## MOSAIC (Drifting Obs - Study of Arctic Climate); AMF2 Atmospheric Radiation Measurement User Facility

Atmospheric Emitted Radiance Interferometer (AERI): summary data ARM Name: AERI Datastream: mosaerisummaryM1.b1

Ceilometer (CEIL): cloud-base heights

ARM Name: CEIL

Datastream: mosceilM1.b1

Doppler Lidar - Fixed Pointing mode ARM Name: DI Datastream: mosdlfptM1.a1

High Spectral Resolution Lidar ARM Name: HSRL Datastream: moshsrlM1.a1

Ka-Band ARM Zenith RADAR (KAZR); general

ARM Name: KAZR

Datastream: moskazrcfrgeM1.a1

Laser disdrometer ARM Name: LDIS Datastream: mosldM1.b1

Present Weather Detector ARM Name: MET Datastream: mospwdM1.b1

Micropulse Lidar (MPL) polarized, fast switching: cloud base and top heights ARM Name: MPL

Datastream: mosmplpolfsM1.b1

Marine W-Band ARM Cloud Radar (MWACR)

ARM Name: MWACR

Datastream: mosmwacrcfrM1.a1

Microwave Water Radiometer (MWR): water liq. & vapor along line of sight (LOS) path

ARM Name: MWR
Datastream: mosmwrlosM1.b1 Microwave Radiometer, 3 Channel ARM Name: MWR3C

Datastream: mosmwr3cM1.b1

1290-MHz Beam-Steered Radar Wind Profiler: Wind and Moment Averages ARM Name: RWP

Datastream: mos1290bsrwpwindavgM1.b1

Siphon Rain Gauge ARM Name: RAIN Datastream: mossrgM1.a1

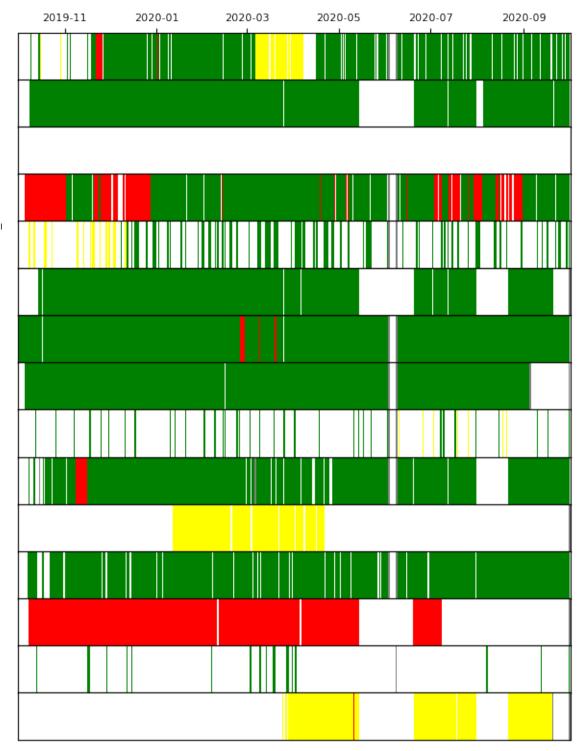
Balloon-borne sounding system (BBSS): Vaisala-processed winds, press., temp, &RH

ARM Name: SONDE

Datastream: mossondewnpnM1.b1 Total Sky Imager (TSI): fractional sky

coverage ARM Name: TSI

Datastream: mostsiskycoverM1.b1



## ARM Data Quality Report (DQR) Table

Datastream	DQR	Quality	Subject	Start Date	End Date
mosaerisummaryM1.b1	D220404.13	missing	No Data	20200407.105011	20200415.125430
mosaerisummaryM1.b1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mosaerisummaryM1.b1	D210223.3	incorrect	Sky Hatch Failure	20191121.100000	20191126.110000
mosaerisummaryM1.b1	D210223.2	suspect	Side Hatch Failure  The M-AERI scene mirror was replaced as part of	20191015.135100	20191029.100000
mosaerisummaryM1.b1	D200103.3	incorrect	routine preventative maintenance. Following the replacement, there was an issue with the scene	20200101.112000	20200102.063000
mosaerisummaryM1.b1	D200417.4	suspect	Snow Incursion in the M-AERI Front-End Blackbodies caused Invalid Data	20200306.090000	20200415.133000
mosceilM1.b1	D210326.1	missing	Facility Relocation	20200731.072016	20200804.173439
mosceilM1.b1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mosdlfptM1.a1	D220422.1	missing	No Data	20200920.000001	20201001.235959
mosdlfptM1.a1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
moshsrlM1.a1	D220405.2	missing	No Data	20200720.113501	20200721.114459
moshsrlM1.a1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
moshsrlM1.a1	D210701.4	missing	No Data	20200824.055501	20200825.160129
moshsrlM1.a1	D210630.9	incorrect	Incorrect Data	20200924.211500	20200925.070000
moskazrcfrgeM1.a1	D220420.2	suspect	Data Time offset	20191011.000000	20191211.204434
moskazrcfrgeM1.a1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
moskazrcfrgeM1.a1	D210416.3	missing	No Data	20200522.141801	20200531.091759
moskazrcfrgeM1.a1	D191209.4	suspect	Questionable Data	20190904.140000	20191027.042300
mosldM1.b1	D221115.2	missing	Missing Data	20200920.120000	20201001.235959
mosldM1.b1	D221107.1	missing	No Data	20200731.060401	20200821.140559
mosldM1.b1	D210416.1	missing	No Data	20200514.160301	20200619.182059
mospwdM1.b1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mospwdM1.b1	D200325.7	incorrect	Present Weather Detector Error Code	20200319.035400	20200320.080800
mospwdM1.b1	D211102.3	incorrect	Incorrect Precipitation Rates Over 10 mm/hr from Present Weather Detector	20200504.171900	20200504.171900
mosmplpolfsM1.b1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mosmplpolfsM1.b1	D210413.2	missing	Data Missing or Incorrect	20200904.195000	20201001.170000
mosmwacrcfrM1.a1	D220420.3	suspect	Suspect Data	20200604.000000	20200821.000000
mosmwacrcfrM1.a1	D220211.15	missing	Missing Data	20200522.141409	20200531.090349
mosmwacrcfrM1.a1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mosmwrlosM1.b1	D220203.1	missing	Missing Data	20200731.071941	20200821.135048

## ARM Data Quality Report (DQR) Table

Datastream	DQR	Quality	Subject	Start Date	End Date
mosmwrlosM1.b1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mosmwrlosM1.b1	D191209.1	missing	Missing Data	20191012.000000	20191016.000000
mosmwrlosM1.b1	D191209.3	incorrect	Incorrect Data	20191107.211900	20191115.110000
mosmwr3cM1.b1	D220211.6	missing	Missing Data	20200421.115101	20201001.235959
mosmwr3cM1.b1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mosmwr3cM1.b1	D210719.2	suspect	High Uncertainty in the Data	20200101.000000	20200421.235959
mos1290bsrwpwindavgl	D220217.8	missing	No Data	20200526.130001	20200528.015959
mos1290bsrwpwindavgl	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mossrgM1.a1	D220204.3	missing	Data not Available	20200708.071501	20201001.235959
mossrgM1.a1	D220204.2	missing	Data not Available	20200514.173011	20200619.043454
mossrgM1.a1	D220204.1	missing	Data Not Available	20200404.235956	20200406.000004
mossrgM1.a1	D200820.3	incorrect	Instrument Malfunction	20191007.000000	20200708.235900
mossondewnpnM1.b1	D220210.23	missing	Missing Data	20191127.122525	20191128.165159
mossondewnpnM1.b1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mostsiskycoverM1.b1	D220311.2	incorrect	Instrument not Deployed Outside	20200323.143700	20200324.144510
mostsiskycoverM1.b1	D220210.14	missing	No Data	20200920.000001	20201001.235959
mostsiskycoverM1.b1	D210416.10	missing	Ship Relocation	20200731.065901	20200821.135059
mostsiskycoverM1.b1	D200713.2	missing	Facility Relocation	20200514.155901	20200619.152059
mostsiskycoverM1.b1	D210817.1	missing	Polarstern in Norwegian Territorial Waters	20200603.203600	20200608.200000
mostsiskycoverM1.b1	D200406.1	missing	Polar Night	20191011.000000	20200323.145959
mostsiskycoverM1.b1	D200825.3	suspect	Calibration Coefficients	20200323.154538	20200511.075802
mostsiskycoverM1.b1	D200417.5	incorrect	Shadowband Misaligned	20200404.115000	20200415.090500
mostsiskycoverM1.b1	D200406.2	suspect	Ship Mast in Field-of-View	20200415.090600	20200920.085959
mostsiskycoverM1.b1	D200717.1	incorrect	Misaligned Shadowband	20200510.161000	20200511.134659

## 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
DL	Newsom, R., & Shi, Y. Doppler Lidar (DLFPT). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1673767
HSRL	Holz, R., Garcia, J., & Schuman, E. High Spectral Resolution Lidar (HSRL). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1462207
KAZR	Lindenmaier, I., Feng, YC., Johnson, K., Nelson, D., Isom, B., Hardin, J., Matthews, A., Wendler, T., Castro, V., Deng, M., & Rocque, M. Ka ARM Zenith Radar (KAZRCFRGE). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1498936
LDIS	Wang, D., Bartholomew, M. J., & Shi, Y. Laser Disdrometer (LD). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1973058
MET	Kyrouac, J., & Tuftedal, M. Surface Meteorological Instrumentation (PWD). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1507725
MPL	Muradyan, P., Cromwell, E., Koontz, A., & Coulter, R. Micropulse Lidar (MPLPOLFS). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1320657
MWACR	Bharadwaj, N., Hardin, J., Isom, B., , I., & Matthews, A. Marine W-Band (95 GHz) ARM Cloud Radar (MWACRCFR). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1512077
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 (1290BSRWPWINDAVG). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1973738
RAIN	Wang, D. Rain Gauge (SRG). Atmospheric Radiation Measurement (ARM) User Facility. https://doi.org/10.5439/1600029
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