Gunnison, CO; Supplemental Facility 2

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 **ACSM** gucaosacsmtofspecS2.a1 gucaosccn2colaS2.b1 **CO-ANALYZER** gucaoscoS2.b1 gucaoscpcf1mS2.b1 **CPCUF** gucaoscpcuf1mS2.b1 **HTDMA** gucaoshtdmaS2.a1 **AOSMET** gucaosmetS2.a1 **NEPHELOMETER** gucaosnephdry1mS2.b1 **OZONE** gucaoso3S2.a1 **PSAP** gucaospsap3w1mS2.b1 **SMPS** gucaossmpsS2.a1

gucaossp2bc60sS2.b1

gucaosuhsasS2.b1

UHSAS

ARM Data Quality Report (DQR) Table

Datastream	DQR	Quality	Subject	Start Date	End Date
gucaosacsmtofspecS2.a	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaosacsmtofspecS2.a	D220829.7	missing	No Data	20220725.183001	20220726.185959
gucaosacsmtofspecS2.a	D220404.8	missing	No Data	20220303.150400	20220402.150000
gucaosacsmtofspecS2.a	D220404.9	missing	No Data	20211104.180000	20220218.200000
gucaosacsmtofspecS2.a	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaosacsmtofspecS2.a	D221118.6	incorrect	Uncalibrated Data	20220218.200000	20220303.150404
gucaosacsmtofspecS2.a	D221007.15	incorrect	Critical Orifice Clogged	20220505.220000	20220507.235959
gucaosccn2colaS2.b1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaosccn2colaS2.b1	D220506.3	incorrect	Instrument in Safe Mode	20211210.120000	20211210.180000
gucaoscoS2.b1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaoscoS2.b1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaoscpcf1mS2.b1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaoscpcf1mS2.b1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaoscpcf1mS2.b1	D230312.1	incorrect	Vacuum Supply Disrupted	20230311.080000	20230311.180000
gucaoscpcf1mS2.b1	D221112.5	incorrect	Incorrect Data	20221028.150000	20221028.190000
gucaoscpcf1mS2.b1	D220211.16	incorrect	Questionable Data	20220211.185000	20220211.195600
gucaoscpcf1mS2.b1	D220209.11	incorrect	Incorrect Data	20211028.000000	20211030.235959
gucaoscpcuf1mS2.b1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaoscpcuf1mS2.b1	D220209.12	missing	No Data	20211106.210401	20211108.214959
gucaoscpcuf1mS2.b1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaoscpcuf1mS2.b1	D230312.1	incorrect	Vacuum Supply Disrupted	20230311.080000	20230311.180000
gucaoscpcuf1mS2.b1	D221112.5	incorrect	Incorrect Data	20221028.150000	20221028.190000
gucaoscpcuf1mS2.b1	D220211.16	incorrect	Questionable Data	20220211.185000	20220211.195600
gucaoscpcuf1mS2.b1	D220209.11	incorrect	Incorrect Data	20211028.000000	20211030.235959
gucaoshtdmaS2.a1	D230316.1	incorrect	Power Outage	20230311.080000	20230311.190000
gucaoshtdmaS2.a1	D230228.2	incorrect	Internal Leak	20230119.170000	20230204.190000
gucaoshtdmaS2.a1	D221221.1	incorrect	Leak in the System	20221216.100000	20221219.213000
gucaoshtdmaS2.a1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaoshtdmaS2.a1	D220909.19	incorrect	Leaks in the System	20220315.190000	20220716.000000
gucaoshtdmaS2.a1	D220609.3	incorrect	Internal Flow Issues	20211030.000000	20220414.000000

ARM Data Quality Report (DQR) Table

Datastream	DQR	Quality	Subject	Start Date	End Date
gucaoshtdmaS2.a1	D220729.6	incorrect	Dry Air Supply Off	20220729.040000	20220729.165000
gucaoshtdmaS2.a1	D220801.2	incorrect	Flow Issues	20220731.163000	20220801.160000
gucaoshtdmaS2.a1	D220707.2	incorrect	Power Outage	20220703.220000	20220704.160000
gucaoshtdmaS2.a1	D220628.2	incorrect	Instrument Troubleshooting	20220613.120000	20220616.210000
gucaosmetS2.a1	D221111.1	missing	No Data	20221104.174201	20221105.191659
gucaosmetS2.a1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaosmetS2.a1	D220627.1	suspect	Precipitation Overestimated	20220619.000000	20220620.000000
gucaosnephdry1mS2.b1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaosnephdry1mS2.b1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaosnephdry1mS2.b1	D220818.2	incorrect	Nephelometer Calibration	20220818.153000	20220818.170000
gucaosnephdry1mS2.b1	D220509.1	incorrect	Bulb Burned Out	20220328.100000	20220401.000000
gucaoso3S2.a1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaoso3S2.a1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaoso3S2.a1	D220725.1	incorrect	Incorrect Data	20220723.121713	20220724.162239
gucaospsap3w1mS2.b1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaospsap3w1mS2.b1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaospsap3w1mS2.b1	D230327.5	incorrect	Bad Data due to Power Outage	20230311.080704	20230311.191558
gucaospsap3w1mS2.b1	D230104.3	incorrect	Bad Data	20221123.200930	20221124.165959
gucaospsap3w1mS2.b1	D220708.2	incorrect	Power Loss Affected Data	20220703.214000	20220704.160000
gucaospsap3w1mS2.b1	D211210.2	incorrect	Questionable Data	20211119.160000	20211120.190000
gucaossmpsS2.a1	D230501.4	incorrect	Instrument undergoing Weekly Check	20230427.170000	20230427.190000
gucaossmpsS2.a1	D230312.1	incorrect	Vacuum Supply Disrupted	20230311.080000	20230311.180000
gucaossmpsS2.a1	D221201.7	missing	No Data	20221107.160000	20221111.235959
gucaossmpsS2.a1	D220821.1	suspect	Noisy Impactor Flow Observed	20220721.150000	20220727.230000
gucaossmpsS2.a1	D220707.1	incorrect	Incorrect Data	20220703.214000	20220705.150000
gucaossmpsS2.a1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaossmpsS2.a1	D230320.3	incorrect	Instrument Under Review	20221107.160000	20221111.230000
gucaossmpsS2.a1	D221112.5	incorrect	Incorrect Data	20221028.150000	20221028.190000
gucaossmpsS2.a1	D220905.1	suspect	Questionable Data	20220511.000000	20220612.000000
gucaossmpsS2.a1	D220811.2	suspect	Data Looks Suspect	20220412.170000	20220412.230000

ARM Data Quality Report (DQR) Table

Datastream	DQR	Quality	Subject	Start Date	End Date
gucaossmpsS2.a1	D220401.3	suspect	Unexplained Instrument Signal at Last Couple of Size Bins	20220305.000000	20220323.000000
gucaossmpsS2.a1	D220310.2	incorrect	Incorrect Data	20220310.180000	20220310.205000
gucaossmpsS2.a1	D220211.17	suspect	Questionable Data	20220211.185000	20220211.195600
gucaossmpsS2.a1	D220209.11	incorrect	Incorrect Data	20211028.000000	20211030.235959
gucaossp2bc60sS2.b1	D220923.5	incorrect	Sample Pump Failure	20220531.140000	20220531.145859
gucaosuhsasS2.b1	D221108.2	incorrect	Instrument Mentors Onsite for Calibrations and Maintenance	20221107.160000	20221111.230000
gucaosuhsasS2.b1	D220811.3	missing	Software Frozen	20220719.060001	20220723.154359
gucaosuhsasS2.b1	D220726.7	missing	Software Crash	20220719.060001	20220723.154359
gucaosuhsasS2.b1	D211112.1	missing	Power Outage	20211104.173000	20211105.140000
gucaosuhsasS2.b1	D220707.2	incorrect	Power Outage	20220703.220000	20220704.160000
gucaosuhsasS2.b1	D220506.10	incorrect	Instrument Sampling Cabin Air	20220324.160000	20220422.213000
gucaosuhsasS2.b1	D211217.1	incorrect	Contamination in the Optics Chamber	20211215.200000	20211217.182300

ARM Data Object Identifier (DOI) Table

Instrument	DOI
ACSM	Shilling, J., Anna, M., & Shippert, T. Aerosol Chemical Speciation Monitor (AOSACSMTOFSPEC). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1822138
CCN	Koontz, A., & Uin, J. Cloud Condensation Nuclei Particle Counter (AOSCCN2COLA). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1323892
CO-ANALYZER	Koontz, A., & Springston, S. Carbon Monoxide Analyzer (AOSCO). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1250819
СРС	Flynn, C., & Ermold, B. Condensation Particle Counter (AOSCPCF1M). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1398277
CPCUF	N/A
HTDMA	Uin, J., & Cromwel, E. Humidified Tandem Differential Mobility Analyzer (AOSHTDMA). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1095581
AOSMET	Kyrouac, J., & Tuftedal, M. Meteorological Measurements associated with the Aerosol Observing System (AOSMET). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1025153
NEPHELOMETER	Uin, J., Salwen, C., & Senum, G. Nephelometer (AOSNEPHDRY1M). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1259232
OZONE	Trojanowski, R., Springston, S., & Koontz, A. Ozone Monitor (AOSO3). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1287329
PSAP	Ermold, B., & Flynn, C. Particle Soot Absorption Photometer (AOSPSAP3W1M). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1225037
SMPS	Kuang, C., Singh, A., & Howie, J. Scanning mobility particle sizer (AOSSMPS). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1225453
SP2	Jackson, R., & Sedlacek, A. Single Particle Soot Photometer (AOSSP2BC60S). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1807910
UHSAS	Uin, J., Senum, G., Koontz, A., & Flynn, C. Ultra-High Sensitivity Aerosol Spectrometer (AOSUHSAS). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1409033