



Droplet Measurement Technologies Inc.
 5710B Flatiron Parkway, Boulder, CO, 80301, USA
 Ph: 303-440-5576, Fax: 303-440-1965
 www.dropletmeasurement.com

**CDP
 CAL Data**

Customer: U. of North Dakota	CCP Serial Number or Stand Alone Unit <input checked="" type="checkbox"/> 8" Strut	Work Order No.:
Serial No. CDP: 0906-055	Technician: GG	Date: 2-14-2011
CDP System Power: <input checked="" type="checkbox"/> 28 VDC <input type="checkbox"/> 115 VAC	CDP Anti-Ice Power: <input checked="" type="checkbox"/> 28 VDC <input type="checkbox"/> 115 VAC	Anti-Ice Heater Circuit Resistance: 5.0 Ω

CDPE PCBA (ABD-0072-02): Rev: 4

Firmware Checksum <u>00146B5AE</u> <input checked="" type="checkbox"/> PBP	Offset Voltage: Sizer: 392	Qualifier: 352
Serial Interface: <u>RS-422</u>	20um Pinhole > 2:1: V _{qualifier} : <u>1.40</u> v V _{sizer} :700	Size: 20

CDPE Power PCBA (ABD-0073): Rev: 4

+5 VDC Setpoint	-5 VDC Setpoint
5.17	-5.12

Sizer PCBA (ABD-0187) Rev: 5

R1	R11	C1	Baseline Offset (mV)
12.7k	24.9	1pF	-509

Qualifier PCBA (ABD-0188): Rev: 5

R14	R24	C13	Baseline Offset (mV)
25.5k	24.9	1pF	-509

Signal and Power PCBA (ABD-0189) Rev: 5

Laser Driver PCBA (ABD-0186) Rev: 5 Heater Installed

Serial No.:CDP090119A	Laser Power (mW)	Laser Current (mA)	Current Trip
Power Monitor: 3.36	P _L = 27.2	I _L = 88.89	I _t : 120mA

Comments:
 Sealed Windows
 Tuned Laser Heater to 25C
 Installed PBP-Dynamic Threshold Firmware – Corrected 72 Board loading.
 Installed 800um pinhole.

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Cloud and Aerosol Spectrometer

Cloud Aerosol and Precipitation Spectrometer



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CDP
Final Notes

Comments (continued):

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Cloud and Aerosol Spectrometer

Cloud Aerosol and Precipitation Spectrometer



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CDP
Final Notes

Customer:	Project:	Work Order No.:
Serial No. CDP:	Technician:	Date:

Comments:

Laser Power: 27.2 mW Laser Current: 88.89 mA Laser Power Monitor:

Beam Diameter: mm Depth of Field Length: mm

Sample Area: 0.240 mm² apprx.

Firmware (FIRM-0013): Rev 00146B5AE

Customer Copy

Cloud and Aerosol Spectrometer

Cloud Aerosol and Precipitation Spectrometer

Sample

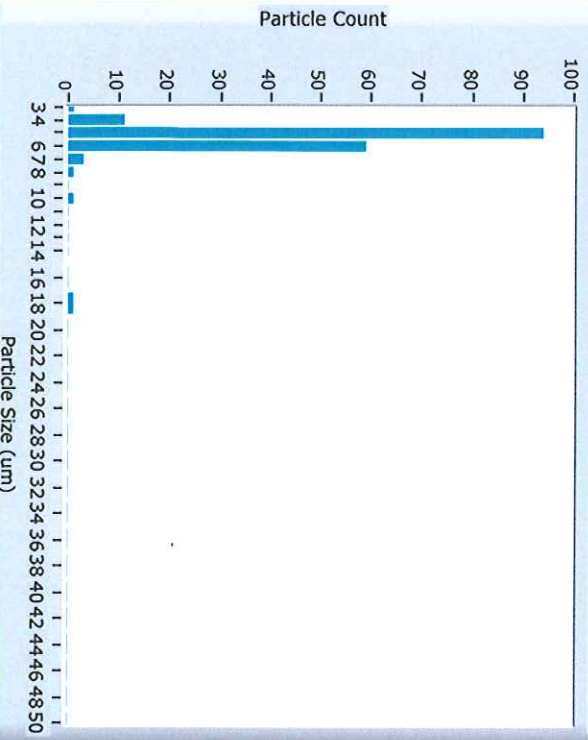
Current Data File: 20110214075322

(0) CDP_PBP Setup

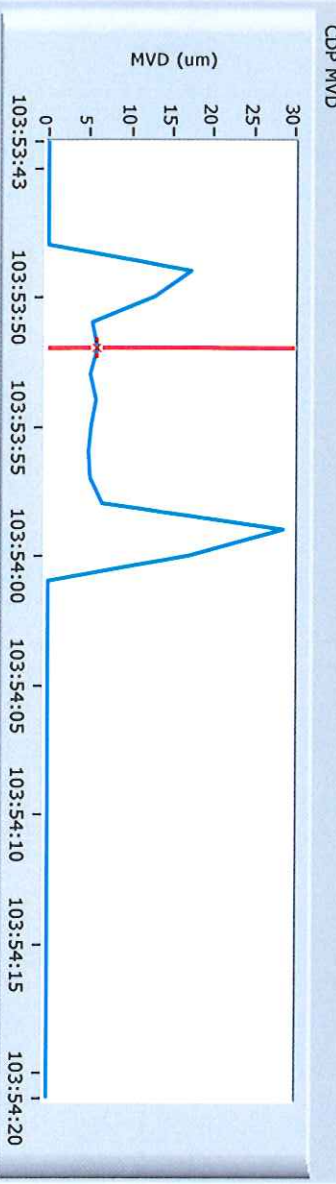
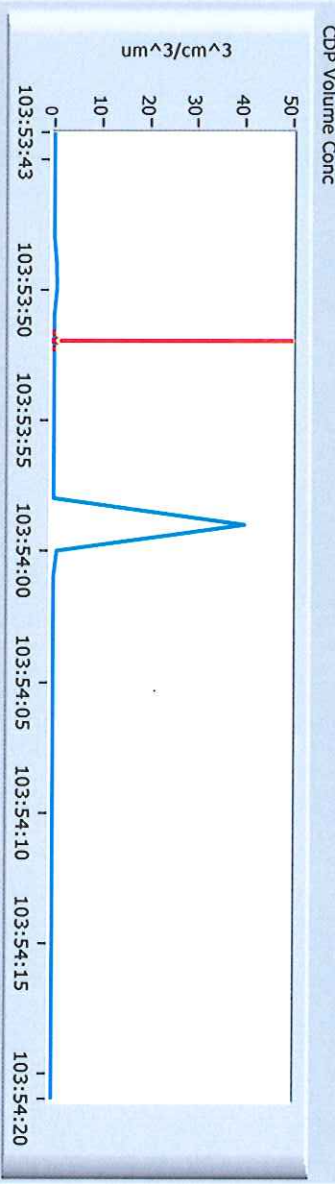
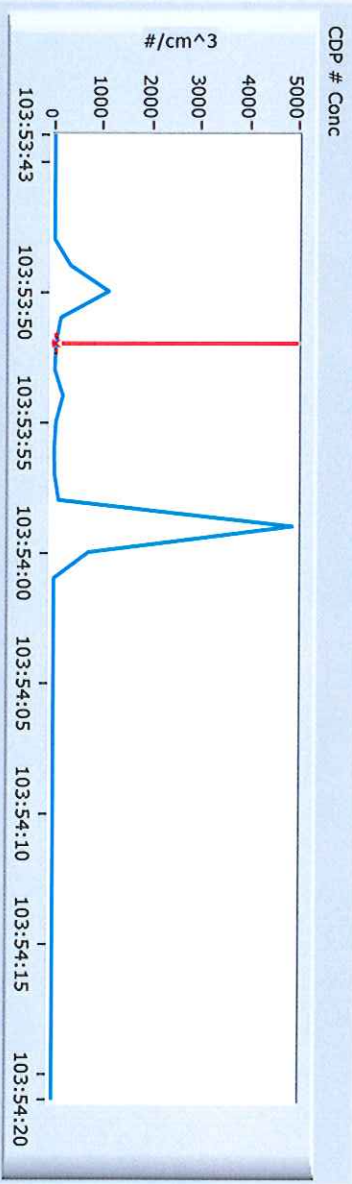
COM Port: 3 v2.8.2

CDP_PBP Data

Number Conc (# / cm ³)	CDP ED (um)	Wingboard_Temp_(C)
28.5	5.89	24
CDP LWC (g / m ³)	Volume Conc (um ³ / cm ³)	Laser_Temp_(C)
0	2259	25.3
CDP MVD (um)	Laser_Current_(mA)	DOF_Reject_Cnt
5.4	80.7	878
	Laser_Monitor_(V)	
	3.12	



/ Vol Conc Selectable Charts PBP Data Particle Count Full



Sample **Not Recording** Read a File

Current Data File: 20110214075445

(0) CDP_PBP Setup

Manual Slow Medium Fast

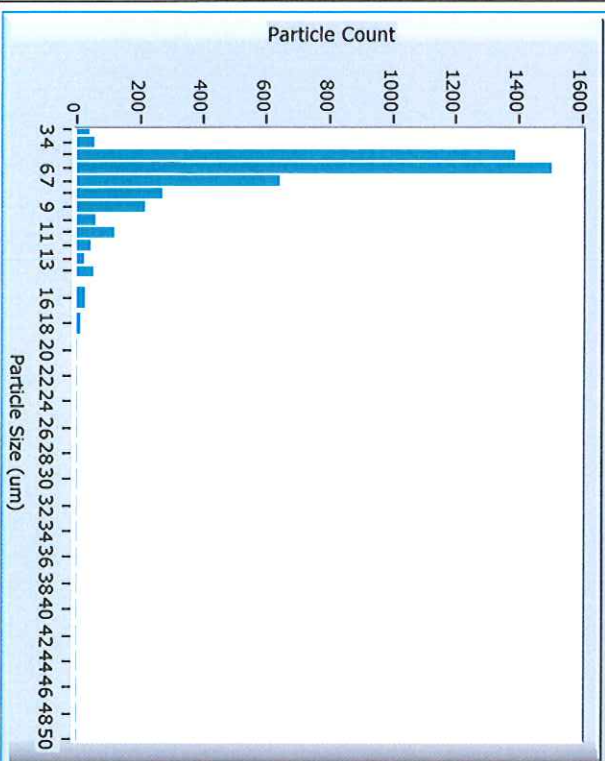
103:54:50 103:55:15 103:55:36

04 d 07:54:57 (374098sec)

Enable Enabled

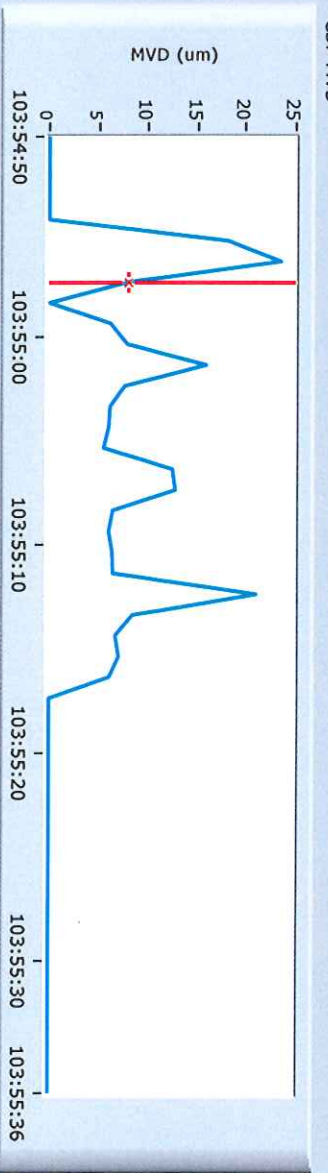
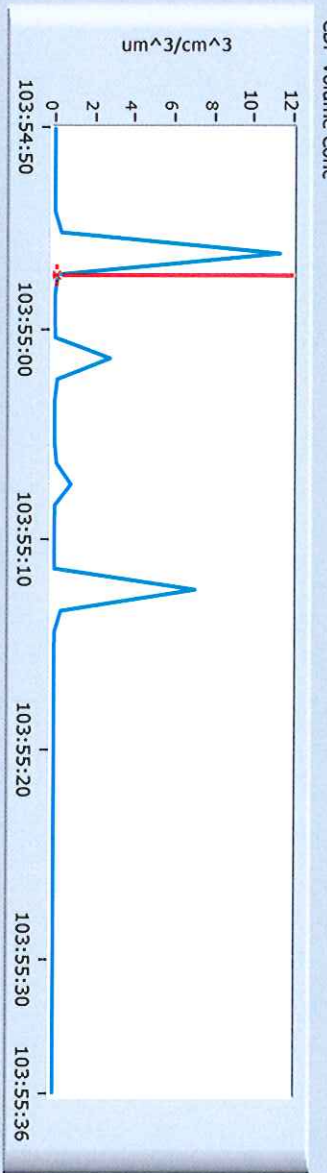
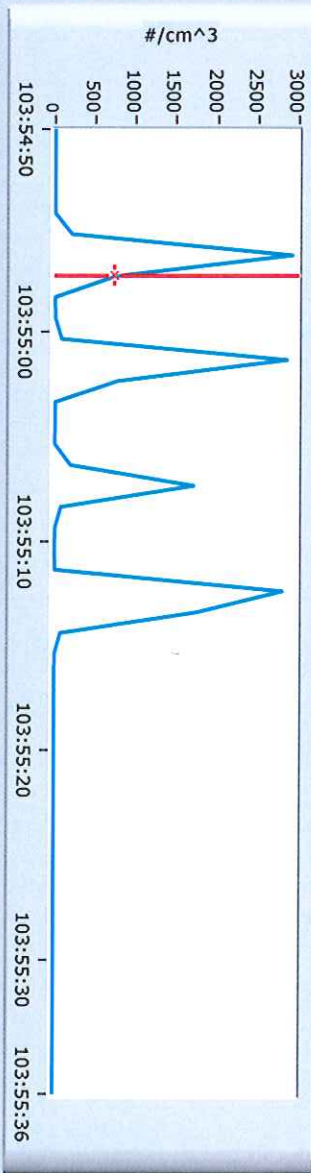
CDP_PBP Data

Number Conc (# / cm ³)	740	CDP ED (um)	7.93	Wingboard_Temp_(C)	24.1
CDP LWC (g / m ³)	0.12	Volume Conc (um ³ / cm ³)	124753	Laser_Temp_(C)	25.6
CDP MVD (um)	8.35	Laser_Current_(mA)	80.52	DOF_Reject_Cnt	6816
		Laser_Monitor_(V)	3.1		



/ Vol Conc Selectable Charts PBP Data Particle Count Full

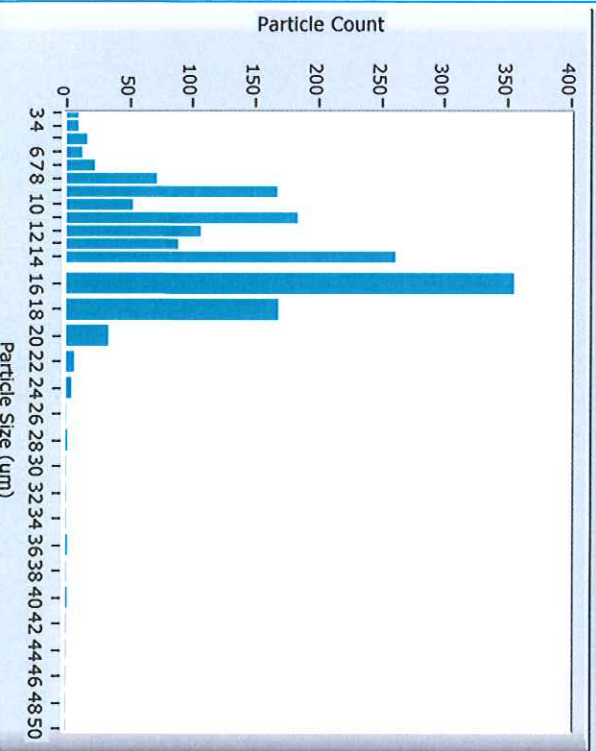
COM Port 3 V2.8.2 No Fault



Sample: **Not Recording** **Read a File**
 Current Data File: 20110214080430
 (0) CDP_PBP Setup
 Manual Slow Medium Fast
 104:04:32 104:04:40 104:04:47
04 d 08:04:42 (374683sec)
 COM Port: 3 V2.8.2
No Fault

CDP_PBP Data **Enable** **Enabled**

Number Conc (# / cm ³)	260.83	CDP ED (um)	14.44	Wingboard_Temp_(C)	24.1
CDP LWC (g / m ³)	0.34	Volume Conc (um ³ / cm ³)	335991	Laser_Temp_(C)	25.5
CDP MWD (um)	14.92	Laser_Current_(mA)	86.74	DOF_Reject_Cnt	3992
		Laser_Monitor_(V)	3.36		



Selectable Charts: # / Vol Conc, PBP Data, Particle Count Full

COM Port: 3 **No Fault**

MWD (um)

Time	MWD (um)
104:04:32	~2.5
104:04:36	~2.5
104:04:39	~2.5
104:04:42	~2.5
104:04:45	~2.5
104:04:47	~2.5

um³/cm³

Time	um ³ /cm ³
104:04:32	~0.1
104:04:36	~0.1
104:04:39	~0.1
104:04:42	~0.1
104:04:45	~0.1
104:04:47	~0.1

#/cm³

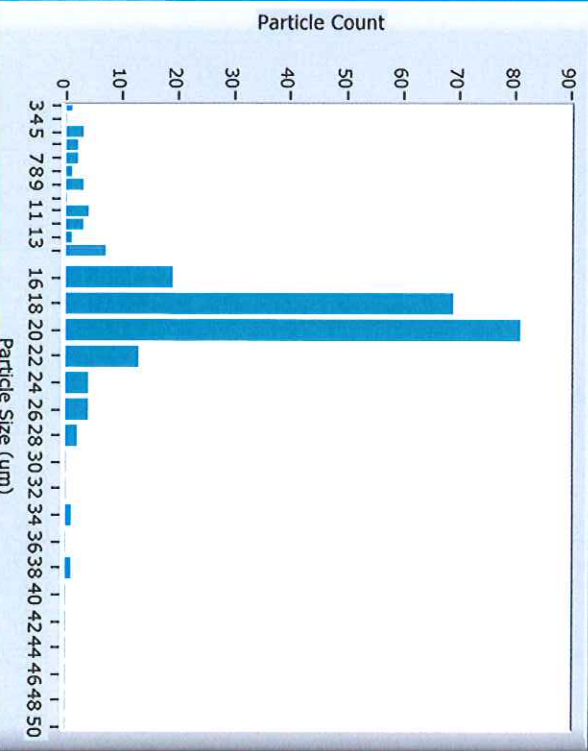
Time	#/cm ³
104:04:32	~100
104:04:36	~100
104:04:39	~100
104:04:42	~100
104:04:45	~100
104:04:47	~100

Sample **Not Recording** **Read a File**
 Current Data File: 20110214075732
 (0) CDP_PBP Setup
 Manual Slow Medium Fast
 103:57:34 103:57:40 103:57:45 103:57:51
 04 d 07:57:42 (374262sec)
 COM Port 3 V2.8.2
No Fault

CDP_PBP Data

Number Conc (# / cm ³)	36.83	CDP ED (um)	19.13	Wingboard_Temp_(C)	24.1
CDP LWC (g / m ³)	0.12	Volume Conc (um ³ / cm ³)	117637	Laser_Temp_(C)	25.4
CDP MVD (um)	18.86	Laser_Current_(mA)	80.7	DOF_Reject_Cnt	555
		Laser_Monitor_(V)	3.13		

Enable Enabled



CDP # Conc # / cm³

CDP Volume Conc um³/cm³

CDP MVD MVD (um)

Selectable Charts: PBP Data Particle Count Full

Sample **Not Recording** **Read a File**
 Current Data File: 20110214075802
 (0) CDP_PBP Setup

Manua Slow Medium Fast
 103:58:48 104:00:00 104:01:00 104:02:06

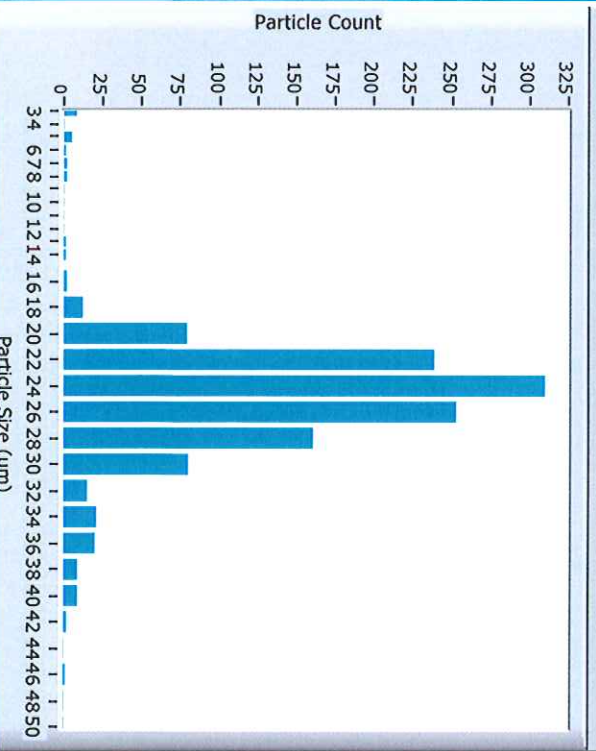
04 d 08:02:03 (374524sec)

COM Port 3 V2.8.2 **No Fault**

Enable **Enabled**

CDP_PBP Data

Number Conc (# / cm ³)	CDP ED (um)	Wingboard_Temp_(C)
205.5	25.66	24
CDP LWC (g / m ³)	Volume Conc (um ³ / cm ³)	Laser_Temp_(C)
1.65	1653720	25.3
CDP MVD (um)	Laser_Current_(mA)	DOF_Reject_Cnt
25.45	86.93	2882
	Laser_Monitor_(V)	
	3.38	



Selectable Charts: CDP # Conc, PBP Data, Particle Count Full

CDP # Conc

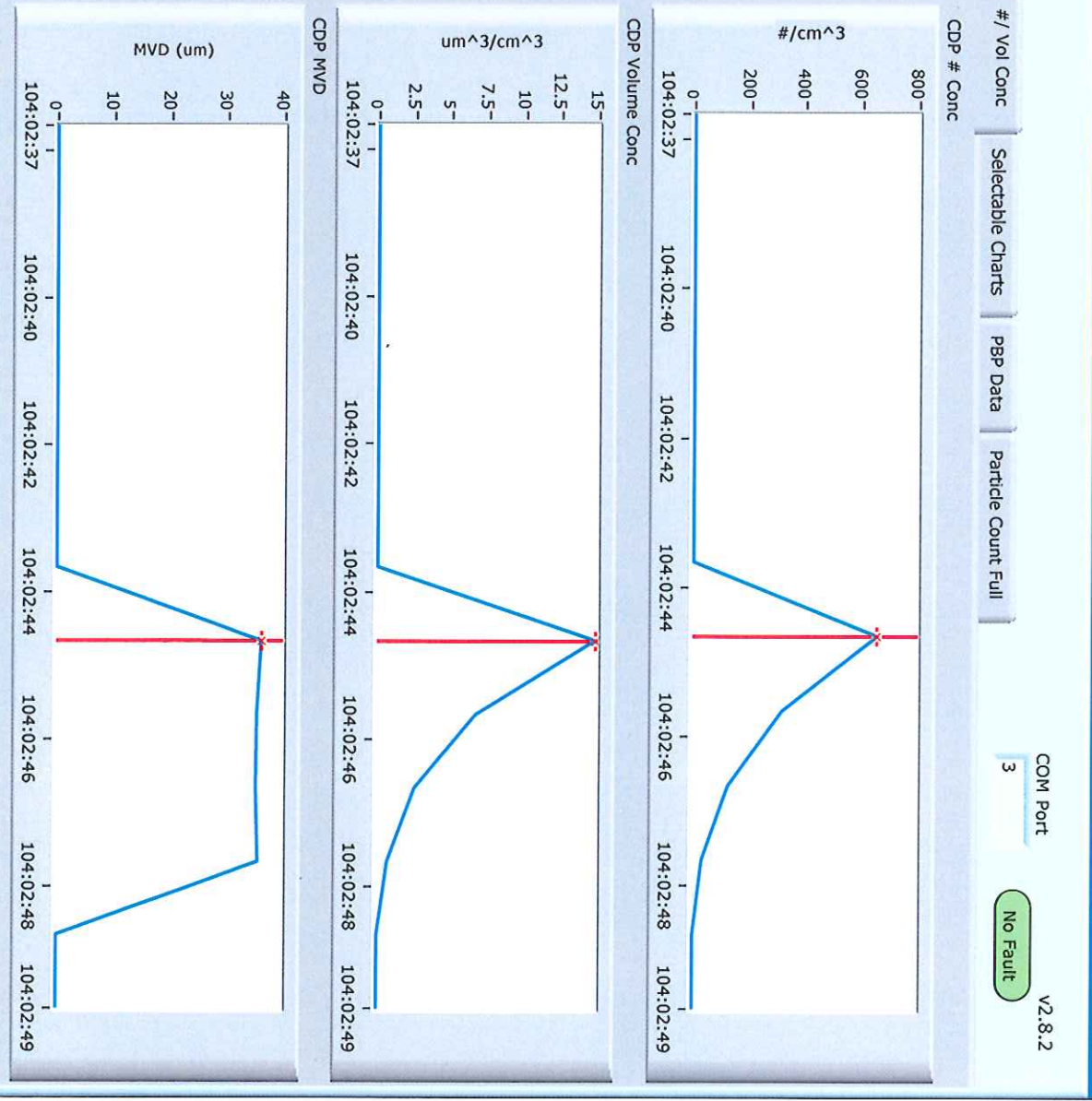
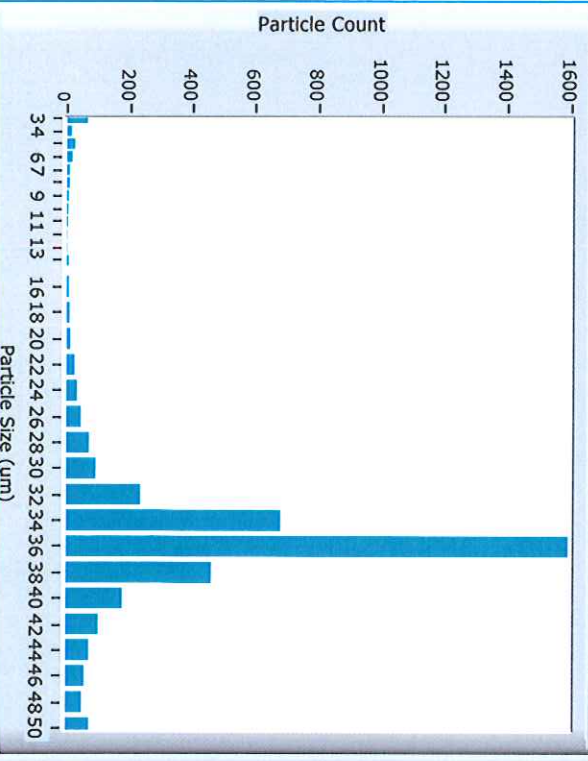
CDP Volume Conc

CDP MVD

Sample **Not Recording** **Read a File**
 Current Data File: 20110214080217
 (0) CDP_PBP Setup
 Manual Slow Medium Fast
 104:02:37 104:02:45 104:02:49
 04 d 08:02:45 (374565sec)
 COM Port 3 V2.8.2
No Fault

CDP_PBP Data **Enable** **Enabled**

Number Conc (# / cm ³)	CDP ED (um)	Wingboard_Temp_(C)
655.83	36.11	24.1
CDP LWC (g / m ³)	Volume Conc (um ³ / cm ³)	Laser_Temp_(C)
14.85	14849118	25.3
CDP MVD (um)	Laser_Current_(mA)	DOF_Reject_Cnt
35.42	86.93	9723
	Laser_Monitor_(V)	
	3.34	



Sample 04 d 08:03:24 (374605sec)

Current Data File: 20110214080300

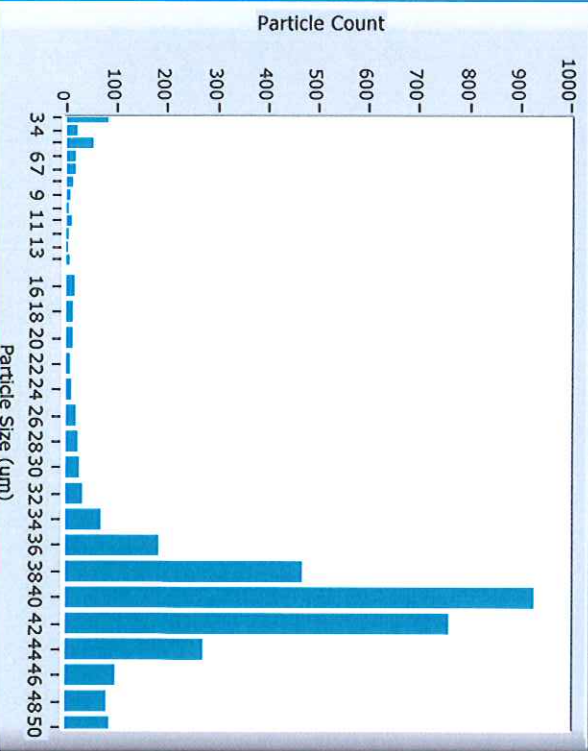
(0) CDP_PBP Setup Manual Slow Medium Fast

104:03:17 104:03:30 104:03:35

COM Port: 3 V2.8.2

CDP_PBP Data

Number Conc (# / cm ³)	CDP ED (um)	Wingboard_Temp_(C)
556.67	40.06	24.1
CDP LWC (g / m ³)	Volume Conc (um ³ / cm ³)	Laser_Temp_(C)
16.88	16881346	25.4
CDP MVD (um)	Laser_Current_(mA)	DOF_Reject_Cnt
40.18	87.11	10013
	Laser_Monitor_(V)	
	3.37	



/ Vol Conc Selectable Charts PBP Data Particle Count Full

CDP # Conc

um³/cm³

CDP Volume Conc

MVD (um)

CDP MVD

104:03:17 104:03:21 104:03:24 104:03:27 104:03:30 104:03:33 104:03:35