ARM Southern Great Plains (SGP) Update

N. Hickmon, D. Sisterson, M. Ritsche

Profiling Modules

AERI ● DL ● MWR3C

Located at SGP
EF32, EF33, EF37, EF39

Intermediate Facilities

Radar Wind Profilers
Precipitation Sensors:
Laser Disdrometer
All-in-One Met
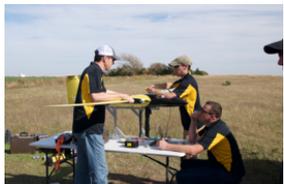Tipping Bucket Raingauge

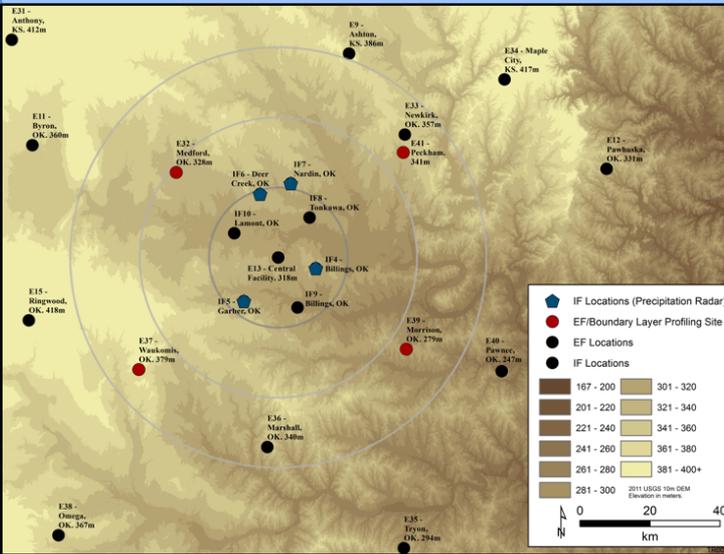Located at IF8, IF9, IF10, CF

Extended Facilities

MET, EBBR, ECOR, STAMP, IRT, MFRSR, SIRS

Located at:
EF9, 11, 12, 13, 15, 21, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41

UAV Campaigns

Central Facility(CF)   Extended Facility(EF)   Intermediate Facility(IF)

26 Years of Campaigns 1992-2017
422 IOP's representing 42% of all ARM approved IOP's

SGP FY17 Field Campaigns To Date:
Orbiting Carbon Observatory-Fourier Transform Spectrometer Validation – Ok.
ARM Radiosondes for SNPP/JPSS Validation
Full-Column Greenhouse Sampling
Measuring Clouds at SGP with Stereo Photogrammetry
Vaisala DIAL
CLOUDMAP (UAS) (continuing)
Cross-Scale Land Atmosphere Experiment
Atmosphere - Biosphere Interaction
Land Atmosphere Feedback Experiment
World Infrared Support Group
SGP FY18 Field Campaigns Upcoming:
NWS Next Generation Sonde Evaluation
Radiosonde Intercomparison and Validation
Short Convection Campaign at SGP Central Facility
Submit Field Campaign Requests at:
https://www.arm.gov/research/campaigns

Field Campaigns FY17

Land Atmosphere Feedback Experiment
Investigated the life cycle of shallow clouds

Thank you for LAFE 2017!

Cross Scale Land Atmosphere Exchange
Investigating spatial scaling of turbulent and soil heat flux and soil moisture at large scales.

New Instrumentation
Stereo Photogrammetry
Creating 3-d cloud masks

Located in a triangular pattern 120 degrees from one another. Camera pairs are 500 to 1000 m apart from one another. They are approximately 5 Km away from the CF

Locations:
EF43a&b, 44a&b, 45a&b

CF INSTRUMENTS: ACSM AERI AOS AOSMET APS BRS CAPS CCN CEIL CO CO2FLX CPC CSAPR2 CSPHOT

PGSISSO PRECIP RL RWP SMPS SAS HE/ZE SIRS SO2 SONDE TAP TDMA TSI TWR UHSAS

DISDRO DL 2DVD FLASK IMPACTOR GHG IRSI IRT Ka/W SACR KAZR LDIS MAWS MFR MFRSR MPL MWR MWR3C NEPH NIMFR n-SMPS ORG PSAP PICARRO