Ten Years of ARM External Data
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XDC Mission
The ARM External Data Center (XDC) acquires, processes, and transmits data to the ARM Archive, that are originally produced or collected by organizations through funding by other agencies or programs external to ARM. The criteria for inclusion are:
• Scientifically relevant and complementary to ARM data
• Not otherwise archived, or easily accessible
• Significant value added by processing to follow ARM standards
Here we show a sampling of external data-streams in each of the ARM measurement categories across all of the ARM sites.

XDC celebrates 10 years of service
When the XDC began operation in October 1996, it processed 36 data-streams based on 11 external data product collections and transferred an average of 12 GB/month to the Archive. Since then, the XDC capacity has grown to meet this scientific and programmatic needs. Today, the XDC handles 250 data streams based on 31 external data product collections with an average volume of 473 GB/month.

External Data-Streams and Measurements by Instrument Category and Location

Aerosols
Aerosol index, size distribution, concentration, absorption, scattering, optical properties
Datastreams: CIPSAT,CNR,UNHAP

Atmospheric State
Atmospheric moisture, pressure, temperature, turbulence, horizontal wind, precipitation, vertical velocity, precipitable water, vertical velocity
Datastreams: ACAR, SODARNET GSPS, WRF

Cloud Properties
Cloud base height, fraction, top height, droplet, liquid water paths, optical depth, sky brightness temperature, upwelling shortwave irradiance, downwelling longwave irradiance
Datastreams: VIS/ST, WSR-88D

Derived Quantities & Models
Attractive tendency, cloud liquid water, cloud ice water, net radiation, radiative heating rate, surface skin temperature, fluxes, surface stress, surface albedo, convective, radiative, heating rate, planetary boundary layer height, downwelling longwave irradiance
Datastreams: ECMWF, NCEP, GFS, MOLTS

Radiometric
Radiation, downwelling shortwave irradiance, upwelling longwave irradiance, diffuse shortwave irradiance, direct shortwave irradiance, net longwave irradiance, upwelling shortwave irradiance, diffuse spectral irradiance, direct spectral irradiance, shortwave irradiance
Datastreams: NOAA/AV, USDA

Surface Meteorology
Soil temperature, soil moisture, precipitation, surface condition
Datastreams: ABRFC, OKMX, KSU, WRNSURT, CRN

Satellite Observations
Longwave radiance, shortwave radiance, atmospheric moisture, ozone, cloud liquid water, precipitable water, precipitation
Datastreams: GOES, GEMS/MSIAT, SSM/I, LANDSAT

Upcoming Datastreams
GFS (Global Forecast System) model:
  Measurements: absolute vorticity, convective available potential energy, convective inhibition, cloud water, surface lifted index, ozone mixing ratio, pressure, precipitable water, RH, specific humidity, temperature, total ozone, u-wind, v-wind, vertical speed shear, pressure vertical velocity

TDMA (Tandem Differential Mobility Analyzer) from Texas A & M University:

Current List of External Data
XDC Data Description Page:
http://www.arm.gov/xds
Don't see a data set on our page?
1) Send an email to xdc_op@arm.gov for assistance OR
2) Submit your request for new data to the ARM ECR System (http://ecr.arm.gov). If approved the XDC will begin the process as directed through the ECO system.