epfl.ch                                         (FTP)
```

Change directory to "pub/weather". IR and visible images of Europe from Meteosat, in GIF format. It appears that this site contains the same images as cumulus.met.ed.ac.uk.

```
marlin.jcu.edu.au       [137.219.16.14]                 (FTP)
```

Change directory to "JCUMetSat". GMS-4 images updated regularly for various Australian states, Australia as a whole, the globe, the TOGA/COARE area, and events of interest such as cyclones. The images are in a format designed for the package JCUMetSat on Amiga computers, but can be converted to GIF format using the ALCHEMY software (shareware) available at this site. (More information on the format and images can be obtained from Professor C.J. Kikkert, eecjk@marlin.jcu.edu.au.)

```
ncardata.ucar.edu       [128.117.8.111]                 (FTP)
```

Information on datasets available from NCAR (the National Center for Atmospheric Research), and a few small datasets. If you would like to order data after browsing this information, email to datahelp@ncar.ucar.edu. Small datasets can be provided by FTP; we also write various kinds of tapes. See the README file.

A shell archive containing scripts to retrieve GIFs from vmd.cso.uiuc.edu, get_gifs, is located in the "weather" subdirectory. This subdirectory also contains Colorado weather and ski reports.

A few special datasets are located in the FTP area, and are free. They are described in the file "pricing". These include a 1 deg resolution elevation dataset, a continental outline dataset, and a list of all WMO stations with latitude, longitude, and elevation.

nssdca.gsfc.nasa.gov (FTP or Telnet)

Telnet: The National Space Science Data Center (NSSDC) On-Line Data and Information Service (NODIS) is a menu-driven interactive system which provides information on services and data supported by NSSDC. Login as NSSDC. Some topics: Nimbus-7 GRID TOMS Data, Geophysical Models, Standards and Technology Information System.

FTP: some information and actual data is also available via anonymous FTP.

sanddunes.scd.ucar.edu (Telnet)

AVHRR (Advanced Very High Resolution Radiometer) images from 1989 through 7 Jan 1992 cover CO, WY, KS, NE, and NM, as well as parts of AZ, UT, OK, and TX. Since 7 Jan 1992, coverage includes these plus CA, OR, NV, WA, and MT, to 1000 km off Pacific coast. Total coverage of US for 1989-present will be available soon. West coast data from 1980-1985 will be available some time this year.

Images are 1024 lines x 1024 elements before 7 Jan 1992, 2560 lines x 1024 elements after. Images are 1 km resolution and 8-bit format.

Contact Tim Kelley by email kelley@sanddunes.scd.ucar.edu or telephone 303/497-1221 for login, password, and manual. Service is free to Internet users and is funded by NASA.

snow.nohrsc.nws.gov [192.46.108.1] (FTP)

Various snow-related images in GIF format. US snow cover map updated weekly. JPEG of current AVHRR images. This site will be operational for the 1993 snow season from in December 1992 through June 1993. Contact tim@snow.nohrsc.nws.gov (Tim Szeliga) for more info.

spectrum.xerox.com [192.70.225.78] (FTP)

Various USGS data in subdirectories under the directory "pub/map".

spot.colorado.edu [128.138.129.2] (FTP)

Change directory to "pub/weather-images". Weather radar summary map GIFS and PICT files, surface maps, satellite images for several US cities and regions. Also images and other stuff for Andrew in the subdirectory "hurricane.andrew".

sseop.jsc.nasa.gov [146.154.11.34] (FTP)

Many pictures taken from the space shuttle. Files are in a 512x512 format as red, green, and blue bitmaps. Image files are binary format, and have .DAT as an extension.

storm.ofps.ucar.edu [128.117.90.53] (Telnet)

Hourly and 5-minute composite surface observations, and composite rawinsonde soundings, from STORM-FEST. Log in as "storm" with the password "research" to access a menu-driven system which will allow you to search for the data you want.
(Contact Mark Bradford, bradfrd2@ncar.ucar.edu if you have questions.)

unidata.ucar.edu [128.117.140.3] (FTP)

Change directory to "images". Weather radar summary map GIFS, surface maps for various places, a few soundings on skew-t log-p diagrams, GOES Hugo images (in subdirectory "images/hugo"). Surface maps include Europe and China.

uriacc.uri.edu [131.128.1.1] (FTP)

Change directory to "davet.195". Images of the northeast US in GIF format from the afternoon passes of NOAA-11. (Provided by Dave Tetreault, DAVET@uriacc.uri.edu.)

vmd.cso.uiuc.edu [128.174.5.98] (FTP)
Change directory to "wx". GOES-7 visible and IR images over the US and Mexico, and surface analyses over the US, are available in GIF format. A script to retrieve GIFs automatically is available from the ncardata.ucar.edu FTP area.
Also available in this directory are many useful documents, including SPOTFREQ.DOC and CHASE-TV.DOC, lists of ham radio frequencies and TV stations which carry useful info for storm chasers, WX-PUBS.DOC, which is a list of weather-related publications, WX-TALK.DOC, which gives information on the WX-**** mailing lists, and many others.

wilbur.stanford.edu [36.14.0.30] (FTP)
Change directory to "pub/weathergifs". IR and visible images of Europe from Meteosat, in GIF format. It appears that this site contains the same images as cumulus.met.ed.ac.uk. Also has satellite images of US.

5. Weather information via Gopher

Gopher is a utility program which finds and retrieves information over the network. It uses FTP, telnet, and other tools, but all you interact with is a simple menu system. You can either run your own gopher client program (you can get this free software by ftp to boombox.micro.umn.edu [134.84.132.2] in the directory pub/gopher) or you can telnet to a public gopher client and connect to other gopher servers through it.

To connect using your own client, just type "gopher" followed by the name or IP number of the system you wish to connect to. You can telnet or rlogin to a public gopher client instead; here's a list from the alt.gopher FAQ:

machine	IP	login as	where
consultant.micro.umn.edu	134.84.132.4	gopher	North America
gopher.uiuc.edu	128.174.33.160	gopher	North America
gopher.sunet.se	192.36.125.2	gopher	Europe
info.anu.edu.au	150.203.84.20	info	Australia
gopher.chalmers.se	129.16.221.40	gopher	Sweden
tolten.puc.cl	146.155.1.16	gopher	South America

Through gopher, you can connect to other gopher servers all over the world. Many gopher servers, particularly at US Universities, have local weather reports as one of the menu items. There are also some gopher servers dedicated to weather information, which you can reach either directly or through the public clients listed above using the menu item "Other Gopher and Information Servers":

UofI Weather Machine:
wx.atmos.uiuc.edu port 70 [128.174.80.10] (Gopher)
The UofI Weather Machine has forecasts, images, surface and upper-air weather, local (Illinois) weather, and various useful documents, including GRIB and ON84 format descriptions, station lists, graphics information, etc. Questions, comments, and requests for changes should be sent to gopher@wx.atmos.uiuc.edu.

CIESIN-NASA-EOS Global Change Information Network:
flubber.ciesin.org [160.39.1.202] (Gopher)
This gopher server has some papers on global change (not many yet). Under the "Environmental Internet Catalog" there are resources under various useful topics, particularly under "Earth Science", "Ecology and the Environment", and "Weather and Meteorology". It allows gopher access to some of the FTP and telnet resources described in this document. Comments should be sent to CIESIN.Info@ciesin.org.

MN Climatology Working Group:
nx1.soils.umn.edu port 70 [128.101.77.165] (Gopher)
How to connect via PeachNet Information Service: Under the menu

"General Information Services" there is an entry for the Univ. of MN Soils Sciences Dept. Selecting this item will give you several options, including "MN Climatology Working Group". This directory contains lots of files with climate data for Minnesota, mostly obscurely named. Comments and questions to gopher-admin@soils.umn.edu.

This source is in the process of becoming a full-fledged project; the name of the machine will soon be changed to gopher.soils.umn.edu, the filenames will be modified to something more useful, more real data will be added, and the gopher information will be propagated to other machines. Watch this space.

##

Subject: CD-ROM source list

C O N T E N T S

1. Basic information

CD-ROMs tend to be relatively expensive, but can hold as much as 600 megabytes of data. Prices are current as of October 1991; prices for some discs are not known. Some discs are provided with driving software. Most of the software is for IBM-PC or compatible systems, but some is available for the Macintosh, and, increasingly, for Unix systems.

Some of these listings are not for CD-ROMs, but are for floppies or tapes. These are listed here, rather than in the section on data available on other media, because they have been prepared as a package. The research data available on tape is generally copied from a computer archive as requests come in.

Commercial sources are flagged as such. Inclusion of a commercial source in this listing does not imply endorsement.

2. List of CD-ROMs by topic, with summaries

A. Weather data

Climate Change Data ($950, or 595 pounds sterling from UK source):

Monthly 5-degree surface temperature anomaly grids 1854-1990, pressure grids 1873-1990. Monthly world temperature data at about 3500 stations and precipitation data at about 6500 stations, for period of record (long). Retrieval and mapping software included, available for various systems.

Contact: Dr. Phil Jones, Climatic Research Unit, University of East Anglia, Norwich NR4 7TJ United Kingdom. Distributed in North America by Chadwyck-Healey Inc.,1101 King St, Alexandria, VA 22314. 800/752-0515.

World Weather Disc ($295):

Monthly temp, precip, pressure, sunshine data for about 2000 world stations for period of record. Daily weather data at hundreds of US stations. Data for some stations on temp, precip, freeze, drought, soil moisture, wind, storms. Frequency and movement of tropical cyclones.

Contact: Cliff Mass, Dept. of Atmos. Sci. (AK40), University of Washington, Seattle, WA 98195. 206/685-0910.

National Climate Info System ($50):

Monthly temperature, precipitation, Palmer drought index data for 344 climate divisions of US. Data can be viewed in tabular or graphical format.

Contact: National Climatic Data Center, Federal Building, Asheville, NC 28801. 704/259-0682.

High Resolution Climatology ($199/variable): *COMMERCIAL* (Floppy disk)
Average monthly climatological values [don't have info as to which variables] for every 1 square km of the conterminous US for the 30-year period 1951-1980. The data are stored as a rectangular matrix for each state. Digitized state and county political boundaries are included and referenced to the climate data sets. The data are in raster form as ASCII or 16-bit binary integers. This dataset is distributed on 5.25" or 3.5" floppy disks.
Contact: ZedX, Inc., P.O. Box 404, Boalsburg, PA 16827-0404.

B. Research data

NMC gridpoint dataset ($150):
Twice daily grids for the Northern Hemisphere at a resolution of about 381 km.
Contact: National Center for Atmospheric Research, PO Box 3000, Boulder, CO 80307. 303/497-1219, email datahelp@ncar.ucar.edu.

National Geophysical Data Center (NGDC) discs:
Various discs available, including: ice and snow coverage, ocean sediment drilling data, ionospheric vertical soundings ($100), solar variability (sunspots, magnetic field data, flares, tree-ring data -- $100), geophysics of North America (earthquake data, magnetic fields, topography, gravity, geopolitical info -- $600), and more.
Contact: NGDC, 325 Broadway, Boulder, CO 80303. 303/497-6958.

Global Ocean Temperature and Salinity (2 discs, $80 each or $124/both)
Temperature and salinity in the world ocean for about 1900-1990, based on all available XBTs, MBTs, BTs, etc.
Contact: National Oceanographic Data Center, NOAA/NESDIS E/OC21, Washington, DC 20235. 202/673-5549.

GALE and ERICA datasets (2 discs, price not known):
GALE (Genesis of Atlantic Lows), 1/15/86-4/15/86: ship data, raobs, aircraft, radar, etc off N Carolina coast. ERICA (Experiment on Rapidly Intensifying Cyclones over the Atlantic), 12/1/88-2/26/89: rawinsondes, aircraft, radar, buoys, satellite data, etc.
Contact: C. Kreitzberg, Dept. of Physics and Atmospheric Science, Drexel University, Philadelphia, PA 19104.

GEDEX (Greenhouse Effect Detection Experiment)(price not known):
Two discs containing surface, upper air, and/or satellite-derived measurements of temperature, solar irradiance, clouds, greenhouse gases, fluxes, albedo, aerosols, ozone, and water vapor, along with Southern Oscillation Indices and Quasi-Biennial Oscillation statistics. Many of the data sets provide global coverage. The spatial resolutions vary from zonal to 2.5 degree grids. Some surface station data sets span more than 100 years; most satellite-derived sets cover only the past 12 years. Temporal coverage is monthly for most sets. An update will be available by June 1992.
Contact: NCDS/Goddard Distributed Active Archive Center, Code 935, Goddard Space Flight Center, Greenbelt, MD 20771. 301/286-3209, email NCDSUSO@NSSDCA.GSFC.NASA.GOV.
A more complete description of these discs may be obtained from the ncardata.ucar.edu FTP site, in the file "catalogs/nondss/gedex".

DMSP SSM/I Brightness Temperature Grids for the Polar Regions, volume 1-12, 9 July 1987 - 30 June 1990 (Price on request):
Each volume contains 3 months of daily brightness temperature grids. Sensor is currently flying; one additional CD-ROM volume is produced approximately every 8 weeks. Passive microwave brightness temperatures (7 dual-polarized frequencies ranging from 19.3 to 85.5 GHz.), used primarily to derive sea ice concentration; Northern and Southern Hemispheres.
Data format: 16-bit raster images (2-byte integers), in "SSM/I grid format".
Associated software: Extraction and ice concentration software, IMDISP image display program for IBM PC, IMAGIC image display program for the Macintosh II. Software distributed on diskettes.

Contact: World Data Center A for Glaciology [Snow and Ice], National Snow and Ice Data Center, University of Colorado, CIRES - Campus Box 449, Boulder, CO 80309. 303/492-5171, FAX 303/492-2468, email hanson@kryos.colorado.edu (Claire Hanson).

DMSP SSM/I Ice Concentration Grids for the Polar Regions, Volume 1, 9 July 1987 - 31 December 1989 (Price on request):
  Contains sea ice concentration derived from SSM/I brightness temperatures, using NASA Team algorithm and J. Comiso algorithm, for Northern and Southern Hemispheres.
  Data format: 8-bit raster images (1-byte integers) in "HDF format" (software available via anonymous ftp from ftp.ncsa.uiuc.edu). Grid files have NASA PDS (Planetary Data System) header labels. Additional volumes will be produced, for the entire time series.
  Associated software: Source code used to derive ice concentration from brightness temperatures. IMDISP image display software. Software distributed on diskettes.
  Contact: World Data Center A for Glaciology, information above.

Nimbus-7 SMMR Polar Radiances, Volumes 1-12, 25 October 1978 - 20 August 1987 (life of SMMR sensor) (Price on request):
  Contains passive microwave brightness temperatures (5 dual-polarized frequencies ranging from 6.6 to 37 GHz) and derived sea ice concentration for the Northern and Southern Hemispheres.
  Data format: 2-byte integers, in single-frequency grids.
  Associated software: IMDISP image display program (C code) for IBM PC; landmask and latitude/longitude overlay (Fortran). Software distributed on IBM PC diskettes.
  Contact: World Data Center A for Glaciology, information above.

Eastern Arctic Ice, Ocean and Atmosphere Data, Volume 1, CEAREX-1 ($50):
  Contains sea ice acceleration, deformation and stress; hydrography (CTDs); meteorology; bathymetry; acoustics and ambient noise (sample data) from Coordinated Eastern Arctic Experiment (CEAREX). Includes meteorology from Marginal Ice Zone Experiment (MIZEX), 1983, 1984, 1987. Experiment location: Arctic Ocean north of Svalbard; Fram Strait, September 1988 - May 1989. Amount of data: 460 mbytes.
  Data format: ASCII files. Associated software: none. Additional volumes are planned; content not yet determined.
  Contact: World Data Center A for Glaciology, information above.

NWS/NOHRSC Snow cover data ($200 each year):
  Airborne snow water equivalent and satellite areal extent of snow cover data for 1990-1992 are now available on CD-ROM for major portions of the U.S. and southern Canada. The CD-ROMs include: (1) airborne snow water equivalent data and the digitized flight line network, (2) calibrated AVHRR and GOES satellite data used to map snow cover, (3) the classified snow cover images (4) national and regional snow cover image products, and (5) ancillary data sets including digital elevation data, digitized NWS basin boundaries, and the alphanumeric results of the satellite snow cover mapping by basin and by elevation zone.
  Contact: CD-ROM Snow Cover Data, National Operational Hydrologic Remote Sensing Center (NOHRSC), Office of Hydrology, National Weather Service, 6301 34th Avenue South: Room 112, Minneapolis, MN 55450-2985. 612/725-3258, FAX 612/725-3338, email tim@snow.nohrsc.nws.gov (Tim Szeliga)

C. Miscellaneous

NASA discs:
  Various discs available, including: Voyager spacecraft images (12 discs, under $20 each!), Viking images of Mars, Magellan Venus data, Halley's comet data (25 discs), excerpts from astronomical catalogs, and more.
  Contact: NSSDC (NASA Space Science Data Center), Code 933.4, NASA Goddard Space Flight Center, Greenbelt, MD 20771. 301/286-6695. They also publish a free newsletter.

CD-ROM, INC: *COMMERCIAL*
  Several hundred discs available, including: "GRIPS 2" high resolution images of topography, Landsat, vegetation maps, plus software ($49),

"JEDI" 3 discs full of earth, space, and sea science data intended for school use ($31), 13 business/economic discs, >50 literature and entertainment discs, >40 health-related discs, many science discs. Prices range from $29-$895. Free catalog available from them.
  Contact: CD-ROM, Inc, 1667 Cole Blvd. Suite 400, Golden, CO 80401. 303/231-9373, FAX 303/231-9581.

Digital Chart of the World ($200):
  The Digital Chart of the World (DCW) is a comprehensive 1:1,000,000-scale vector basemap of the world containing cartographic, attribute, and textual data. It is provided with software that permits the database to be accessed, queried, and displayed on PC-class computers. The primary source for the database is the U.S. Defense Mapping Agency (DMA) Operational Navigation Chart (ONC) series.
  There are 4 discs: (1)North America, (2)Europe/Northern Asia, (3)South American/Africa/Antarctica, and (4)Southern Asia/Australia. The data are organized into 17 thematic coverages, including political boundaries and ocean coast lines, cities, transportation networks, drainage, land cover, and elevation contours.
  Contact: USGS Open File Section, Box 25286, Denver, CO 80225. 303/236-7476.

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Subject: Research data on tape and other media

Carbon Dioxide Information Analysis Center (CDIAC):
  Research and distribution center for data related to carbon dioxide, methane, and other trace gas emissions; the carbon cycle; and other climate-change topics. You can access catalog information by FTP (see section I). Datasets are available on various media including CD-ROM and magnetic tape. They also publish a free newsletter.
  Contact: CDIAC, Oak Ridge National Laboratory, P. O. Box 2008, Oak Ridge, TN 37831-6335. 615/574-0390, FAX 615/574-2232, email cdp@stc10.ctd.ornl.gov.

NASA Space Science Data Center (NSSDC):
  Astronomical and atmospheric data. You can access catalog information by FTP or telnet (see section I).
  Contact: NSSDC, Code 933.4, NASA Goddard Space Flight Center, Greenbelt, MD 20771. 301/286-6695.

National Center for Atmospheric Research (NCAR):
  Over 400 datasets available to the research community on various media. You can access catalog information by FTP (see section I).
  Contact: NCAR Data Support Section, PO Box 3000, Boulder, CO 80307. 303/497-1219, FAX 303/497-1137, email datahelp@ncar.ucar.edu.
  (DISCLAIMER: NCAR is a non-profit government organization operated by UCAR under a grant from the NSF. Our charges reflect the actual cost of data retrieval and magnetic media. I receive no benefit from you ordering data. Please, research-related inquiries only.)

National Climatic Data Center (NCDC): NCDC, Federal Building, Asheville, NC 28801. 704/259-0682.

National Geophysical Data Center (NGDC): NGDC, 325 Broadway, Boulder, CO 80303. 303/497-6958.

United Nations Environment Program (UNEP)/Global Resource Information Database (GRID):
  Digital environmental data and information related to the Earth's surface, oceans and atmosphere, free of charge to non-commercial users. Typical global data sets include elevation, hydrology, soils, life zones, vegetation, wetlands, climate, natural/physical boundaries, earthquake hazards, vegetation index (NOAA/GVI), human population etc.
  For a free catalog of global datasets, contact: Facility Manager, UNEP/GRID-Geneva, 6 rue de la Gabelle, CH-1227 Carouge, Geneva SWITZERLAND. (0041-22) 343-8660, FAX (0041-22) 343-8862, email POSTMAN@grid.unige.ch or POSTMAN@CGEGRD11.BITNET.

For a free catalog of datasets for Africa and Latin America, contact: Facility Manager, UNEP/GRID-Nairobi, P. O. Box 30552, Nairobi, KENYA. (00254-2) 230-800, FAX (00254-2) 226-491.

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Subject: Weather-related mailing lists

C O N T E N T S

1. CLIMLIST (moderated by John Arnfield)

CLIMLIST is a moderated electronic mail distribution list for climatologists and those working in closely-related fields. It is used to disseminate notices regarding conferences and workshops, data availability, calls for papers, positions available etc, as well as requests for information. An updated directory of email addresses for the subscribers to the list is distributed every month (usually on the 15th).

To subscribe, mail to whichever of these addresses works for you:
AJA+@OHSTMAIL.BITNET / aja+@osu.edu / johna@magnus.acs.ohio-state.edu
with the following information:

Your name; your email address; your departmental & institutional affiliation; whether your email address is shared or personal; your area of interest or responsibility within climatology.

2. Weather-users (administered by scott@zorch.sf-bay.org)

This list is for discussions of weather servers; sharing of code to automatically query weather servers; and announcements of availability (or lack thereof) and changes to weather servers. Initially, Jeff Masters (sdm@downwind.sprl.umich.edu) has agreed to send Weather Underground status notices to this list.
To join or quit the list, email to weather-users-request@zorch.sf-bay.org; the list mail address is weather-users@zorch.sf-bay.org.

3. WX-TALK and other WX-lists

WX-TALK, formerly STORM-L, is a mailing list for weather-related topics, special event notifications, job announcements, and administrative messages. This list, and other specialized weather-related lists, are run from the vmd.cso.uiuc.edu (UIUCVMD) machine at Urbana-Champaign, Illinois. WX-TALK is for discussions and questions; the others are intended to distribute information on particular topics, but you should not post mail to them.

To join the list, send a message consisting of the single line
SUB WX-TALK Your Name
to whichever of these addresses works for you:
LISTSERV@UIUCVMD / LISTSERV@UIUCVMD.BITNET / LISTSERV@VMD.CSO.UIUC.EDU
or uiucuxc!vmd!listserv from uucp.
Contributions should then go to WX-TALK@[working address]

For more information, and a list of the other WX-lists on vmd.cso.uiuc.edu, use anonymous FTP to retrieve the file WX-TALK.DOC from vmd.cso.uiuc.edu in the directory "wx".

4. Wxsat (administered by Richard B. Emerson)

Wxsat resends all NOAA/NESDIS bulletins on polar and geostationary weather satellites as well as occasional material on Meteosat. Bulletins with orbital predictions, spacecraft operation schedules, and related messages are copied from NOAA.SAT on SCIENCEnet and forwarded to all addresses on the list. The list is configured to accept and broadcast mail from subscribers to the list at large. Wxsat does not store or distribute imagery and is not primarily a "chat" list. Wxsat is oriented towards users with a daily operational need for TBUS and related bulletins.

An archive of roughly 60 days' messages are available for retrieval via email messages to wxsat-archive@ssg.com. Send the message "help" in the text to the archive server for details on how to retrieve the current index and other files.

Subscription requests go to wxsat-request@ssg.com. The service is free to all Internet users but donations are accepted as this is a volunteer operation.

5. CALMET (Computer Aided Learning in Meteorology)

CALMET is a mailing list dedicated to computer-aided learning in meteorology. It is associated with the ftp site cumulus.met.ed.ac.uk.

To join the list, send mail to calmet-request@ed.ac.uk. Messages to the list go to calmet@ed.ac.uk.

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