

Low-Cost, Off-the-Shelf Components for Stratospheric Ballooning (Part 2)

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Results from one “Off-The-Shelf” (OTS) payload

Hobo data loggers

> Internal temperature, relative humidity, external temperature

> Hobo 3-axis accelerometer

Neulog Chain “A”

> Pressure, Wide-Range Temperature, Light, UVA/UVB

Neulog Chain “B”

> Polarized UVA?UVB, Light, Temperature and Voltage (Solar Panel)

PocketLab Weather

> Internal Temperature, External Temperature, Relative Humidity, Barometric Pressure, Light Sensor

Stratotrack APRS

SPOT “Finder”

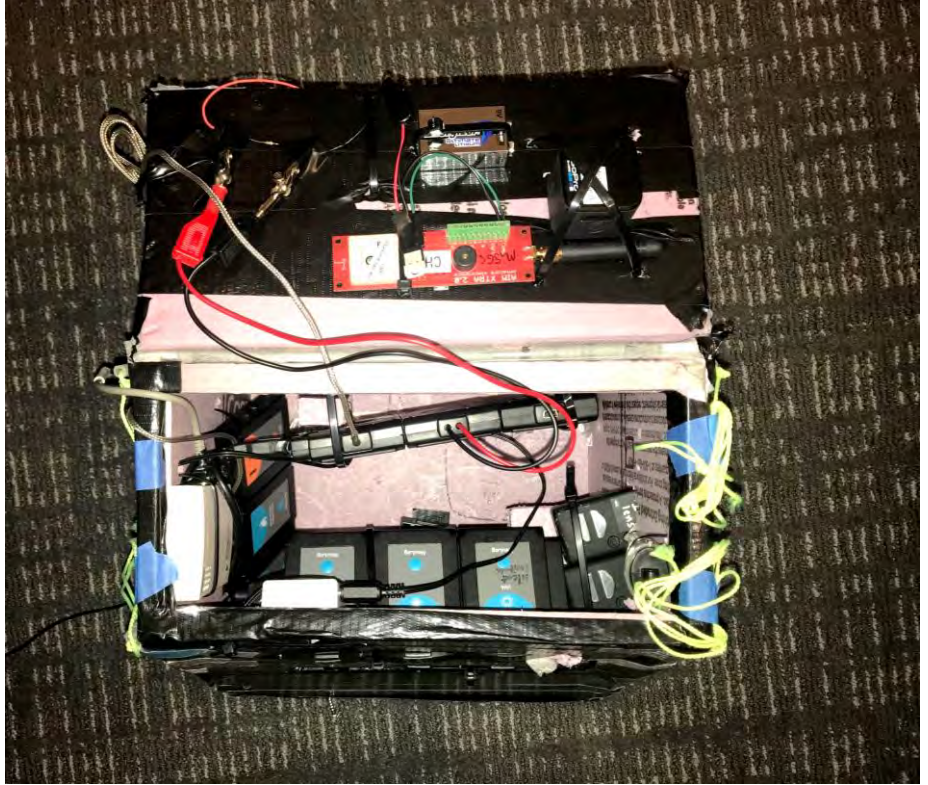
GoPro Session

LightDow 4000

Mobius ActionCam

> Standard & Infrared





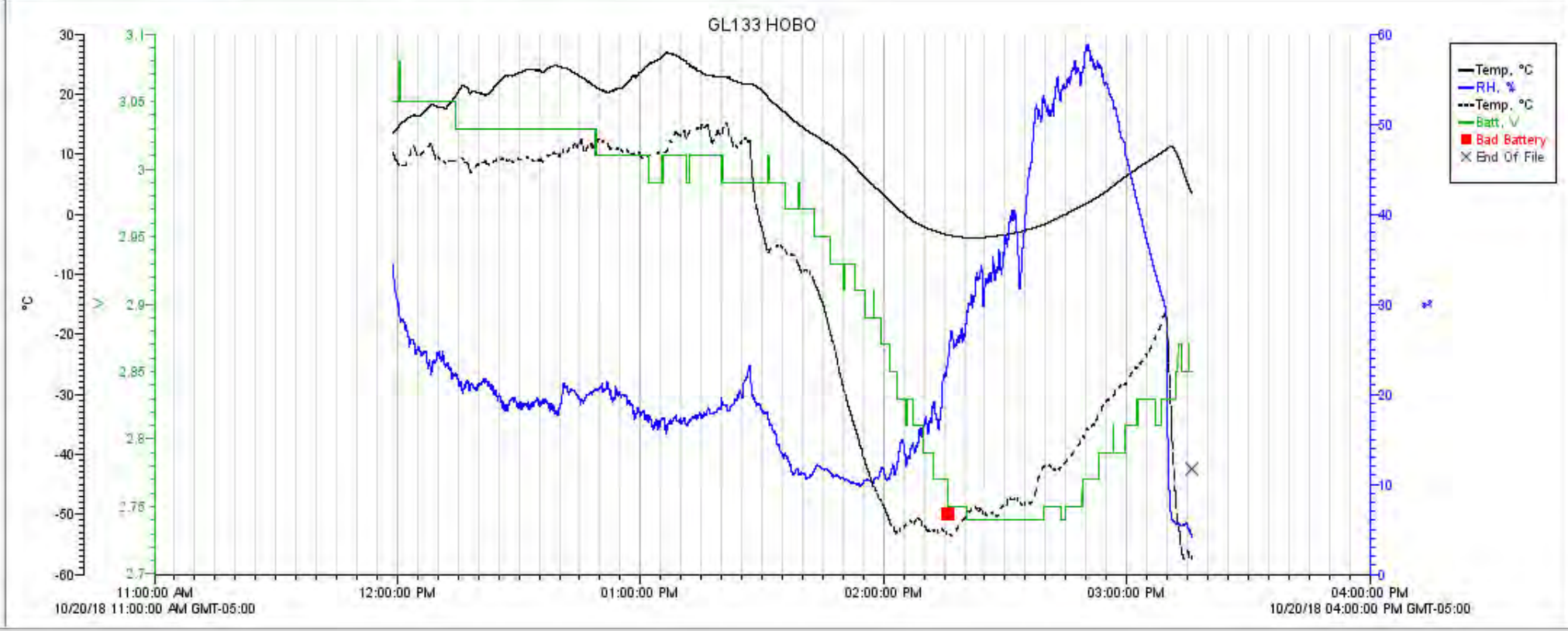


GL133_HOBO_Accel.hobo GL133_HOBO.hobo

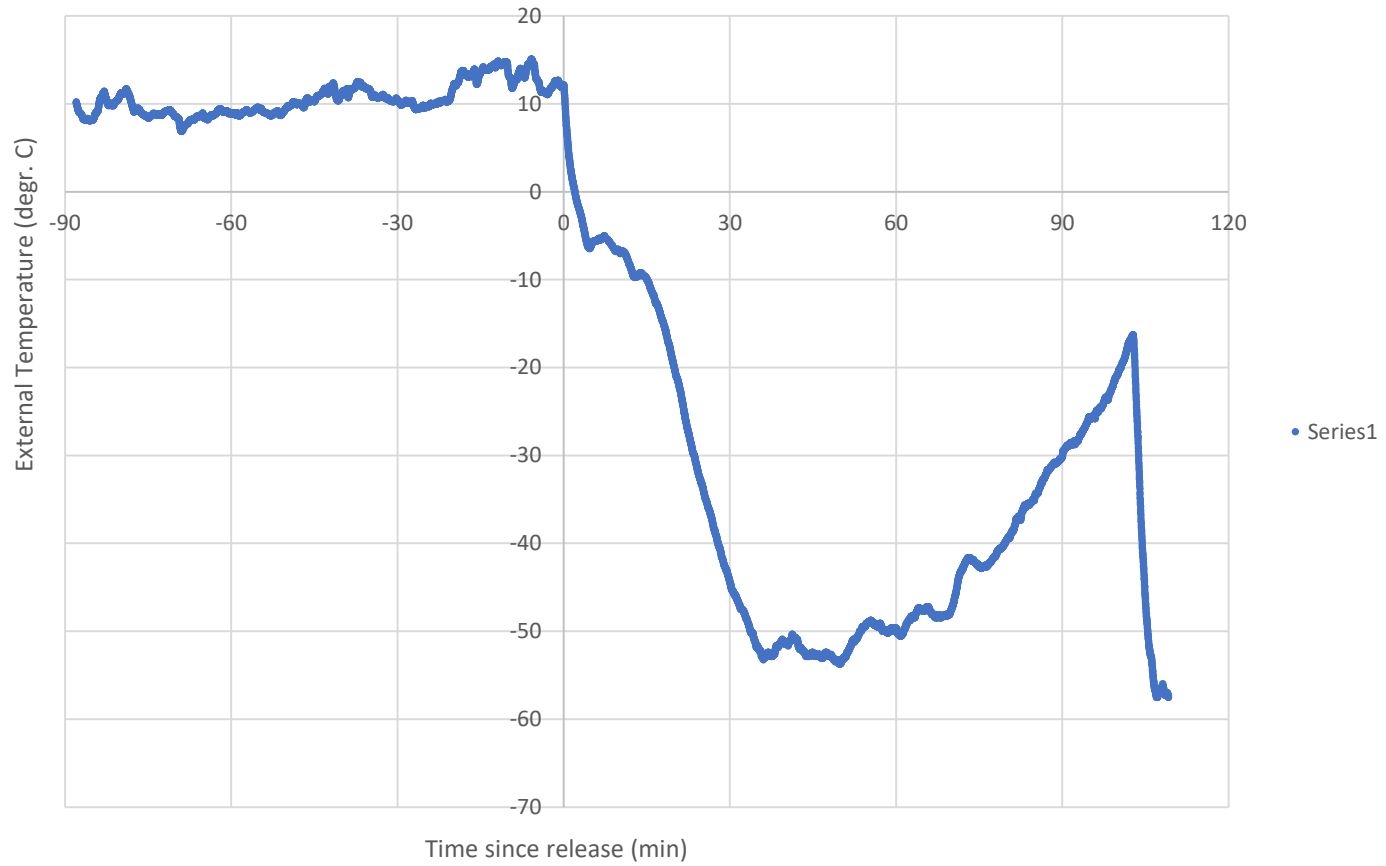
#	Time, GMT-05:00	Temp, °C (Internal temp)	RH, % (Rel humidity)	Temp, °C (External temp)	Batt, V	Bad Battery	End Of File
1	10/20/18 11:59:00 AM	13.377	34.446	10.247	3.05		
2	10/20/18 11:59:01 AM	13.425	34.289	10.173	3.05		
3	10/20/18 11:59:02 AM	13.425	33.998	10.124	3.05		
4	10/20/18 11:59:03 AM	13.449	33.708	10.075	3.05		
5	10/20/18 11:59:04 AM	13.473	33.451	10.026	3.05		
6	10/20/18 11:59:05 AM	13.497	33.259	10.001	3.05		

Show All Hide All

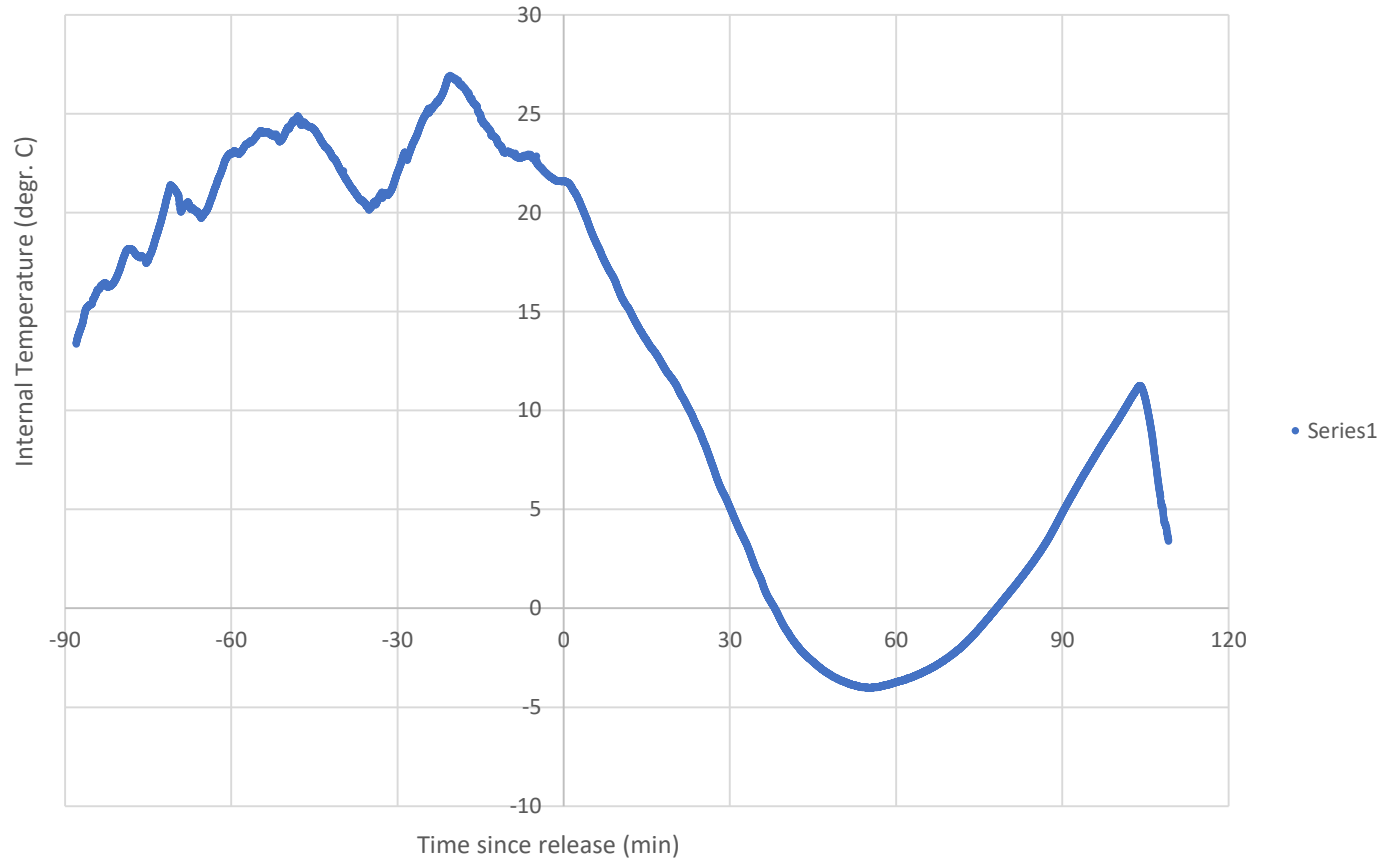
- Details
- Series: Temp, °C (Internal temp)
 - Series: RH, % (Rel humidity)
 - Series: Temp, °C (External temp)
 - Series: Batt, V
 - Event Type: Bad Battery
 - Event Type: End Of File



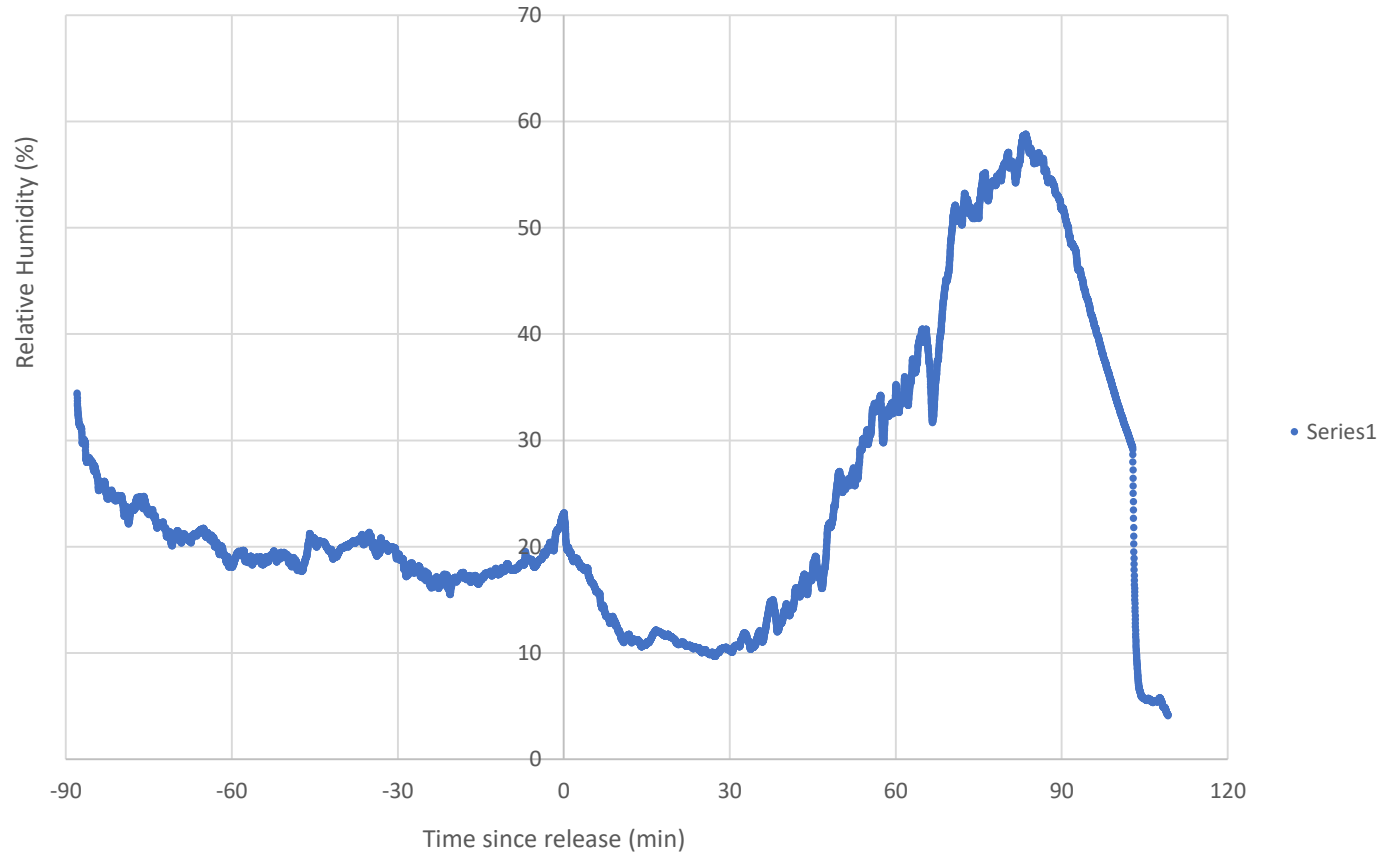
GL133 HOBO: Time vs External Temperature

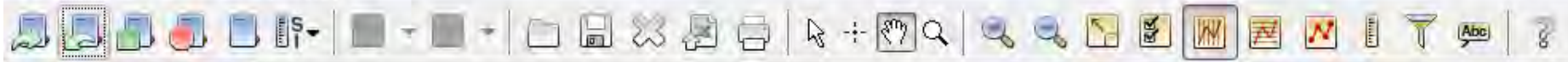


GL133 HOBO: Time vs Internal Temperature



GL133 HOBO: Time vs Relative Humidity



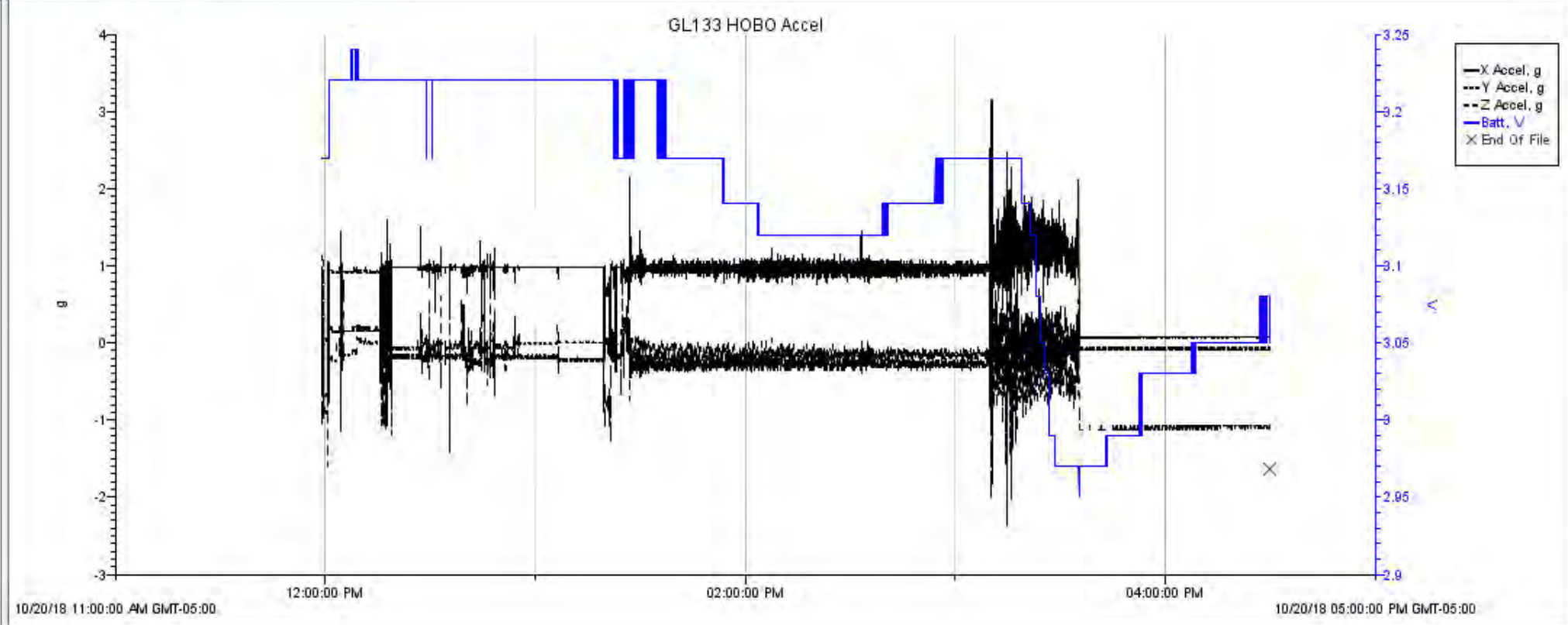


GL133_HOBO_Accel.hobo

#	Time, GMT-05:00	X Accel, g	Y Accel, g	Z Accel, g	Batt, V	End Of File
1	10/20/18 11:59:00 AM	0.125	-0.075	-1.050	3.17	
2	10/20/18 11:59:01 AM	0.125	-0.075	-1.050	3.17	
3	10/20/18 11:59:02 AM	0.125	-0.075	-1.050	3.17	
4	10/20/18 11:59:03 AM	0.050	-0.175	0.875	3.17	
5	10/20/18 11:59:04 AM	0.850	0.275	0.525	3.17	
6	10/20/18 11:59:05 AM	0.425	0.150	0.875	3.17	

Show All Hide All

- Details
- Series: X Accel, g
 - Series: Y Accel, g
 - Series: Z Accel, g
 - Series: Batt, V
 - Event Type: End Of File

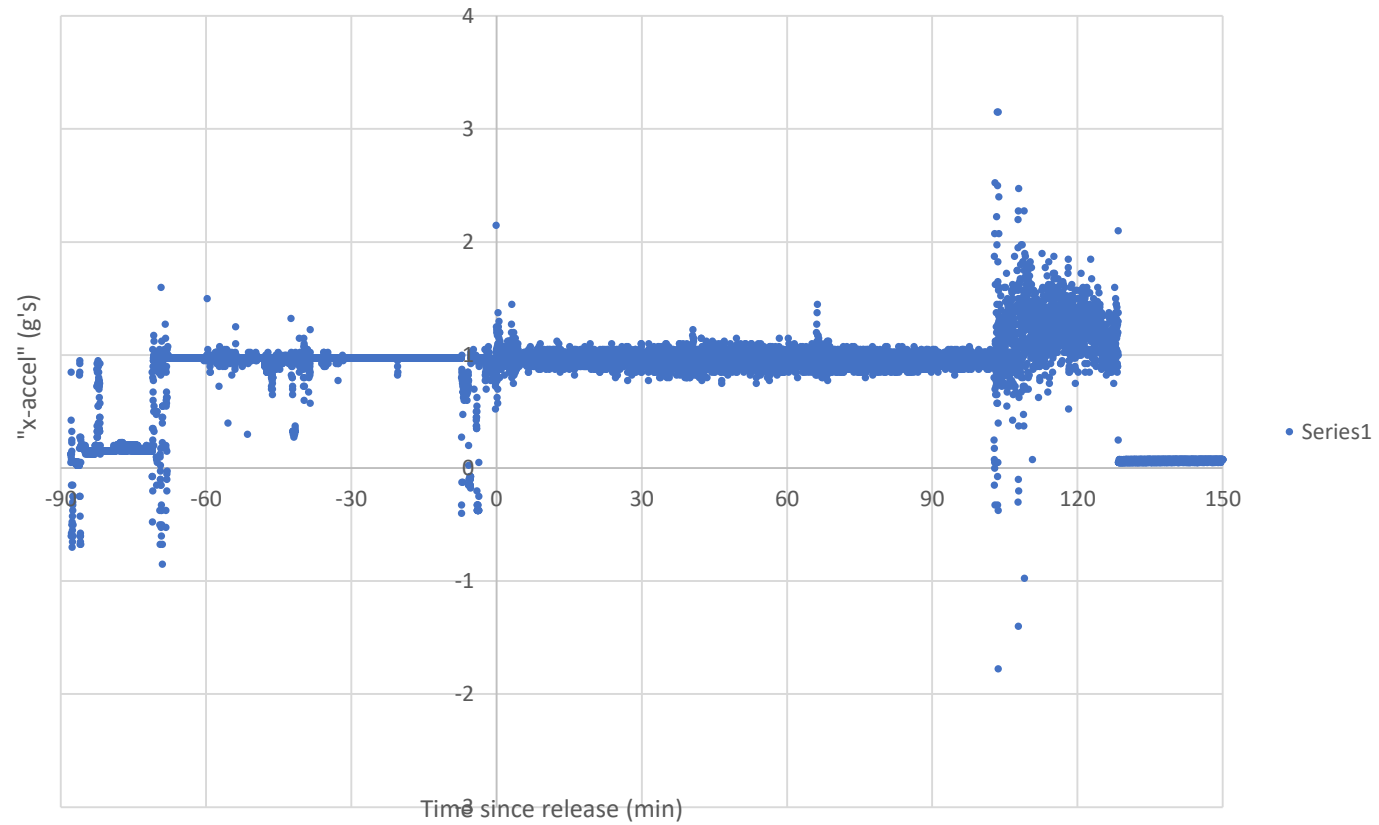


Ready.

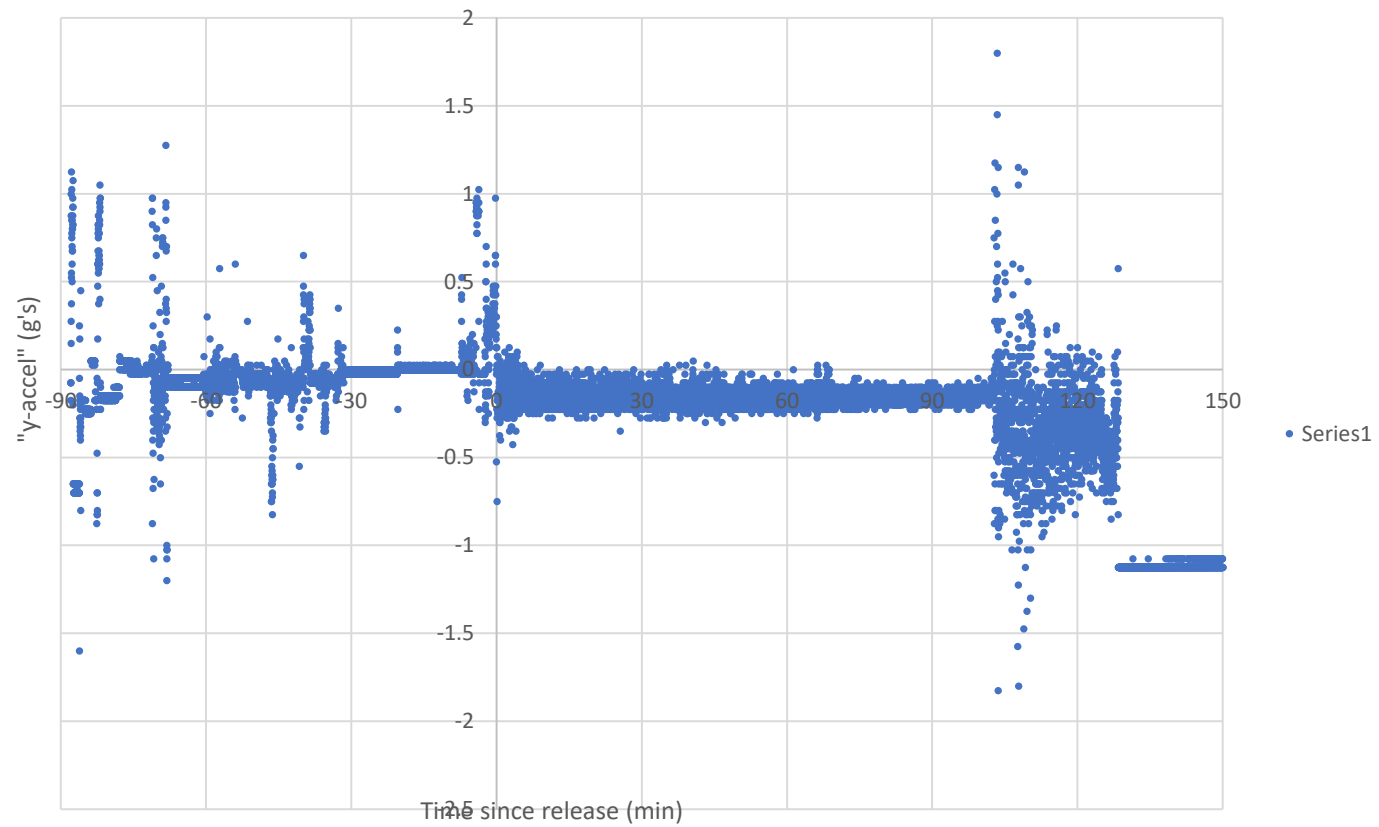
Dev: HOBO UA-004-64 Pendant G, S/N: 9903369

1 device connected

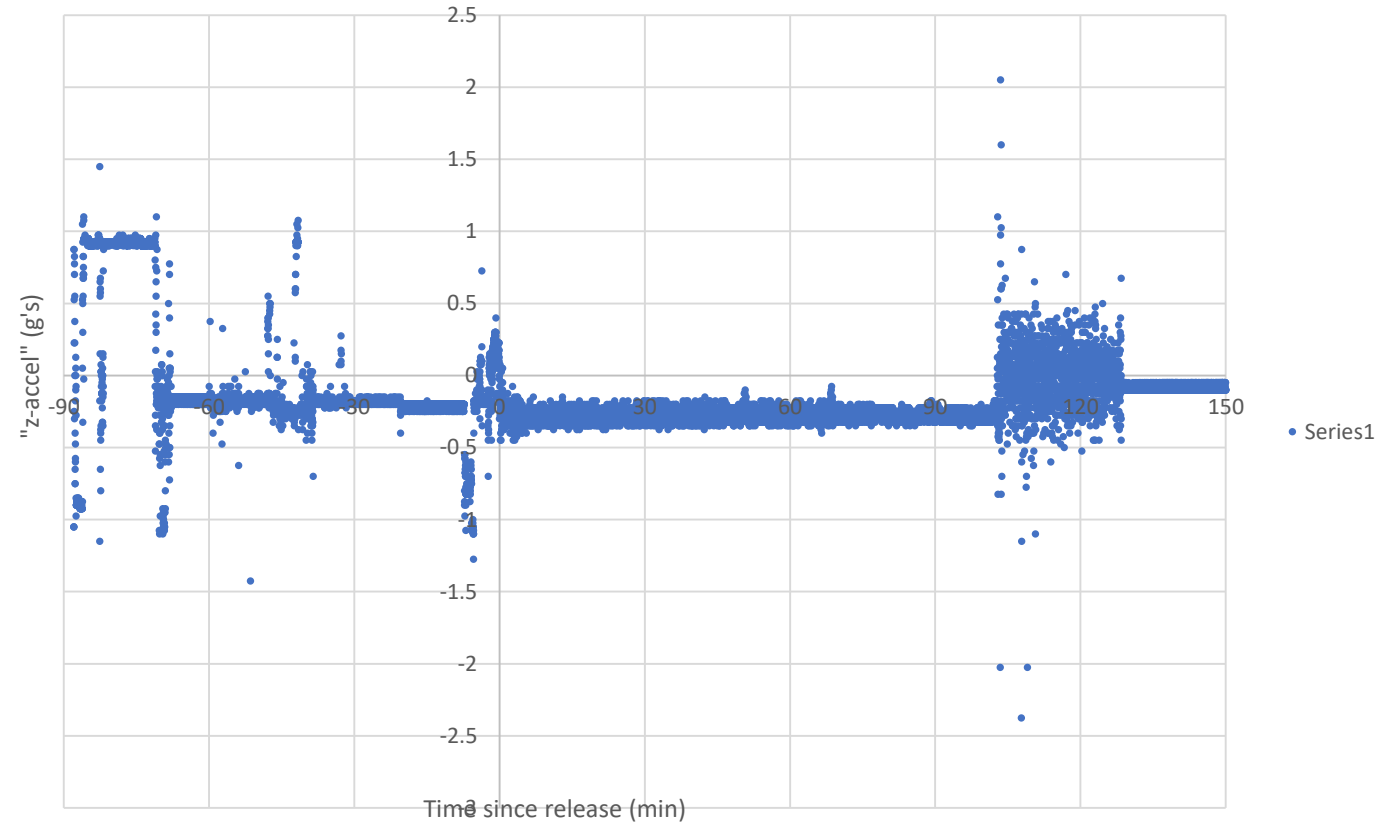
GL133 HOBO Accel: Time vs "x-accel"

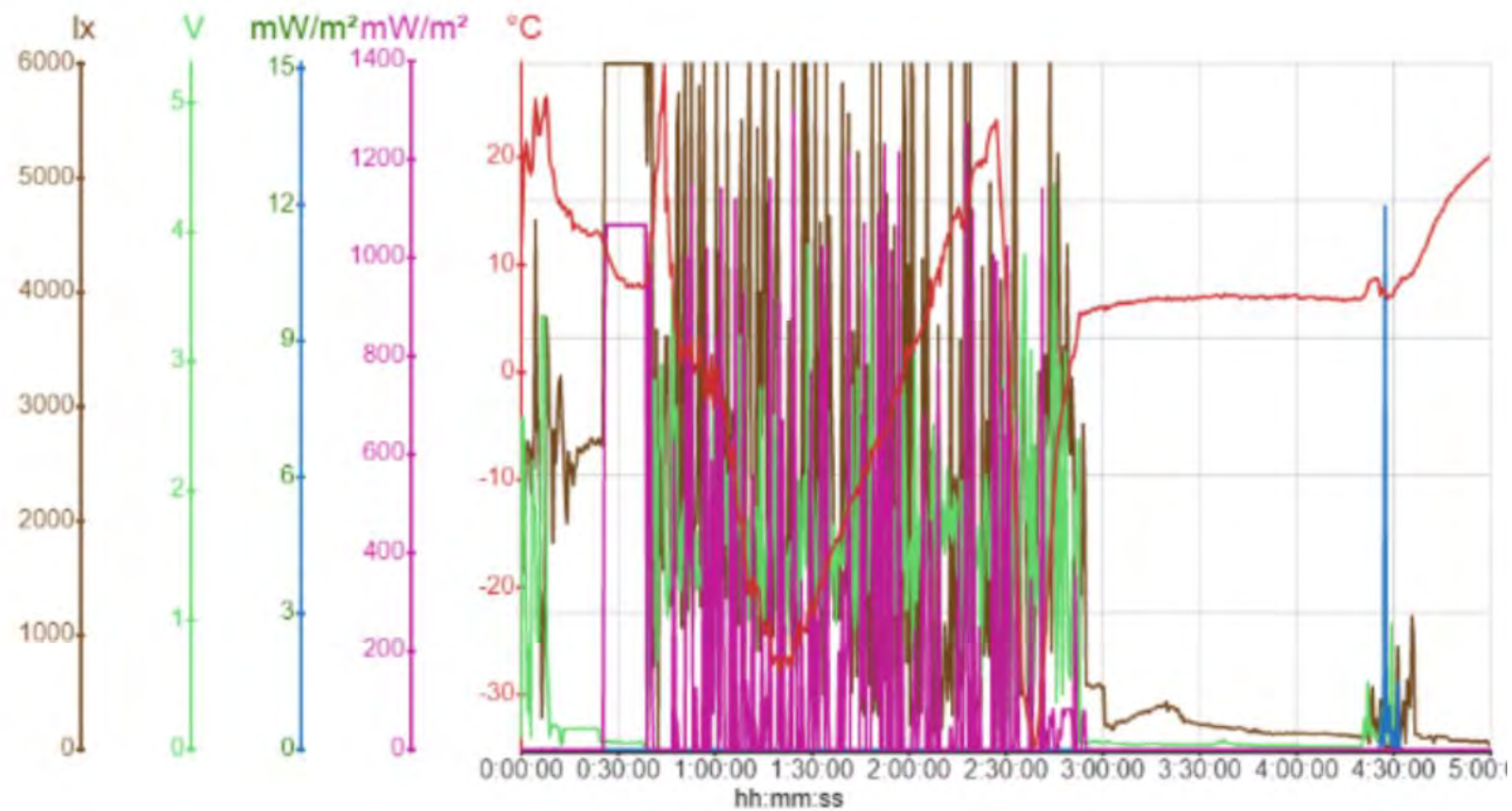


GL133 HOBO Accel: Time vs "y-accel"

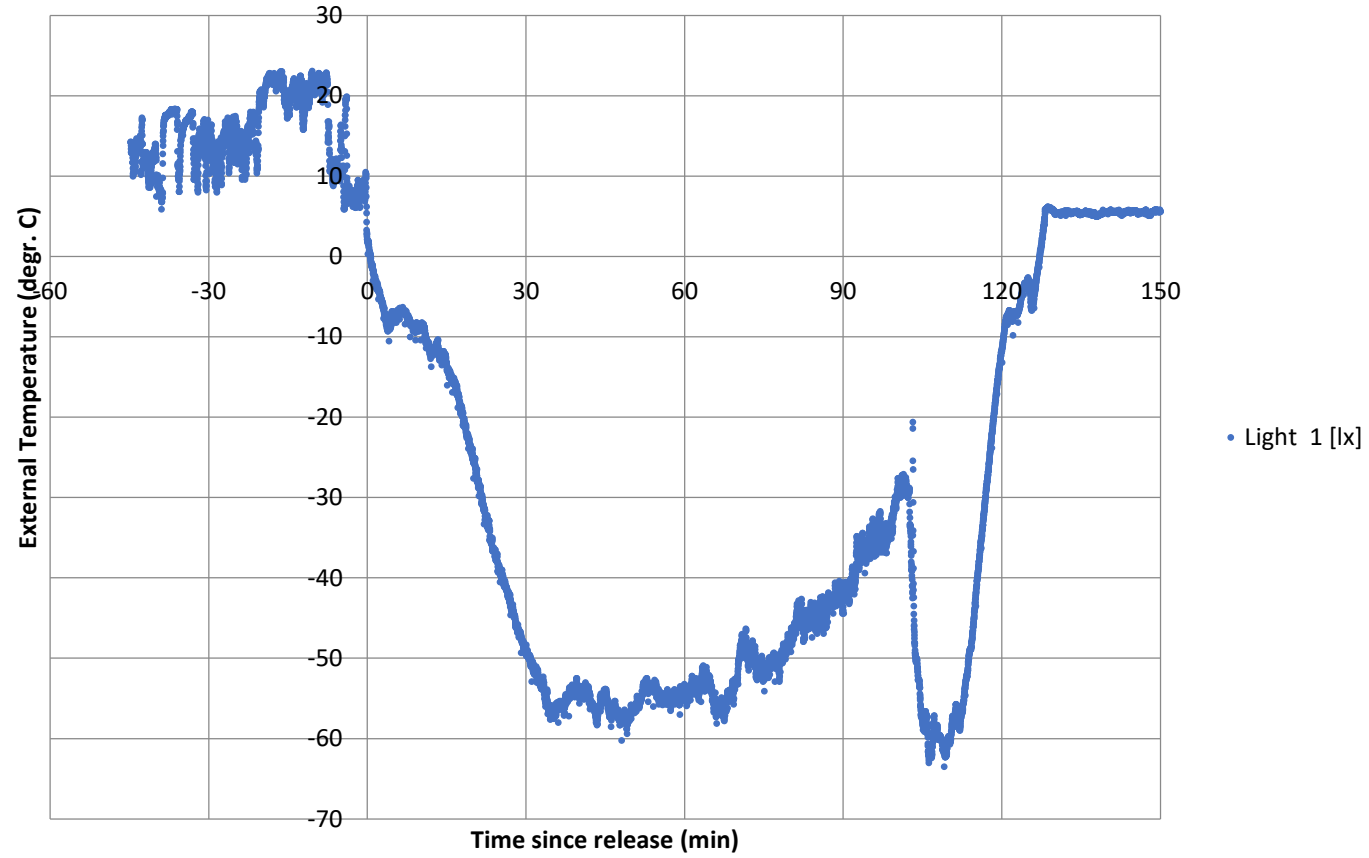


GL133 HOBO Accel: Time vs "z-accel"

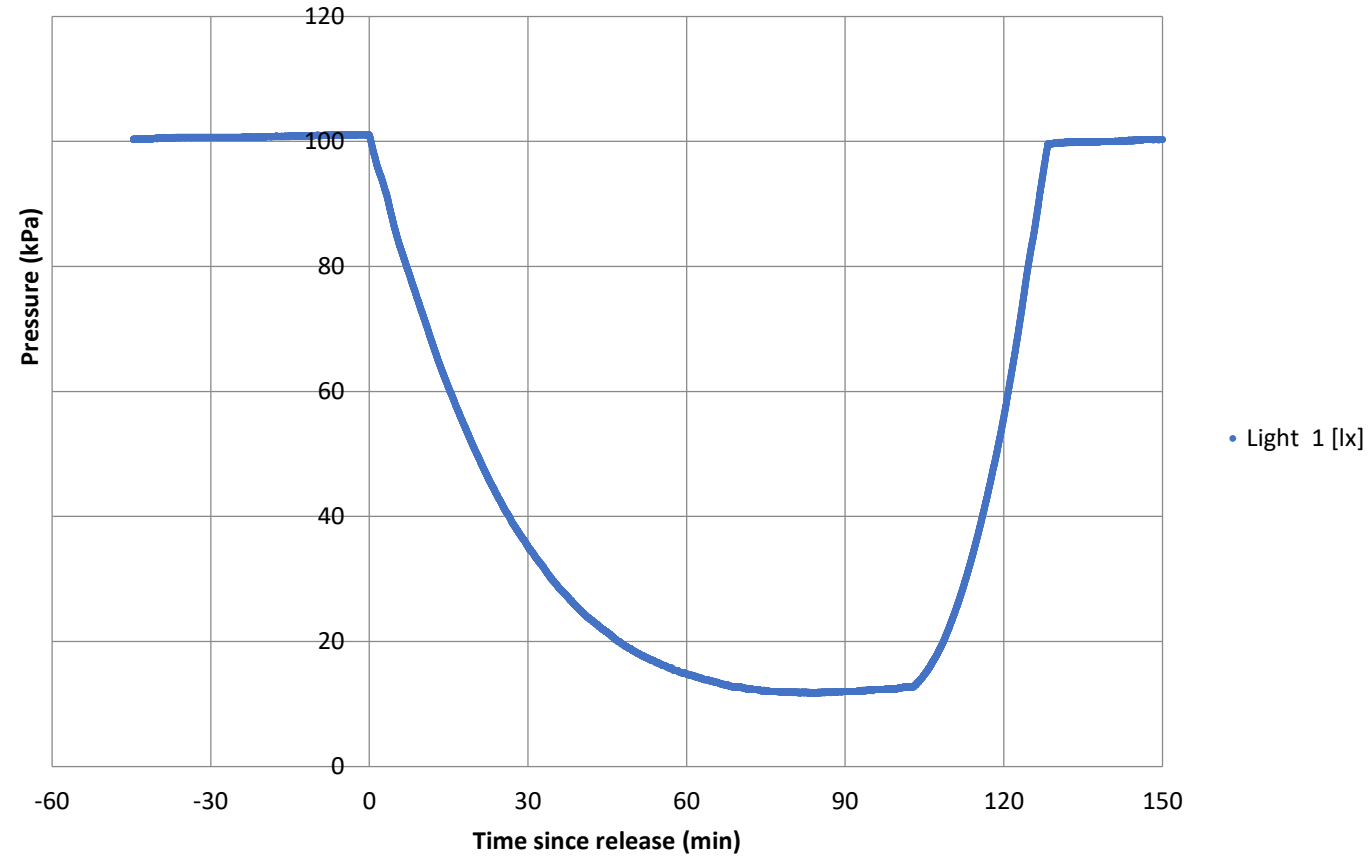




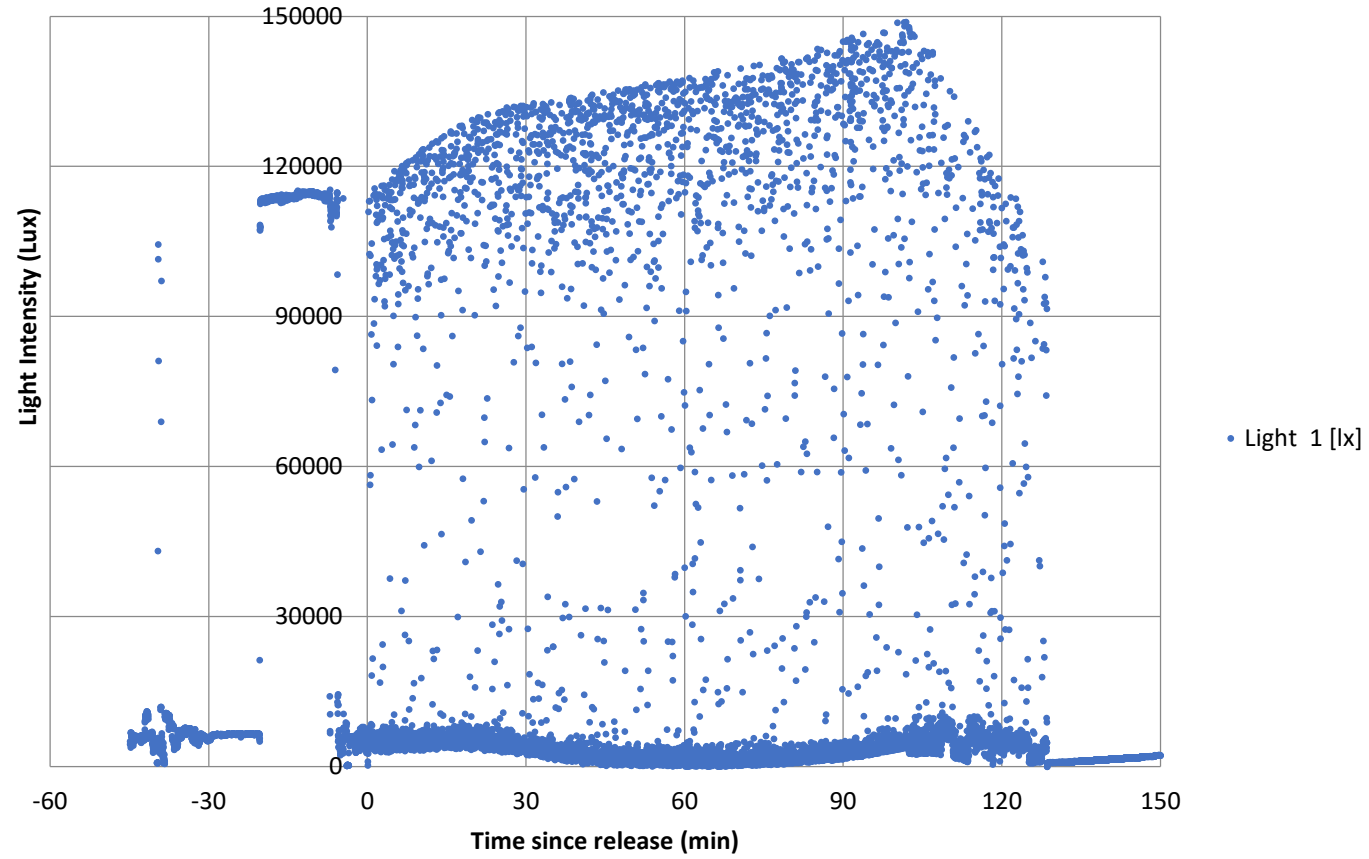
GL133 Neulog A: Time vs Ext. Temp.



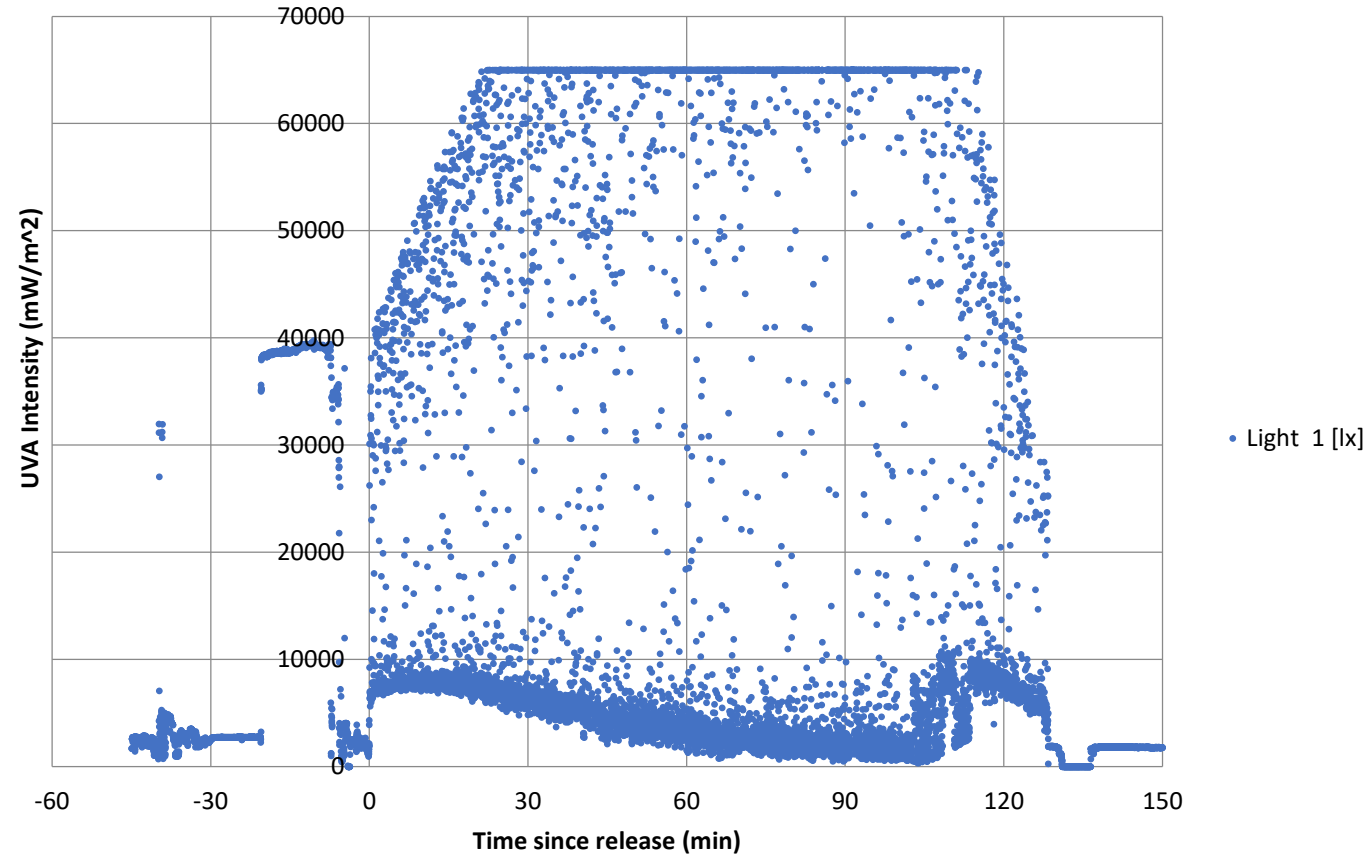
GL133 Neulog A: Time vs Pressure



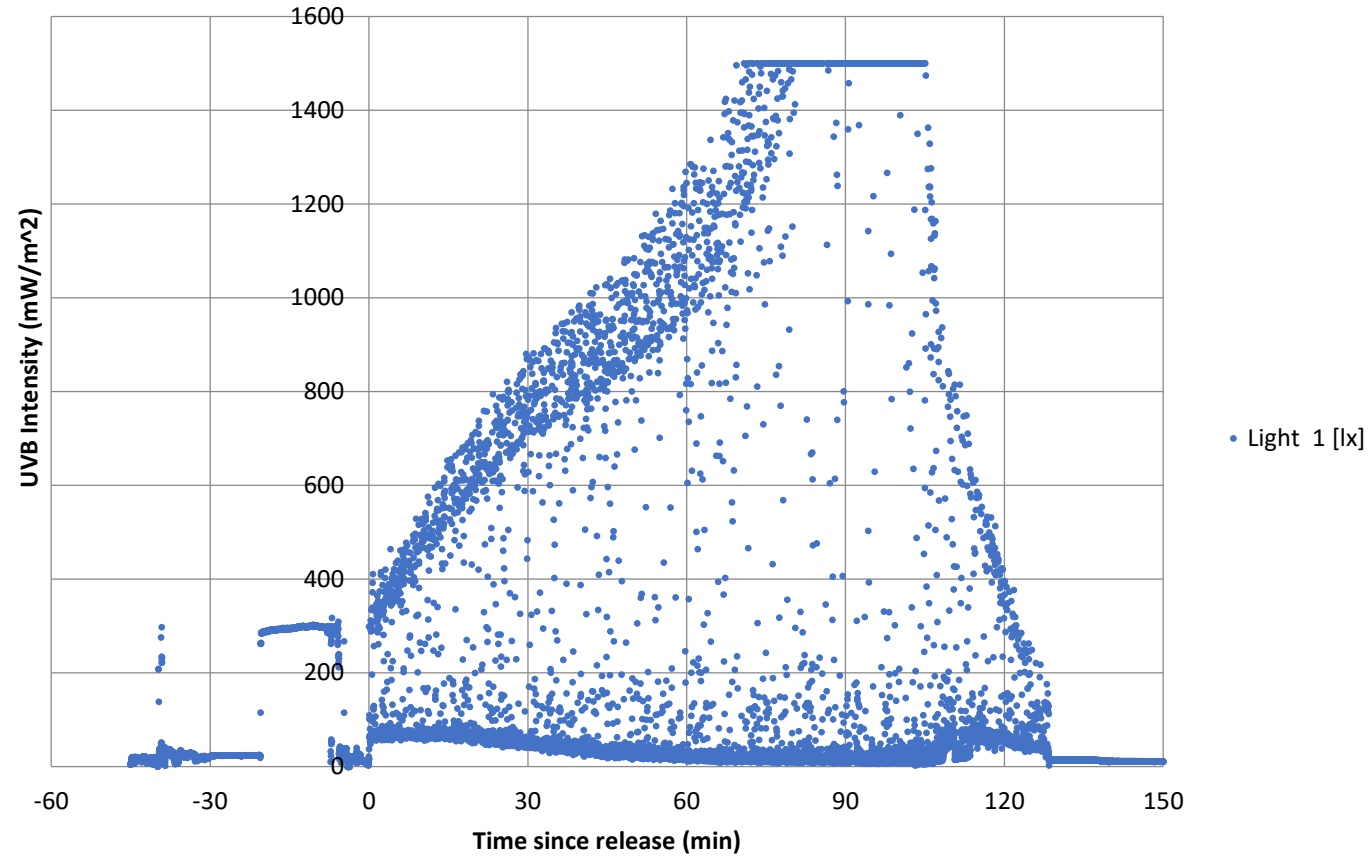
GL133 Neulog A: Time vs Light



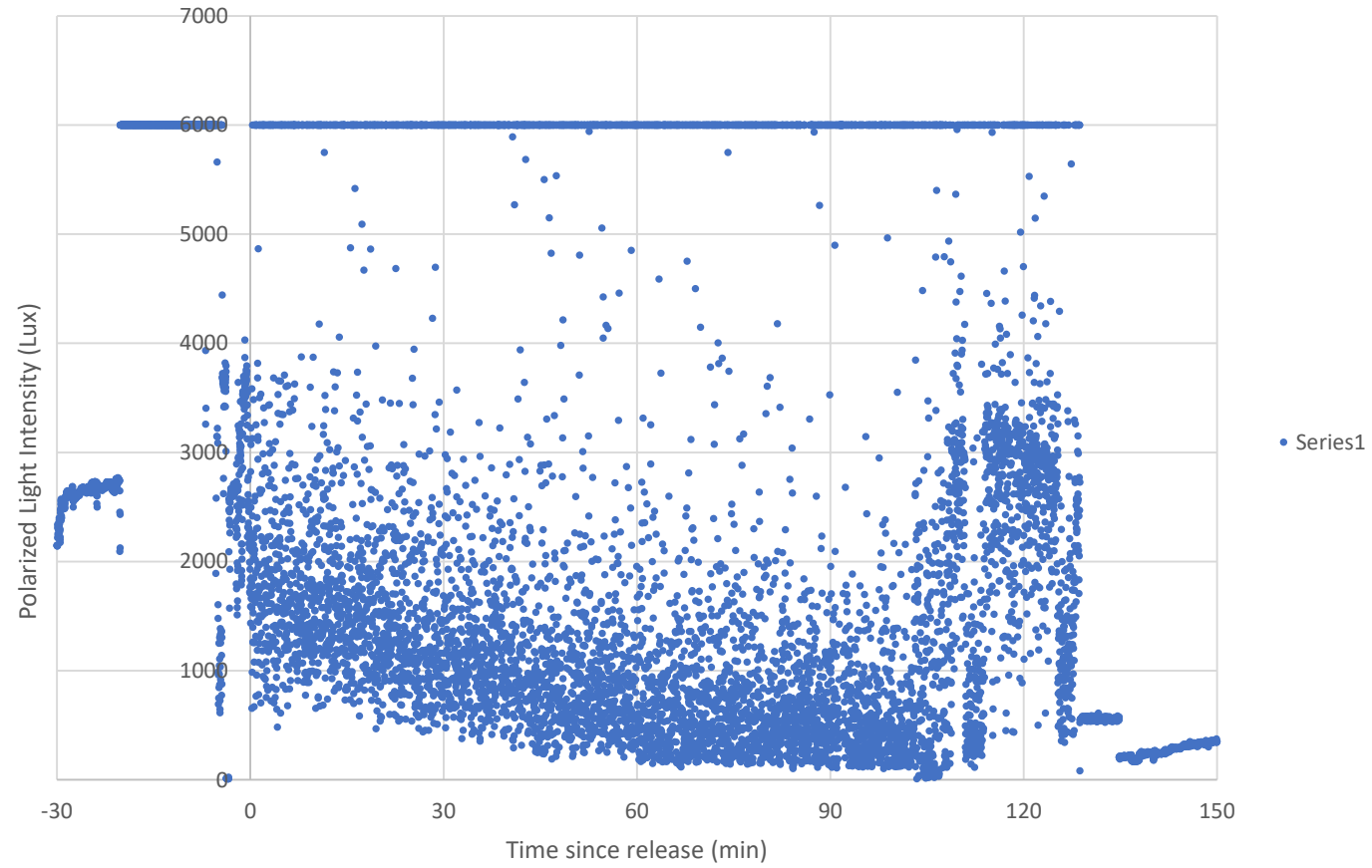
GL133 Neulog A: Time vs UVA Intensity



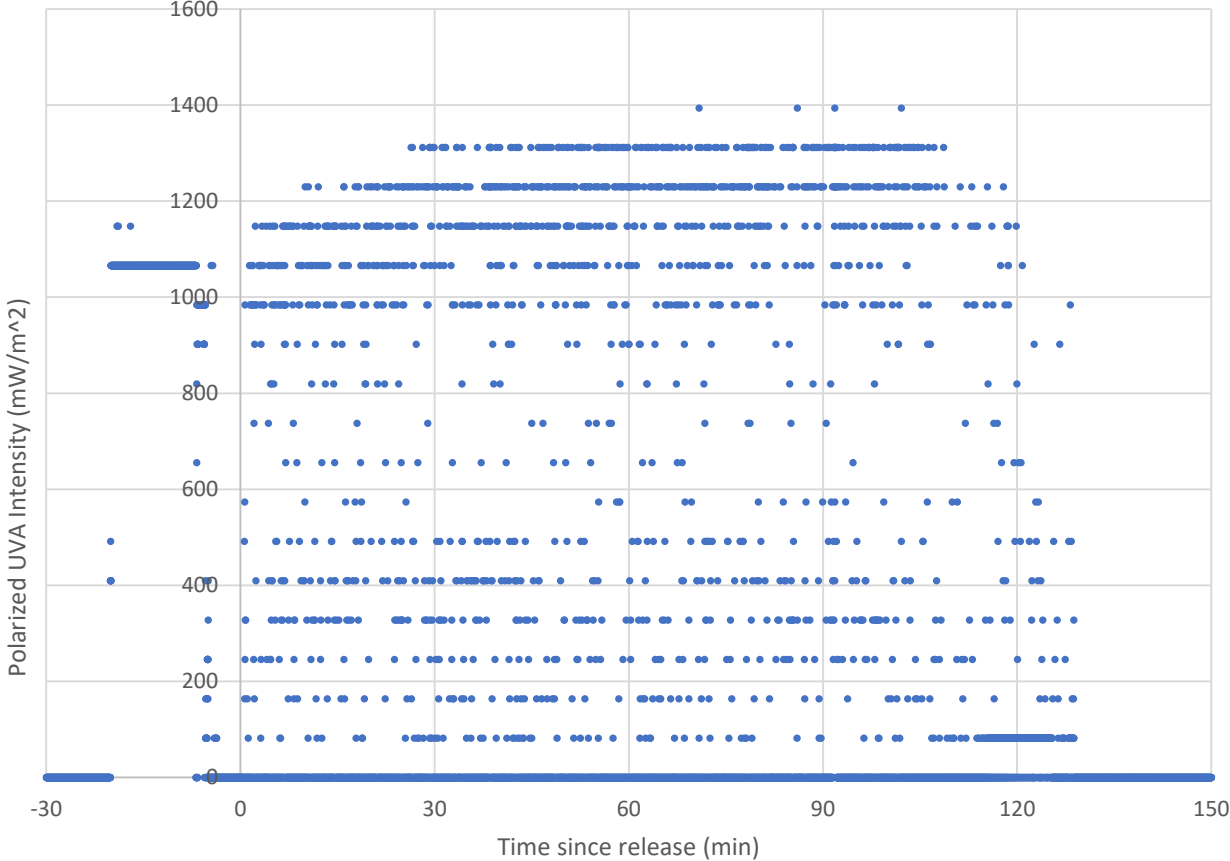
GL133 Neulog A: Time vs UVB Intensity



GL133 Neulog B: Time vs Polarized Light

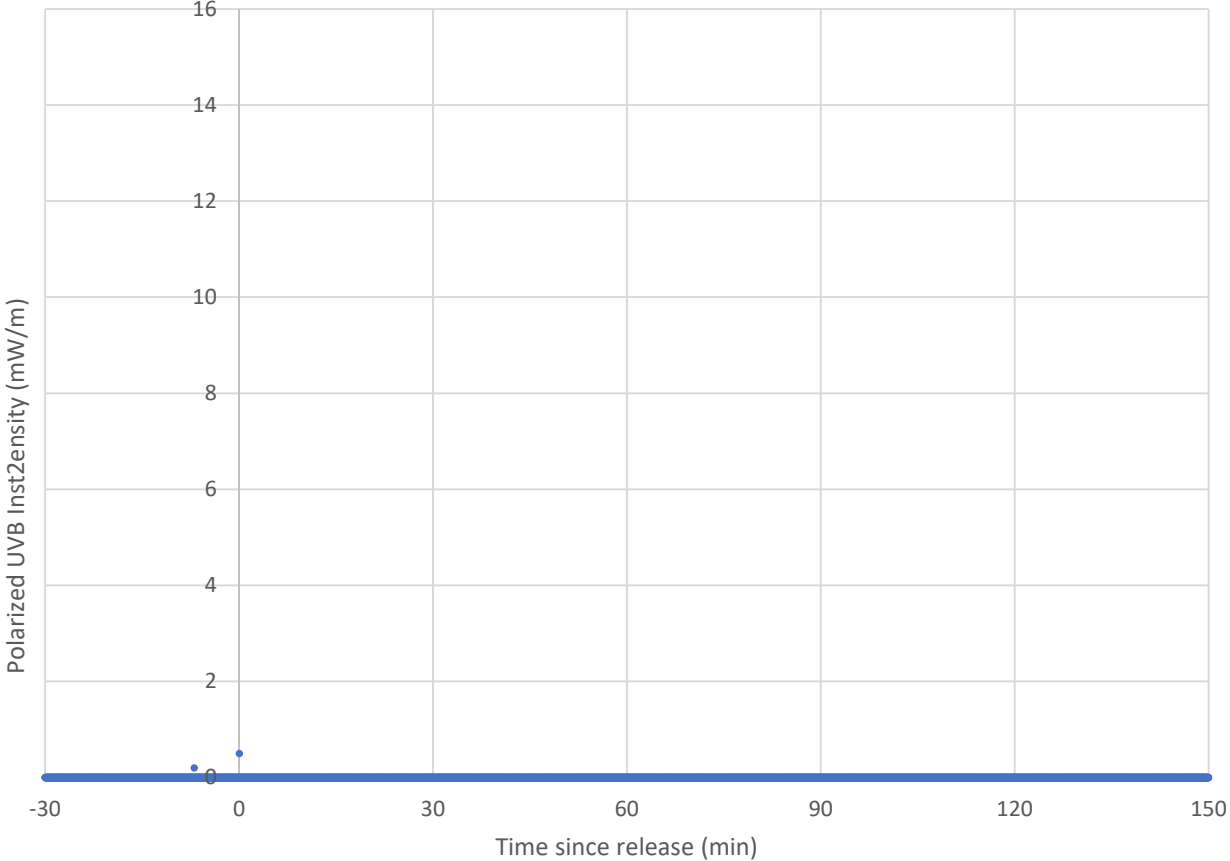


GL133 Neulog B: Time vs Polarized UVA



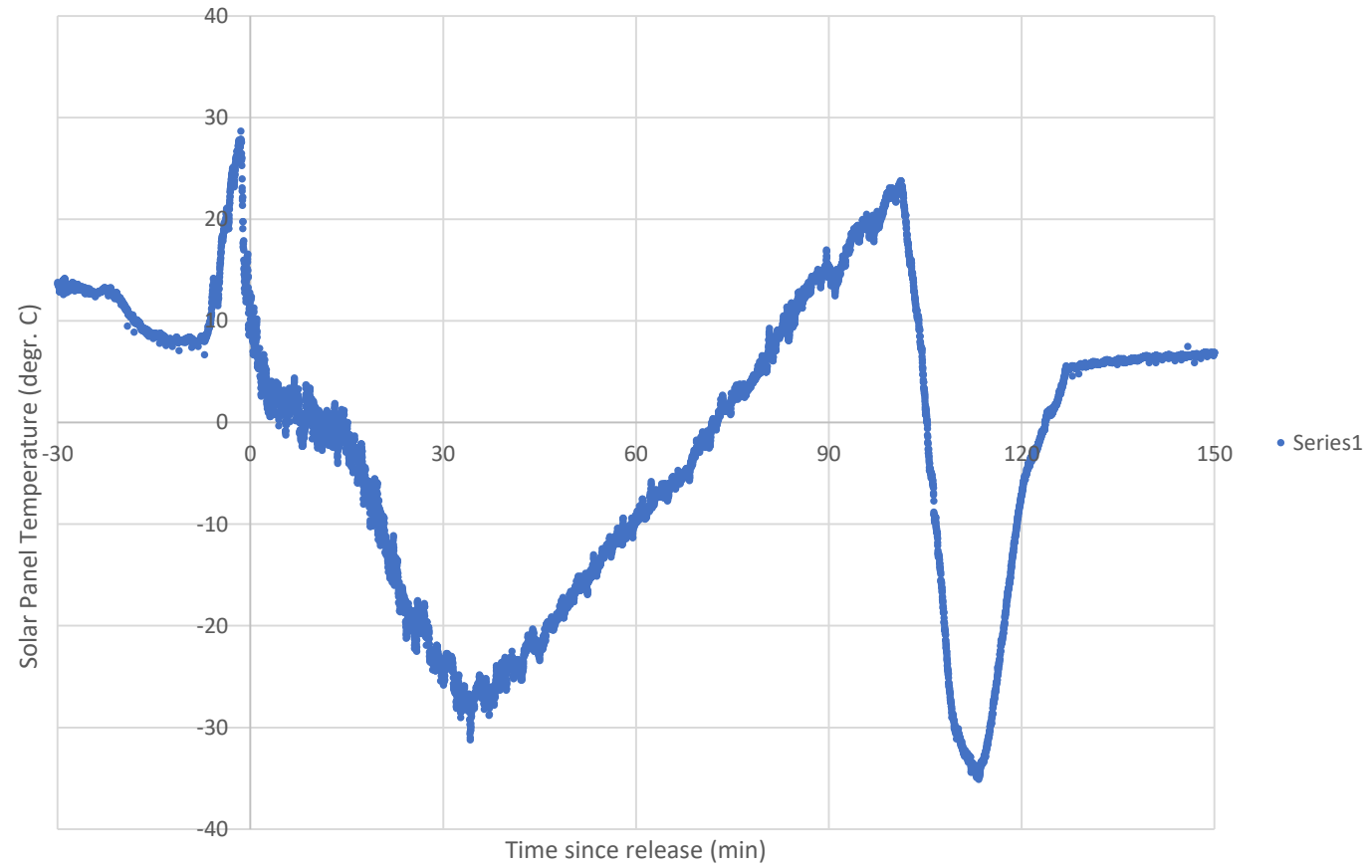
Series1

GL133 Neulog B: Time vs Polarized UVB

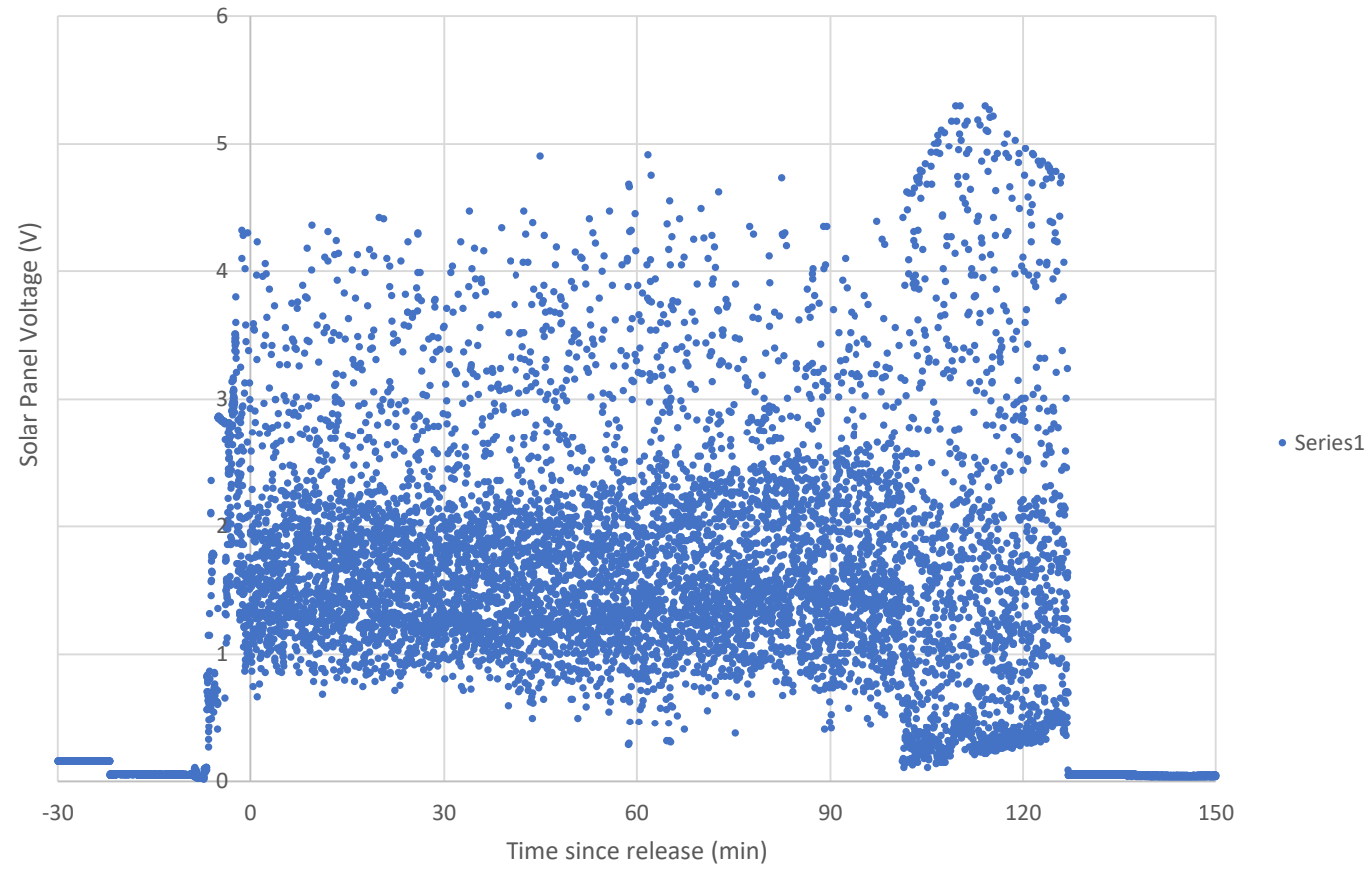


• Series1

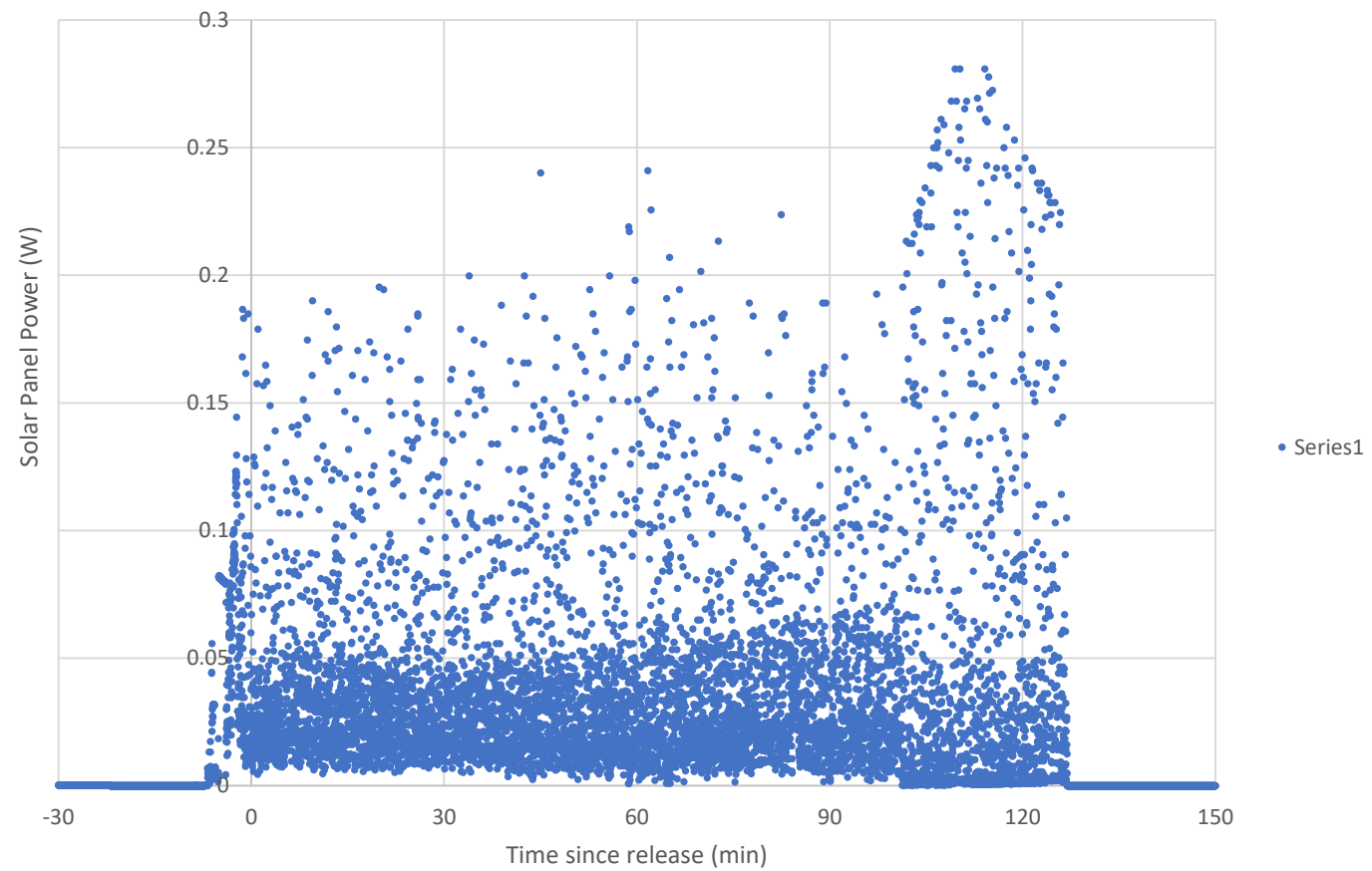
GL133 Neulog B: Time vs Solar Panel Temp.



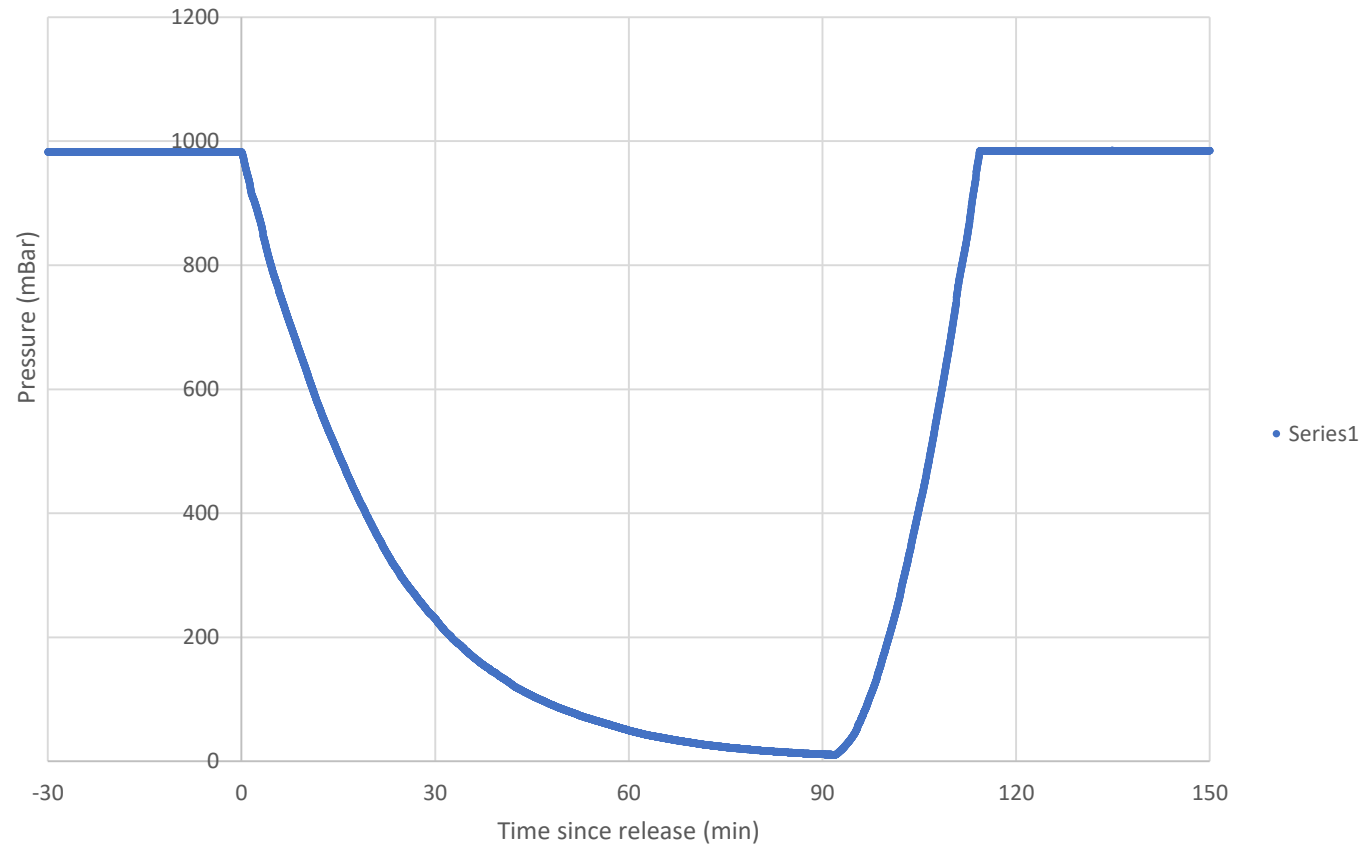
GL133 Neulog B: Time vs Solar Panel Voltage



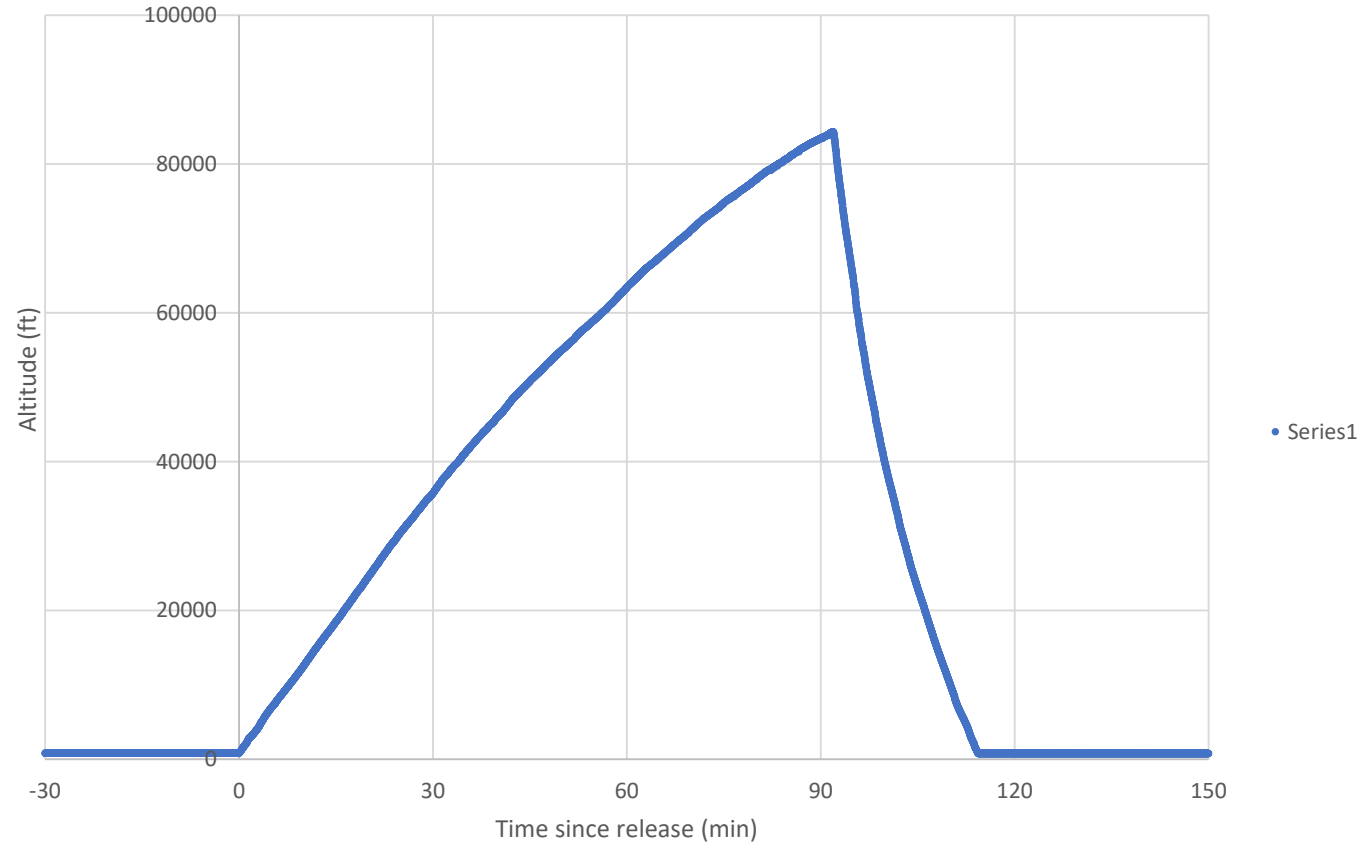
GL133 Neulog B: Time vs Solar Panel Power



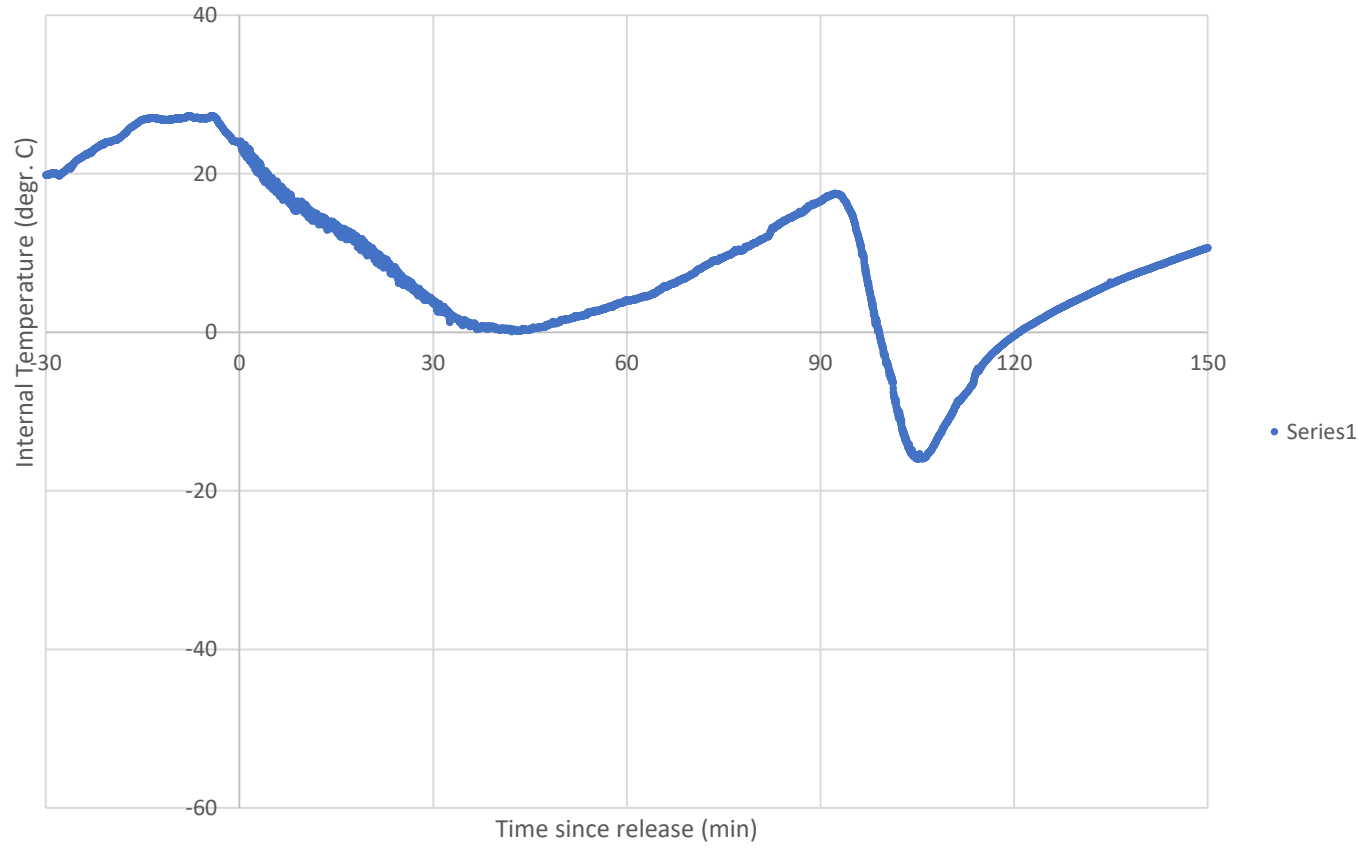
GL133 PocketLab: Time vs Pressure



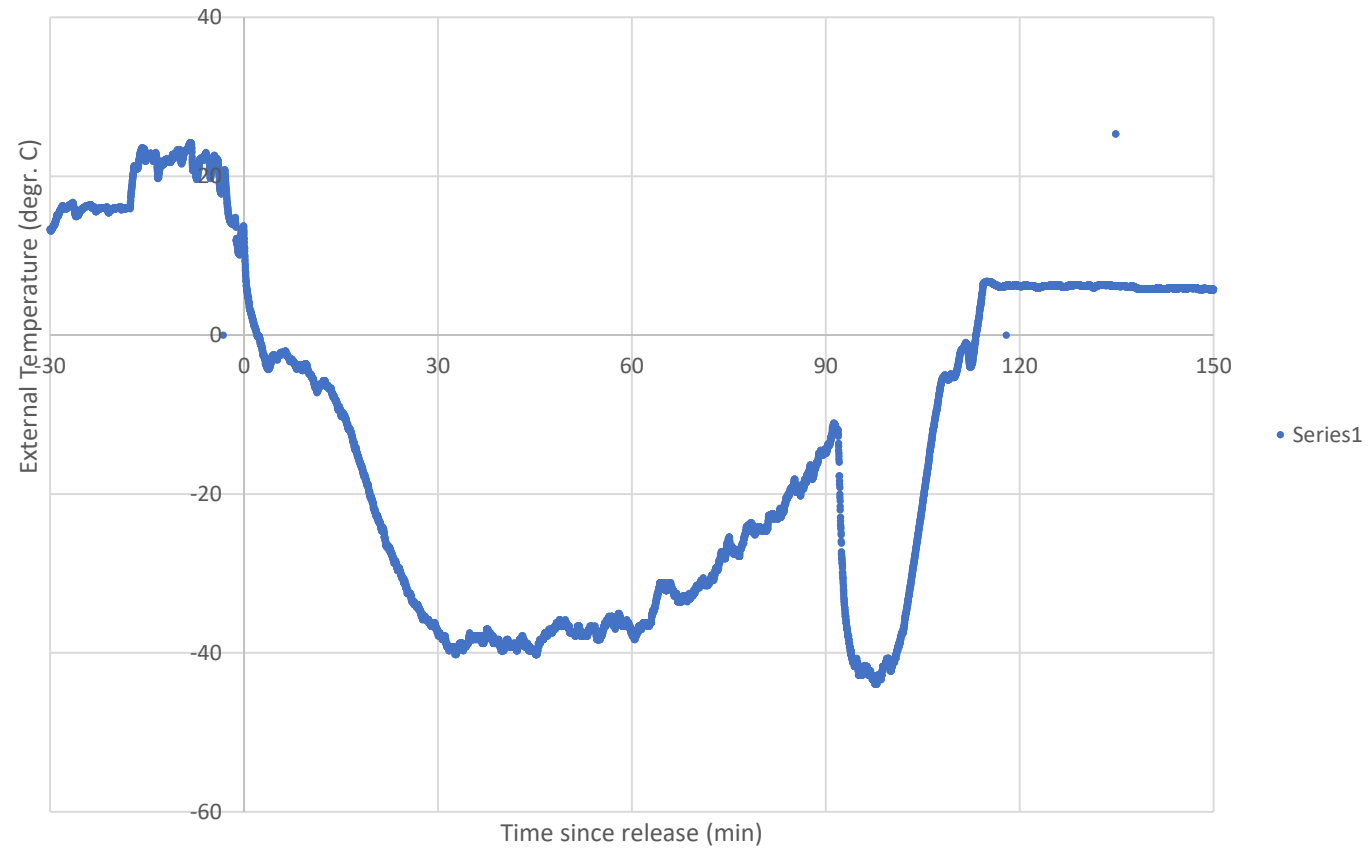
GL133 PocketLab: Time vs Altitude (Pressure)



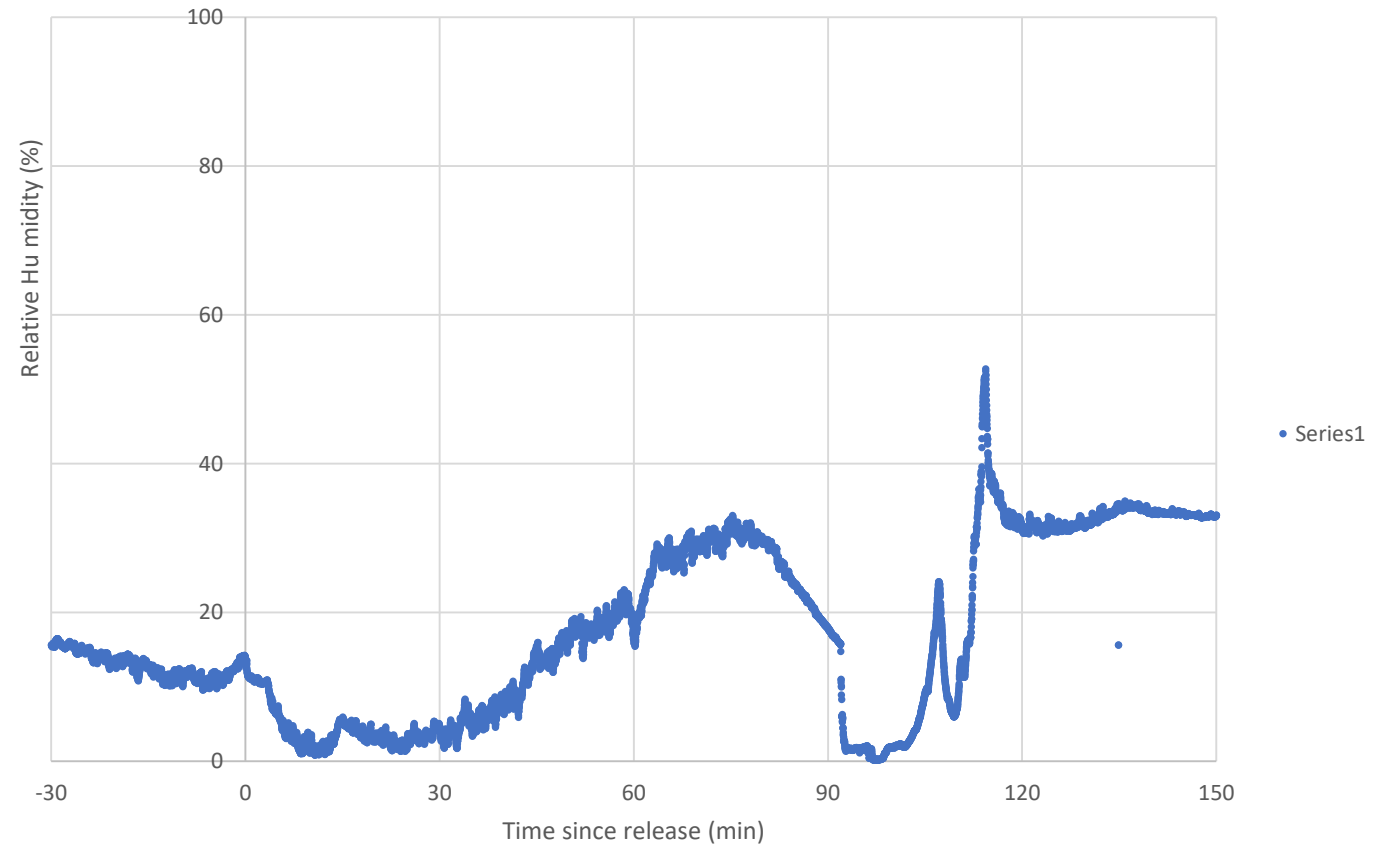
GL133 PocketLab: Time vs Internal Temp.



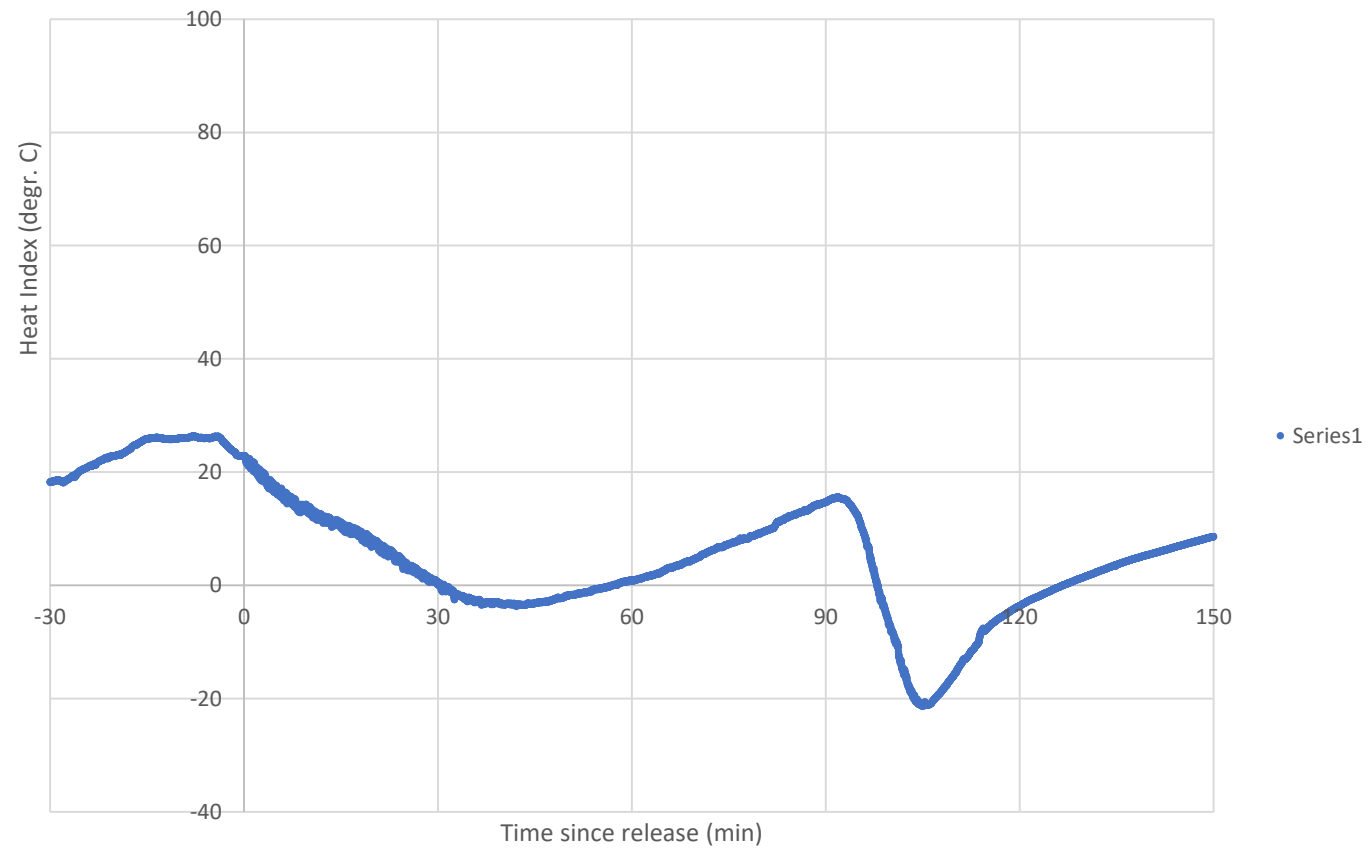
GL133 PocketLab: Time vs External Temp.



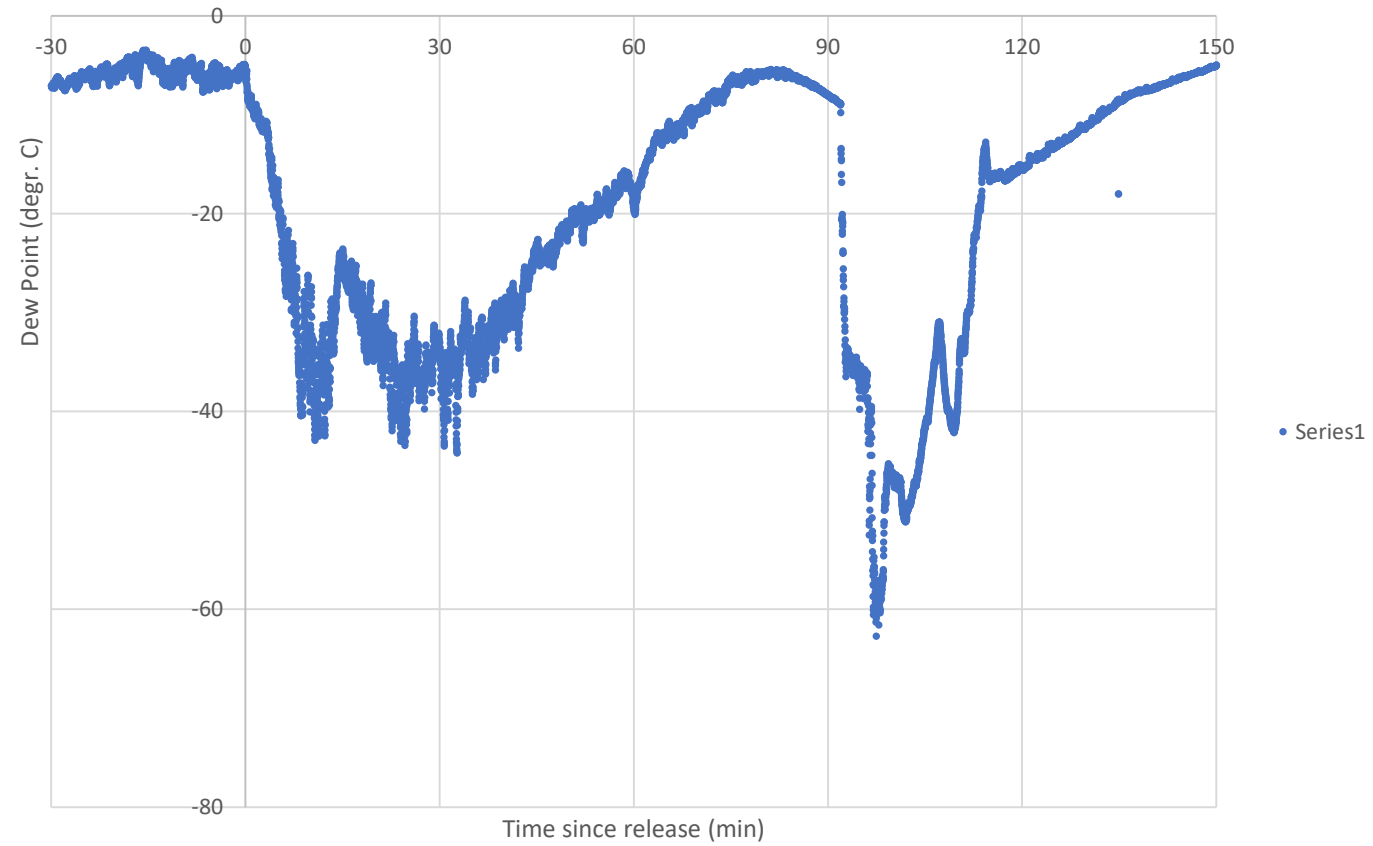
GL133 PocketLab: Time vs Rel. Humidity



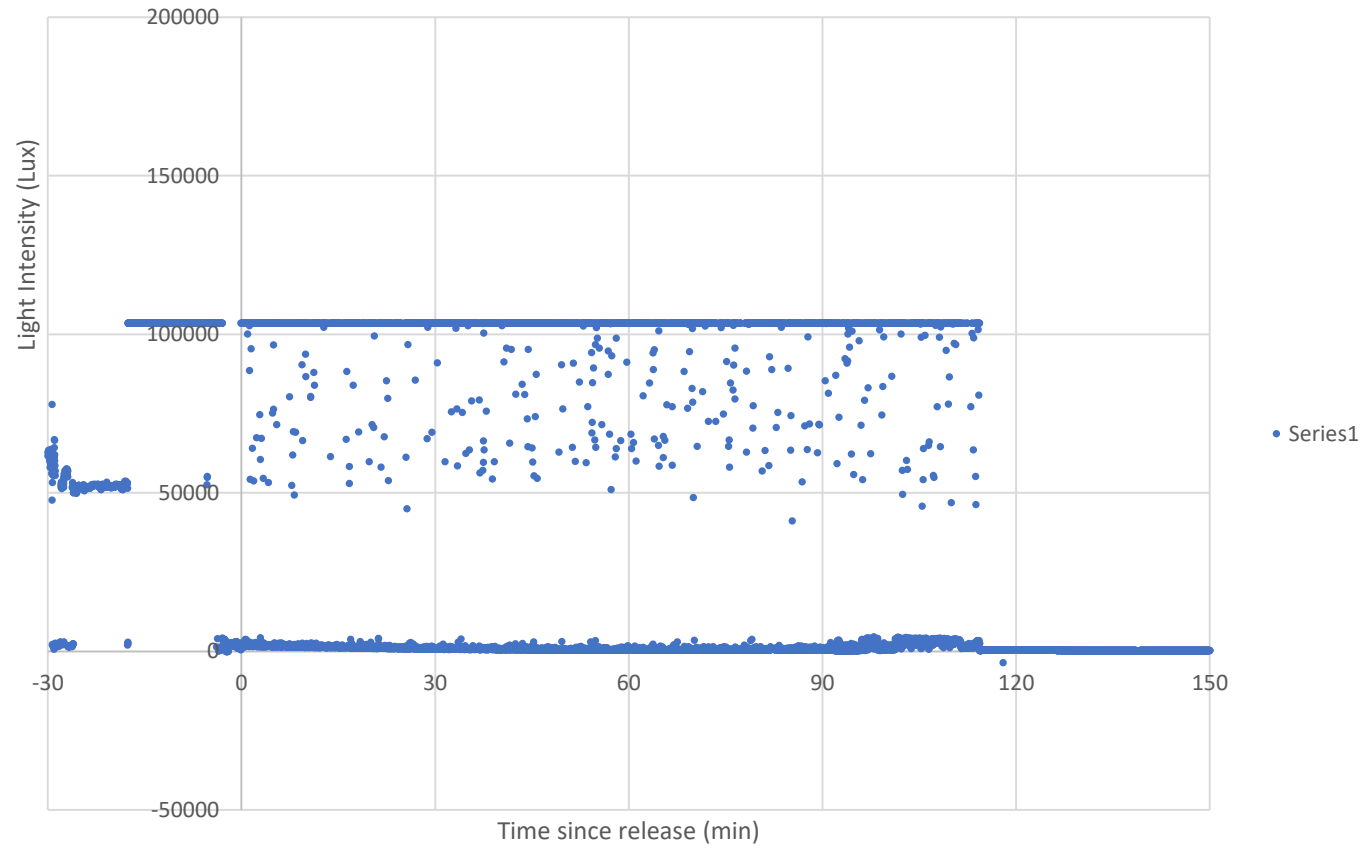
GL133 PocketLab: Time vs Heat Index



GL133 PocketLab: Time vs Dew Point



GL133 PocketLab: Time vs Light Intensity



Google Maps APRS - SeaMonkey

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Map

Overlays

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Two-Night Staycations

Track callsign:

Address, city or Locator:

Show last:

Track tail length:

KD0AWK-12

Updated: 2018-10-20 16:34:49 (1d22h)
Position: 44°11.69' N 93°59.11' W

2016 2017 2018

Other SSIDs: KD0AWK KD0AWK-10 KD0AWK-14 KD0AWK-15 KD0AWK-8

Wx: 60°F 33% 1017 mbar 6.1 MPH NW

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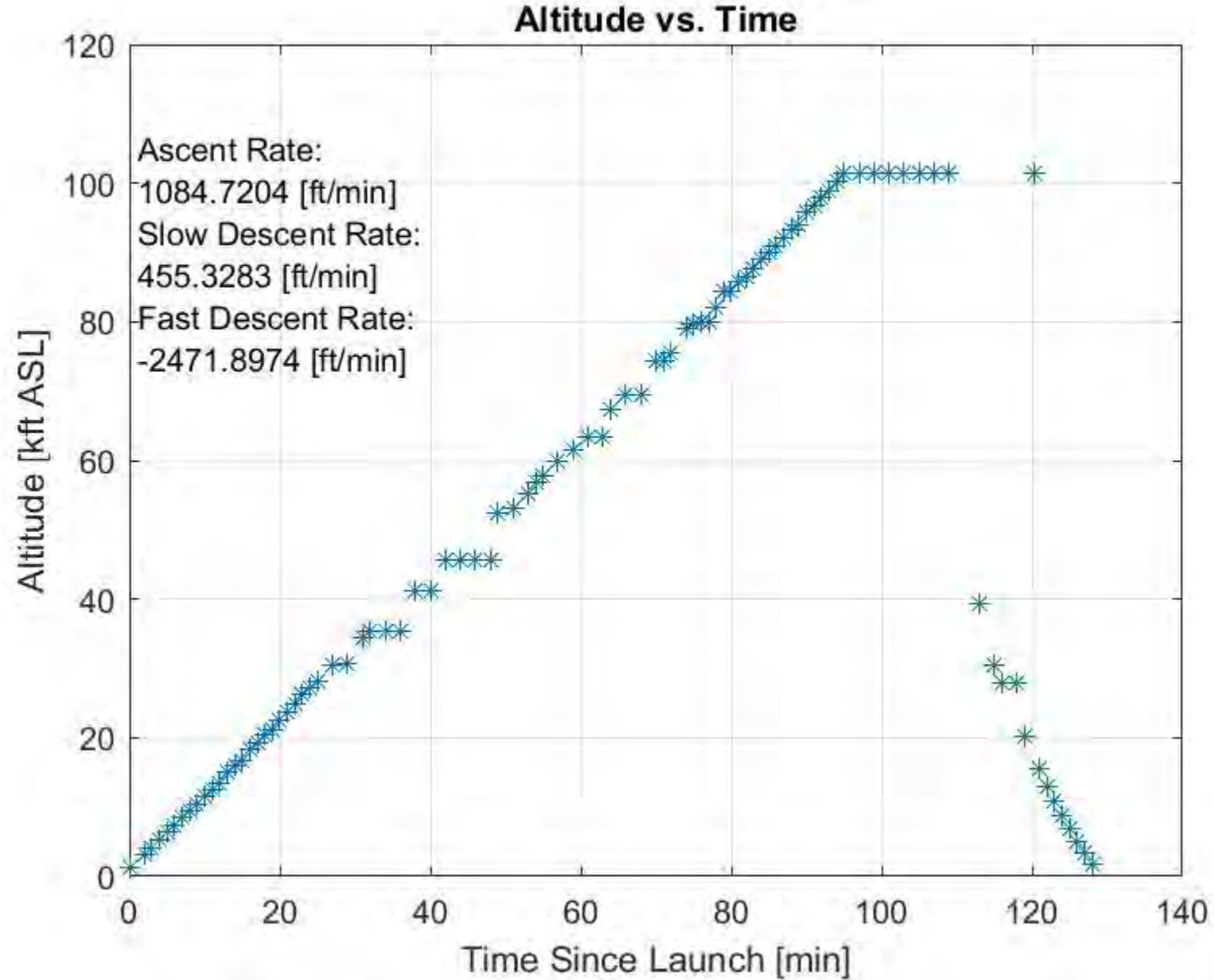
idle

Google

<https://aprs.fi/info/a/KD0AWK-12>

Map data ©2018 Google 10 km Terms of Use Report a map error

GL133 aprs tracking from StratoTrack (KD0AWK-12)



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SPOT Messages

Type	Time	Messenger
Messenger: Aero1 (16 Messages)		
Unlimit...	2 Days ago (October...	Aero1
Unlimit...	2 Days ago (October...	Aero1
Unlimit...	2 Days ago (October...	Aero1
Unlimit...	2 Days ago (October...	Aero1
Unlimit...	2 Days ago (October...	Aero1
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Messenger: Aero2 (4 Messages)		
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Unlimit...	2 Days ago (October...	Aero2
Unlimit...	2 Days ago (October...	Aero2
Unlimit...	2 Days ago (October...	Aero2

Map Satellite

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0:06:20



0:06:32



0:03:29

10/20/2018 12:55:23