AMF2 Instruments for BAECC

| Instrument | Mentor | Instrument Name | Manufacturer | Measurement |
|---|---|---|---|---|
| ASSISTII (like an Aeri) | Connor Flynn | ASSISTII | LR-Tech, Inc. | Temperature and water vapor profiles |
| CSPHOT | Laurie Gregory | Cimel Sunphotometer | CIMEL Electronique | Solar irradiance and sky radiance |
| IRT | Vic Morris | Infrared Thermometer | Heimann | Equivalent black body brightness temps |
| MWR-2C | Maria Cadeddu | Microwave Radiometer | Radiometrics | Column H20 vapor and liquid |
| MWR-3C | Maria Cadeddu | Microwave Radiometer | Radiometrics | Column H20 vapor and liquid |
| TSI | Vic Morris/Mike Reynolds | Total Sky Imager | Yankee Environmental Systems | Cloud fraction values |
| BBSS | Donna Holdridge | Balloon Borne Sounding System | Vaisala, Inc. | Temp, humidity, pressure, wind speed and direction profiles |
| MPL | Rich Coulter | Micropulse Lidar | Sigma Space, Inc. | Cloud Height |
| HSRL | | High Spectral Resolution Lidar | Univ Wisconsin | |
| RWP 1290MHZ | Rich Coulter | Radar Wind Profiler | Detect, Inc. | Wind and virtual temperature profiles |

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| VCEIL | Vic Morris | Ceilometer | Vaisala, Inc. | Cloud height |
| MWACR | Kevin Widener/Nitin Bharadwaj | W-band ARM Cloud Radar | ProSensing, Inc. | Cloud height and microphysics |
| KAZR | Kevin Widener/Nitin Bharadwaj | Ka Zenith Pointing ARM Cloud Radar | ProSensing, Inc | Cloud height and micorphysics |
| CPC | Stephen Springston | Condensation Particle Counter Model 3772 | | CPC>10nm. Determines the concentration of aerosol particles down to an aerodynamic diameter of 10 nm. |
| HTDMA | Stephen Springston | Hygroscopic Tandem Mobiity Analyzer | | Provides differential mobility sizing and the aerosol distribution (size, mass or number) as a function of relative humidity |
| PSAP | Stephen Springston | Particle Soot Absorption Photometer | | Measures the optical transmittance of particles deposited on a filter at three wavelengths. |
| Neph | Stephen Springston | Ambient Nephelometer | | Measures the light scattering coefficient of aerosols at ambient relative humidity |
| F(RH) | Stephen Springston | Wet Nephelometer | | Measures the light scattering coefficient of aerosols over a range of relative humidities. |
| CCN | Stephen Springston | Cloud Condensation Nuclei (CCN100) | | Measures the concentrations of CCN's as a function of supersaturation. |
| AOS MET | Stephen Springston | Local Meteorology at the top of the AOS stack. WXT520 | Vaisala | Measures wind speed, direction, temp, RH, Barometric Pressure, rainfall. |

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| $O_3$ | Stephen Springston | Ozone | | Measures $O_3$ concentration (range) by absorption |

AMF2 Instruments: Land Based and New Systems for BAECC

| Instrument | Mentor | Instrument Name | Manufacturer | Measurement |
|---|---|---|---|---|
| Land MET | Jenni Prell | WS425 ultrasonic, HMP330 barometer, HMP155 sensor, rm young aspirator, PWD-22, ORG 815 | various | Sfc meteorology on a 10m telescoping tower. |
| 2d –VD | Mary Jane Bartholomew | Video Disdrometer | Joanneum Research, Inc. | Drop Size Distribution, rainfall amounts and rate. Snow fall. |
| WBRG | Mary Jane Bartholomew | Weighing bucket Rain Gage | Belfort | Rainrate, water equivalent |
| Skyrad | Tom Stoffel | SKYRAD | Eppley, Kipp & Zonen | Consists of NIP, 2-PIR's, 1-PSP, 1-B&W and 1-vertically looking IRT. (like SIRS) |
| Gndrad | Tom Stoffel | GRNDRAD | Eppley, Kipp & Zonen | Consists of 1-PIR, 1-PSP and one downward looking IRT (like SIRS on met tower). Is mounted on cross-arms on top of telescoping met tower. |
| MFRSR | Gary Hodges | MFRSR | SGP/YES | AOD |
| M-AERI (new) | John Gero | Marine Atmospheric Emitted Radiance Interferometer | AB BOMEM | Absolute infrared spectral radiance |

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| KA-SACR | Nitin Bharadwaj/Kevin Widener | Ka-Band Scanning Cloud Radar | ProSensing | Cloud particles |
| X-SACR | Nitin Bharadwaj/Kevin Widener | X-Band Scanning Cloud Radar | ProSensing | Cloud particles |

Guest Instruments

| Instrument | PI | Instrument Name | IOP | Measurement |
|---|---|---|---|---|
| 3D-WND | Dmitri Moisseev | METEK 3D-Anememoter | 2013-6632<br>BAECC Snowfall Experiment | 3D wind field |
| 2d –VD | Dmitri Moisseev | Video Disdrometer | 2013-6632<br>BAECC Snowfall Experiment | Drop Size Distribution, Precipitation rates. Inside a DFIR |
| NASA-PVI | Dmitri Moisseev | NASA Particle Video Imager (vers. 2) | 2013-6632<br>BAECC Snowfall Experiment | Particle size distribution and fall velocities. Inside DFIR |
| Disdrometer | Dmitri Moisseev | OTT Pluvio 2 | 2013-6632<br>BAECC Snowfall Experiment | Drop Size Distribution, rainfall amounts and rate, snowfall. Inside a DFIT=R |

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| Rain Radar | Dmitri Moisseev | METEK MicroRain Radar | 2013-6632<br>BAECC Snowfall Experiment | Inside DFIR |
| TPS | Dmitri Moisseev | Yankee Environmental TPS-300 Hot Plate | 2013-6632<br>BAECC Snowfall Experiment | Precipitation rate. Inside DFIR |
| FIGAERO-ToF-CIMS | Tuuka Petaja | Filter Inlet for Gases and Aerosols - Time of Flight – Chemical Ionization Mass Spectrometer | 2013-6604 FIGAERO-ToF-CIMS Instrument in Hyytiala with AMF2 | SOA source attribution and chemical and physical properties |