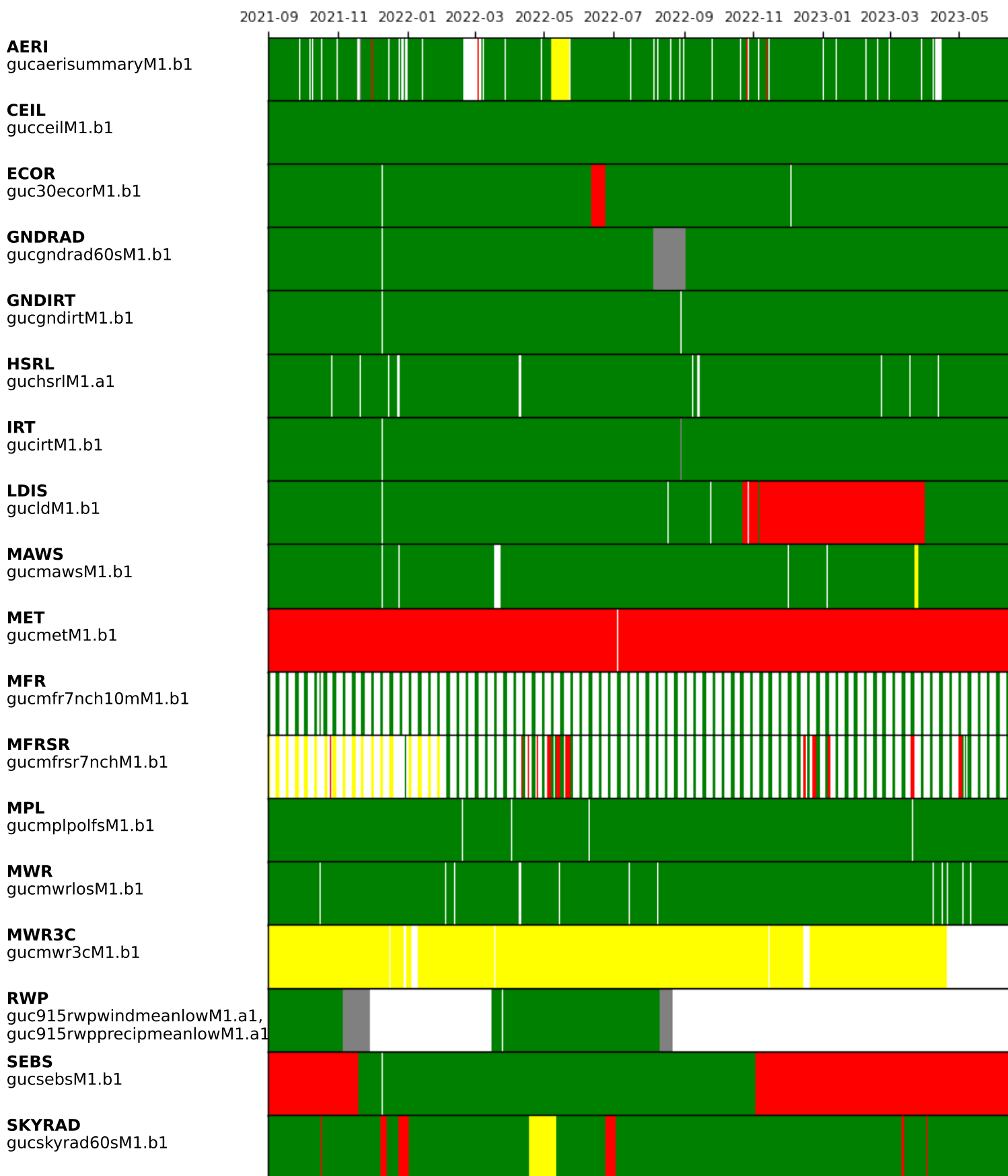


Gunnison, CO; AMF2 (main site for SAIL)

Atmospheric Radiation Measurement User Facility

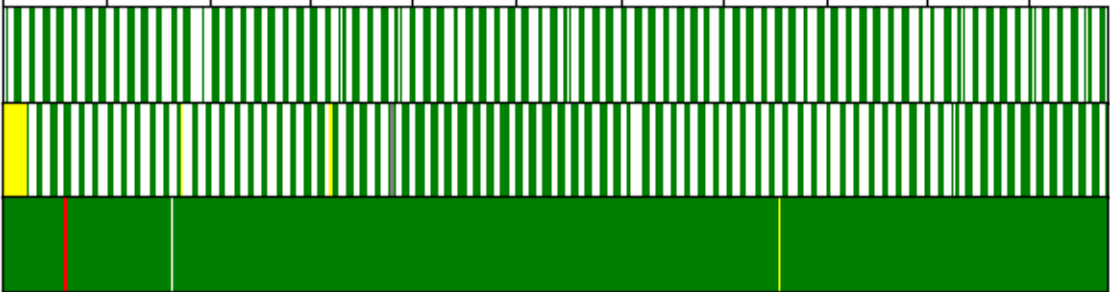


2021-09 2021-11 2022-01 2022-03 2022-05 2022-07 2022-09 2022-11 2023-01 2023-03 2023-05

SONDE
gucsondewnpnM1.b1

TSI
guctsiskycoverM1.b1

WB
gucwbpluvio2M1.a1



ARM Data Quality Report (DQR) Table

| Datastream | DQR | Quality | Subject | Start Date | End Date |
|---------------------|------------|-----------|--|-----------------|-----------------|
| gucaerisummaryM1.b1 | D220720.2 | missing | Missing Data - Instrument Off | 20220304.150000 | 20220307.162529 |
| gucaerisummaryM1.b1 | D220209.19 | missing | No Data | 20211227.055100 | 20211228.160801 |
| gucaerisummaryM1.b1 | D211124.3 | missing | No Data | 20211119.131200 | 20211120.235959 |
| gucaerisummaryM1.b1 | D221202.6 | incorrect | Incorrect Data due to Scene Mirror not Rotating | 20221112.000000 | 20221112.223000 |
| gucaerisummaryM1.b1 | D220720.4 | suspect | AERI Skipping Laser Fringes | 20220507.000000 | 20220523.235959 |
| gucaerisummaryM1.b1 | D220720.3 | incorrect | Laser Testing | 20220303.183718 | 20220304.150000 |
| gucaerisummaryM1.b1 | D220209.18 | incorrect | Incorrect Data - Mirror Appears not to be Moving | 20220101.012000 | 20220101.185950 |
| gucaerisummaryM1.b1 | D220210.15 | incorrect | Questionable Data | 20211201.000000 | 20211201.235959 |
| gucceiM1.b1 | D230511.4 | incorrect | Incorrect Data | 20230422.062105 | 20230422.192322 |
| guc30ecorM1.b1 | D220711.4 | incorrect | Incorrect Data | 20220611.203001 | 20220624.000000 |
| gucgndrad60sM1.b1 | D220902.4 | missing | up_long_hemisp_vent_tachometer | 20220805.150000 | 20220902.163600 |
| gucgndirtM1.b1 | D220810.6 | incorrect | Incorrect Measurements during Tower Maintenance | 20220805.150000 | 20220805.174900 |
| gucirtM1.b1 | D220831.2 | missing | No Data | 20220829.011701 | 20220829.173759 |
| gucirtM1.b1 | D230322.9 | incorrect | Incorrect Data | 20230311.180500 | 20230311.193000 |
| gucldM1.b1 | D230412.3 | incorrect | Incorrect Data | 20230206.000000 | 20230331.235959 |
| gucldM1.b1 | D230209.1 | incorrect | Incorrect Precipitation Properties | 20230117.000000 | 20230206.235959 |
| gucldM1.b1 | D230116.2 | incorrect | Incorrect Precipitation Properties | 20221106.000000 | 20230116.235959 |
| gucmawsM1.b1 | D220323.1 | missing | Network Issues | 20220318.183001 | 20220323.194259 |
| gucmawsM1.b1 | D230407.4 | suspect | High RH | 20230323.000000 | 20230325.235959 |
| gucmetM1.b1 | D220719.3 | suspect | Tower Lowered | 20220713.180000 | 20220713.190000 |
| gucmetM1.b1 | D210920.2 | incorrect | Pressure Data Incorrect | 20210901.000000 | 20210917.174000 |
| gucmetM1.b1 | D230404.3 | missing | Missing Optical Rain Gauge Data | 20230331.024300 | 20230404.194800 |
| gucmetM1.b1 | D221209.4 | incorrect | False Precipitation Recorded | 20220731.171500 | 20220731.171659 |
| gucmetM1.b1 | D220210.27 | incorrect | False Precipitation Recorded | 20220130.205000 | 20220130.205500 |
| gucmetM1.b1 | D221118.7 | missing | Missing Present Weather Detector Data | 20221115.215301 | 20221118.190059 |
| gucmetM1.b1 | D211001.1 | incorrect | Present Weather Detector Instrument Errors | 20210901.000000 | 20210921.184500 |
| gucmetM1.b1 | D230224.3 | incorrect | Broken Heater Fuse on Tipping Bucket Rain Gauge | 20221129.000000 | 20230109.235959 |
| gucmetM1.b1 | D230303.1 | incorrect | False Precipitation Recorded | 20230226.171300 | 20230226.171359 |
| gucmetM1.b1 | D220225.3 | incorrect | Snow Obstructed in Tipping Bucket Rain Gauge | 20220220.000000 | 20220222.235959 |
| gucmetM1.b1 | D230616.3 | incorrect | Incorrect Flag on Corrected Tipping Bucket Data | 20210901.000000 | 20230616.000000 |

ARM Data Quality Report (DQR) Table

| Datastream | DQR | Quality | Subject | Start Date | End Date |
|----------------------|------------|-----------|---|-----------------|-----------------|
| gucmetM1.b1 | D221103.2 | incorrect | Temperature Data Reads High | 20210901.000000 | 20221031.201559 |
| gucmfrsr7nchM1.b1 | D211021.4 | incorrect | Shading Problem - Shadowband Slip | 20211015.150000 | 20211015.180400 |
| gucmfrsr7nchM1.b1 | D230613.1 | incorrect | Incorrect Data - Power Supply Issues | 20230430.180000 | 20230503.182500 |
| gucmfrsr7nchM1.b1 | D220210.21 | suspect | Questionable Data - Nighttime Values Over-Ranging | 20210718.000000 | 20220204.173000 |
| gucmfrsr7nchM1.b1 | D220607.4 | incorrect | Shading Problem - Shadowband Misalignment | 20220406.133500 | 20220406.151600 |
| gucmfrsr7nchM1.b1 | D210831.1 | incorrect | Shading Problem - Shadowband Misalignment | 20210804.150600 | 20210804.204700 |
| gucmfrsr7nchM1.b1 | D211130.2 | incorrect | Shading Problem - Shadowband Misalignment | 20211025.143700 | 20211025.174800 |
| gucmfrsr7nchM1.b1 | D230109.2 | incorrect | Incorrect Data - Snow/Ice | 20221210.152000 | 20221210.223000 |
| gucmwrlosM1.b1 | D220406.5 | missing | Missing Data | 20220408.183701 | 20220410.130259 |
| gucmwr3cM1.b1 | D230428.3 | missing | Missing Data | 20230420.000000 | 30010101.000000 |
| gucmwr3cM1.b1 | D230112.3 | missing | Missing Data | 20221215.160001 | 20221220.125400 |
| gucmwr3cM1.b1 | D220110.1 | missing | Missing Data | 20211228.120000 | 20211230.175959 |
| gucmwr3cM1.b1 | D220113.3 | suspect | Inaccurate Tip Calibration | 20210709.140000 | 30010101.000000 |
| gucmwr3cM1.b1 | D210917.1 | incorrect | Incorrect IRT Data | 20210901.000000 | 20211102.180000 |
| guc915rwpwindmeanlov | D221114.3 | missing | Missing Data | 20220811.000000 | 20221104.161005 |
| guc915rwpwindmeanlov | D220404.11 | missing | Missing Data | 20211105.213000 | 20220315.235959 |
| guc915rwpwindmeanlov | D220405.6 | incorrect | Incorrect Data | 20220315.000000 | 20220315.235959 |
| gucsebsM1.b1 | D220211.4 | incorrect | Incorrect Data | 20210713.212258 | 20211118.170000 |
| gucsebsM1.b1 | D230720.1 | incorrect | Soil Temp 3 Problem | 20221103.030000 | 20230616.153059 |
| gucskyrad60sM1.b1 | D230314.1 | missing | Missing Data due to External Power Failure | 20230311.054600 | 20230311.180400 |
| gucskyrad60sM1.b1 | D220109.1 | incorrect | Incorrect Data due to Failed Solar Tracker and Adverse Environmental Conditions | 20211224.140000 | 20220102.200000 |
| gucskyrad60sM1.b1 | D230405.5 | incorrect | Incorrect Data due to Tracking/Shading Issue | 20230402.135400 | 20230402.161400 |
| gucskyrad60sM1.b1 | D230314.4 | incorrect | External Power Failure resulted in Loss of Time Keeping in Tracker | 20230311.180400 | 20230313.191400 |
| gucskyrad60sM1.b1 | D221213.2 | incorrect | Incorrect Data - Due to Tracker Issue | 20220608.114000 | 20220608.170700 |
| gucskyrad60sM1.b1 | D221213.3 | incorrect | Incorrect Data | 20220815.133600 | 20220815.165500 |
| gucskyrad60sM1.b1 | D220715.5 | incorrect | Incorrect Data due to Misaligned Tracker | 20220624.120000 | 20220703.163000 |
| gucskyrad60sM1.b1 | D211215.2 | incorrect | Incorrect Dta due to Failed Tracker | 20211208.160000 | 20211213.183500 |
| gucskyrad60sM1.b1 | D220518.2 | suspect | Questionable Data from the short_direct_normal Datastream (NIP Instrument) | 20220418.000000 | 20220511.194500 |
| gucskyrad60sM1.b1 | D211123.1 | incorrect | Incorrect short_direct_normal Data due to Problem with NIP Instrument | 20211028.180000 | 20211028.210000 |
| gucsondewnnpnM1.b1 | D230103.2 | missing | No Data | 20221221.000000 | 20221221.235959 |

ARM Data Quality Report (DQR) Table

| Datastream | DQR | Quality | Subject | Start Date | End Date |
|----------------------|-----------|-----------|--|-----------------|-----------------|
| gucsondewnnpnM1.b1 | D220318.2 | missing | First and Second Flight Attempt Failed | 20220314.110000 | 20220314.145959 |
| guctsiskycoversM1.b1 | D230403.2 | missing | No Data | 20230317.165931 | 20230318.204800 |
| guctsiskycoversM1.b1 | D220911.1 | missing | Missing Data | 20220907.160001 | 20220910.150259 |
| guctsiskycoversM1.b1 | D220512.1 | missing | TSI Movie not Available | 20220418.000000 | 20220420.000000 |
| guctsiskycoversM1.b1 | D220331.1 | incorrect | Maintenance Impacts Data | 20220324.181430 | 20220324.181730 |
| guctsiskycoversM1.b1 | D220120.2 | suspect | Mirror Misalignment Resulting from Ice | 20211215.142500 | 20211215.234130 |
| guctsiskycoversM1.b1 | D220331.3 | suspect | Questionable Data | 20220312.200730 | 20220314.180200 |
| guctsiskycoversM1.b1 | D210917.5 | suspect | Mountains Visible within TSI Processing Zenith | 20210801.000000 | 20210915.171030 |
| gucwbpluvio2M1.a1 | D230122.2 | suspect | Questionable Data | 20221204.000000 | 20221204.231739 |
| gucwbpluvio2M1.a1 | D211027.2 | incorrect | Incorrect Data | 20211007.033049 | 20211008.235959 |

ARM Data Object Identifier (DOI) Table

| Instrument | DOI |
|------------|---|
| AERI | Gero, J., Garcia, R., Hackel, D., Ermold, B., & Gaustad, K. Atmospheric Emitted Radiance Interferometer (AERICH1). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1989299 |
| CEIL | Zhang, D., Morris, V., & Ermold, B. Ceilometer (CEIL10M). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1497398 |
| ECOR | Sullivan, R., Billesbach, D., Keeler, E., & Ermold, B. Eddy Correlation Flux Measurement System (30ECOR). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1025039 |
| GNDRAD | Sengupta, M., Habte, A., Andreas, A., Reda, I., Jaker, S., Xie, Y., Yang, J., Gotseff, P., Kutchenreiter, M., & Shi, Y. Ground Radiometers on Stand for Upwelling Radiation (GNDRAD60S). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1377837 |
| GNDIRT | N/A |
| HSRL | Holz, R., Garcia, J., & Schuman, E. High Spectral Resolution Lidar (HSRL). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1462207 |
| IRT | Shi, Y. Infrared Thermometer (GNDIRT). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1366509 |
| LDIS | Wang, D., & Shi, Y. Laser Disdrometer (LD). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1973058 |
| MAWS | Keeler, E., & Kyrouac, J. Automatic Weather Station (MAWS). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1162061 |
| MET | Kyrouac, J., & Shi, Y. Surface Meteorological Instrumentation (MET). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1786358 |
| MFR | Hodges, G., Herrera, C., & Ermold, B. Multifilter Radiometer (MFR7NCH10M). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1773175 |
| MFRSR | Hodges, G., Herrera, C., & Ermold, B. Multifilter Rotating Shadowband Radiometer (MFRSR7NCH). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1429369 |
| MPL | Muradyan, P., Cromwell, E., Koontz, A., & Coulter, R. Micropulse Lidar (MPLPOLFS). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1320657 |
| MWR | Cadeddu, M., & Tuftedal, M. Microwave Radiometer (MWRLOS). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1046211 |
| MWR3C | Cadeddu, M., Gibler, G., & Koontz, A. Microwave Radiometer, 3 Channel (MWR3C). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1025248 |
| RWP | Muradyan, P. Radar Wind Profiler (915RWPPRECIPMEANHIGH). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1972785 |
| SEBS | Sullivan, R., Keeler, E., & Pal, S. Surface Energy Balance System (SEBS). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1984921 |

ARM Data Object Identifier (DOI) Table

| Instrument | DOI |
|------------|--|
| SKYRAD | Sengupta, M., Habte, A., Andreas, A., Reda, I., Jaker, S., Xie, Y., Yang, J., Gotseff, P., Kutchenreiter, M., & Shi, Y. Sky Radiometers on Stand for Downwelling Radiation (SKYRAD60S). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1377836 |
| SONDE | Keeler, E., & Burk, K. Balloon-Borne Sounding System (SONDEWNPN). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1595321 |
| TSI | Flynn, D., & Morris, V. Total Sky Imager (TSISKYCOVER). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1992207 |
| WB | Wang, D., Bartholomew, M., & Cromwell, E. Weighing Bucket Precipitation Gauge (WBPLUVIO2). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1338194 |