

Contacts

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 NOAA Data Manager, Logistics: Sara Crepinsek  
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Datagrams:  
**Eureka**



**mwr: microwave radiometer**

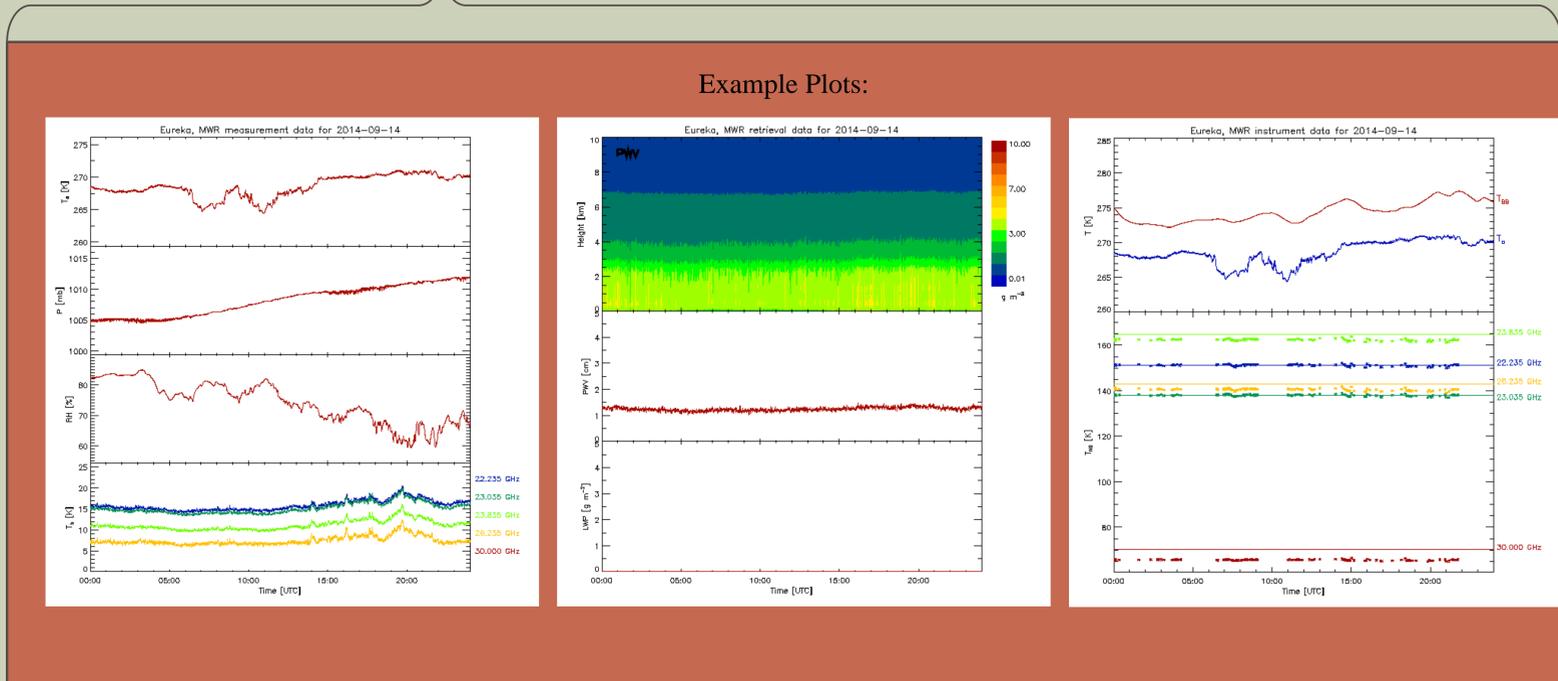
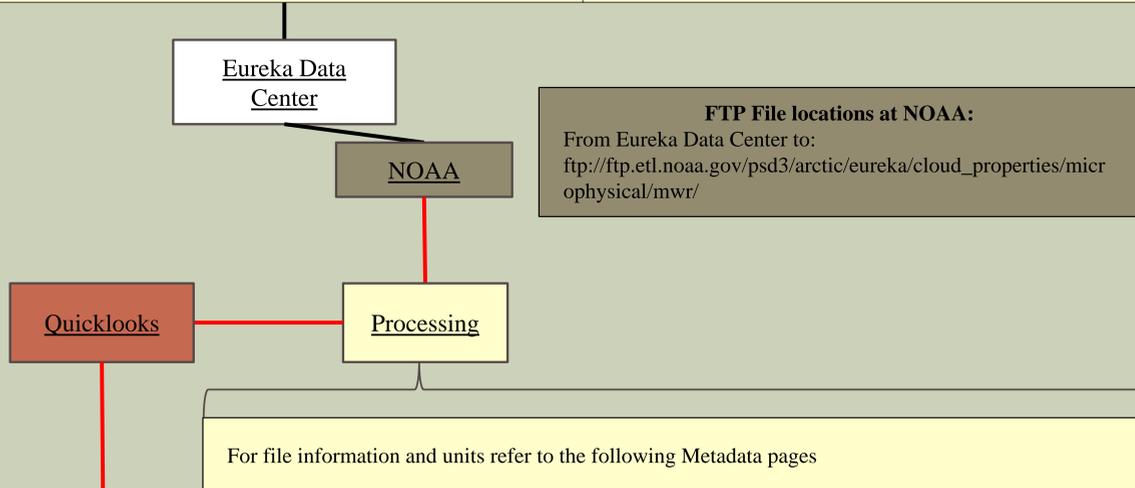
Contacts

Project Lead: Taneil Uttal  
 taneil.uttal@noaa.gov  
 Site Manager: Pierre Fogal  
 pierre.fogal@utoronto.ca

Data	Diagnostics	Logger Info
<b>mwr sub-folder</b>	<b>File Names</b>	
lv0	YYYY-MM-DD_hh-mm-ss_lv0.csv	
lv1	YYYY-MM-DD_hh-mm-ss_lv1.csv	
lv2	YYYY-MM-DD_hh-mm-ss_lv2.csv	
psd-tip	YYYYMMDD.tip	
psd-txt	YYYYMMDDheng.txt	
tip	YYYY-MM-DD_hh-mm-ss_tip.csv	
		<b>File Location NOAA ftp</b>
lv0		ftp://ftp.etl.noaa.gov/psd3/arctic/eureka/cloud_properties/microphysical/mwr/raw/lv0/YYYY/
lv1		ftp://ftp.etl.noaa.gov/psd3/arctic/eureka/cloud_properties/microphysical/mwr/raw/lv1/YYYY/
lv2		ftp://ftp.etl.noaa.gov/psd3/arctic/eureka/cloud_properties/microphysical/mwr/raw/lv2/YYYY/
psd-tip		ftp://ftp.etl.noaa.gov/psd3/arctic/eureka/cloud_properties/microphysical/mwr/raw/psd-tip/YYYY/
psd-txt		ftp://ftp.etl.noaa.gov/psd3/arctic/eureka/cloud_properties/microphysical/mwr/raw/psd-txt/YYYY/
tip		ftp://ftp.etl.noaa.gov/psd3/arctic/eureka/cloud_properties/microphysical/mwr/raw/tip/YYYY/



Instrument Details	
<b>Specifications</b>	1
<b>Measurement</b>	Precipitable water vapor, liquid water path, temperature
<b>Serial #</b>	
<b>Instrument Manufacturer</b>	In-house build; no specific manufacturer
<b>Type</b>	
<b>Calibration factors</b>	



**Home:**  
<http://www.esrl.noaa.gov/psd/iasoa/>  
**Data:**  
<http://www.esrl.noaa.gov/psd/iasoa/dataataglance>

**IASOA Portal**

**Product**

**Example Product File:**  
 See Product Attachment Details

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Iv0 Metadata

File Name: 2015-07-19_00-00-00_iv0.csv		File Path: eureka\cloud_properties\microphysical\mwr\raw\lv0\																			
Description	Value																				
Model	MP1600																				
Serial #	MP1511																				
Windows com port (1 to 9)	1																				
Baud rate	1200																				
Auto "Quit" after this many minutes	-1	-1 means don't shut down																			
Path for level2 files	nul																				
Regression coeff for a good tip	0.99																				
Default Azimuth Angle	0																				
Number of Elevation Angles	5																				
Tip Elevation Angle #1	30																				
Tip Elevation Angle #2	45																				
Tip Elevation Angle #3	90																				
Tip Elevation Angle #4	135																				
Tip Elevation Angle #5	150																				
0=No tips when rain sensor on	0	1=allow tips w/rain on																			
Rain sensor threshold (volts)	0.8																				
Default CNF command	12000,10000,1500,100,17																				
Date of last factory LN2 calibration	2006/02/10 20:06:48																				
Date of last user LN2 calibration	2006/02/10 20:06:48	TIP Cals from 1-27-06 transferred on 1-27-06																			
Target tolerance for ln2 cal number of frequencies	0.9	Average of only 10 tips for quick cal																			
Frequency	MRT	Window Coef	alpha	dtdg	k1	k2	k3	k4	Tnd												
22.235	275	0.00014	1.0797	2.45E+05	2.82E+02	3.15E+00	1.16E-02	-1.40E-05	151.328												
23.035	275.7	0.00014	1.0729	2.63E+03	5.41E+01	-7.08E-01	2.85E-03	-3.63E-06	138.145												
23.835	276	0.00015	1.0730	2.78E+09	2.18E+02	2.49E+00	9.23E-03	-1.12E-05	164.612												
26.235	275.4	0.000164	1.0591	3.06E+06	1.78E+02	1.93E+00	6.87E-03	-8.03E-06	143.082												
30	274.1	0.0002	1.0389	3.85E+02	9.23E+01	1.09E+00	4.21E-03	-5.29E-06	70.161												
Description	Value																				
LN2 liq depth in cm	13	The LN2 boiling point linear equation																			
LN2 BP C0	68.23																				
LN2 BP C1	0.009037																				
LN2 interfaces correction	0.0078																				
LN2 polystyrene dielectric loss coef ~ 1.16e-5 K/K-cm-GHz	6.08E-06																				
LN2 Styrofoam thickness [cm]	5.1																				
Air press C0 Vaisala PTB100A 800-1060mb	801.3	0-5 volts (MS 07-01-2005)																			
Air press C1	52																				
Tamb correction (edit with values for this instrument)	0																				
Rh correction (edit with values for this instrument)	0																				
BB sensor correction (default=1.5)	-1.5																				
Az(deg)	El(deg)	Vsky Ch 1	Vskynd Ch 1	Vsky Ch 2	Vskynd Ch 2	Vsky Ch 3	Vskynd Ch 3	Vsky Ch 4	Vskynd Ch 4	Vsky Ch 5	Vskynd Ch 5										
VtkBB	Vbb Ch 1	Vbbnd Ch 1	Vbb Ch 2	Vbbnd Ch 2	Vbb Ch 3	Vbbnd Ch 3	Vbb Ch 4	Vbbnd Ch 4	Vbb Ch 5	Vbbnd Ch 5											
KTmix(K)	KTnd(K)	VTmix(K)	VTnd(K)	VRain	VRh	VRain	VRh	VRain	VRh	VRain	VRh										
VTamb	VRh	VPres	VTnd(K)	VRain	VRh	VRain	VRh	VRain	VRh	VRain	VRh										
KTmix(K)	KTnd(K)	VTmix(K)	VTnd(K)	VRain	VRh	VRain	VRh	VRain	VRh	VRain	VRh										
322.86	323.52	0.02	0.04	21	19818	12000	10000	1500	100	17	17										
Test# 0	Test# 1	Test# 2	Test# 3	Test# 4	Test# 5	Test# 6	Test# 7	Test# 8	Test# 9	Test# 10	Test# 11										
7.368	7.364	0	0	0	8.039	0	8.055	0	0	0	0										
7.365585	4.547064	5.468564	3.2358	3.866	2.9606	3.6354	2.73573	3.31990	2.84642	3.111	701										
7.368	7.364	0	0	0	8.039	0	8.055	0	0	0	0										
7.365585	4.547064	5.468564	3.2358	3.866	2.9606	3.6354	2.73573	3.31990	2.84642	3.111	701										
Az(deg)	El(deg)	Vsky Ch 1	Vskynd Ch 1	Vsky Ch 2	Vskynd Ch 2	Vsky Ch 3	Vskynd Ch 3	Vsky Ch 4	Vskynd Ch 4	Vsky Ch 5	Vskynd Ch 5										
VtkBB	Vbb Ch 1	Vbbnd Ch 1	Vbb Ch 2	Vbbnd Ch 2	Vbb Ch 3	Vbbnd Ch 3	Vbb Ch 4	Vbbnd Ch 4	Vbb Ch 5	Vbbnd Ch 5											
KTmix(K)	KTnd(K)	VTmix(K)	VTnd(K)	VRain	VRh	VRain	VRh	VRain	VRh	VRain	VRh										
VTamb	VRh	VPres	VTnd(K)	VRain	VRh	VRain	VRh	VRain	VRh	VRain	VRh										
KTmix(K)	KTnd(K)	VTmix(K)	VTnd(K)	VRain	VRh	VRain	VRh	VRain	VRh	VRain	VRh										
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7.365585	4.547064	5.468564	3.2358	3.866	2.9606	3.6354	2.73573	3.31990	2.84642	3.111	701										
7.368	7.364	0	0	0	8.039	0	8.055	0	0	0	0										
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Eureka



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Product netCDF Metadata

<b>File name:</b> eurmwrlosC1.b1.20131228.000000.cdf	<b>Path:</b> eureka\cloud_properties\microphysical\mwr\products	
<b>Attributes</b>		
Name	Value	
'site_id'	'eur'	
'facility_id'	'Eureka Weather Station, Eureka, NC, Canada'	
'contact'	'NOAA Earth System Research Laborator, Physical Sciences Division'	
'time_created'	'seconds since 2013-12-29 15:28:01 0:00'	
'TB_eqn'	'tb = xl * (cf * (((thot - tref)/(vhot - vref)) * (vsky - vref))+ tref) + ((1 - xl) * t_wg) + xb'	
'tau_eqn'	'tau = ln((mrt - Cosmic_BG) / (mrt - tb))'	
'liquid_eqn'	'l = 10.0 * (lcoef0 + (lcoef1 * tau_ch0) + (lcoef2 * tau_ch1))'	
'vapor_eqn'	'v = vcoef0 + (vcoef1 * tau_ch0) + (vcoef2 * tau_ch1)'	
<b>Dimensions</b>		
Name	Length	
'freqs'	5	
'mrad_coef'	6	
'time'	5683	
<b>Variables</b>		
Name	Long name	Units
'base_time'	'Base time in Epoch'	'seconds since 1970-1-1 00:00:00'
'time_offset'	'Time offset from base time'	'seconds since 2013-12-28 00:01:00 0:00'
'timeoffmid'	'Time offset from midnight'	'seconds since 2013-12-28 00:00:00 0:00'
'averagingtime'	'time of sample average'	'seconds'
'wet_window'	'moisture detector: 0 = off (dry), 1 = on (wet)'	'none'
'num_samples'	'number of samples in average'	'none'
'lat'	'latitude'	'degrees_N'
'lon'	'longitude'	'degrees_E'
'alt'	'altitude'	'm_MSL'
'pitch'	'pitch'	'degrees'
'roll'	'roll'	'degrees'
'heading'	'heading'	'degrees'
'pressure'	'pressure'	'mBars'
'rh'	'relative humidity'	'percent'
'temperature'	'temperature'	'C'
'liquid'	'Total liquid water along LOS path'	'cm'
'vapor'	'Total water vapor along LOS path'	'cm'
'vt_sky'	'sky voltage'	'volts'
'vt_ref'	'reference voltage'	'volts'
't_ref'	'reference load temperature'	'K'
'tb'	'brightness temperatures'	'K'
'liquid_coef'	'liquid retrieval coefficents'	'none'
'vapor_coef'	'vapor retrieval coefficents'	'none'
'tmr'	'mean radiating temperature'	'K'