

2023 – CLAMPS & CopterSondes

Lake Village, AR:

- CLAMPS2 continuous deployment
 - Doppler lidar: VADs, vertical stares, backscatter
 - MWR: TROPoe temperature and humidity retrievals, sfc met
 - *AERI not on board*
- CopterSonde WxUAS IOP deployment
 - Pressure, temperature, humidity
 - Wind speed and direction



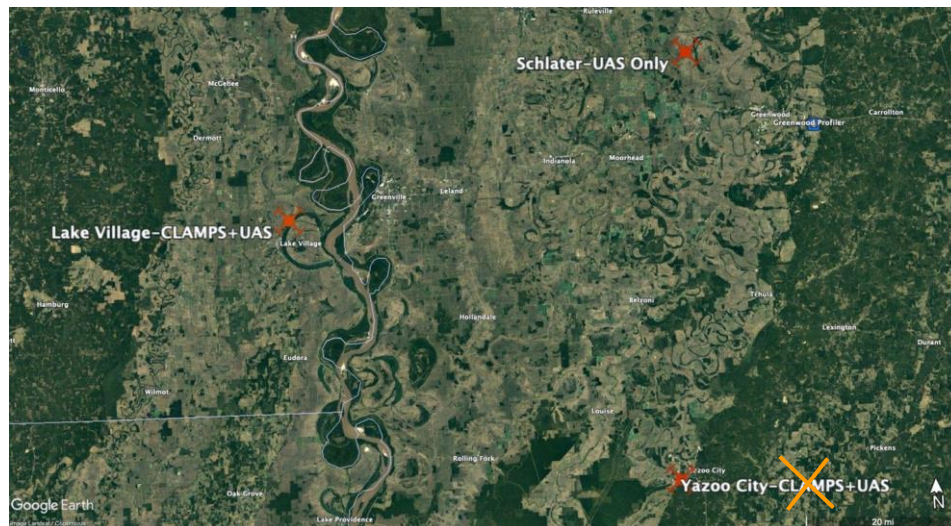
Schlater, MS

- CopterSonde WxUAS IOP deployment
 - Pressure, temperature, humidity
 - Wind speed and direction

Yazoo City, MS

- CopterSonde WxUAS IOP deployment
 - Pressure, temperature, humidity
 - Wind speed and direction

Note: CLAMPS1 did not deploy

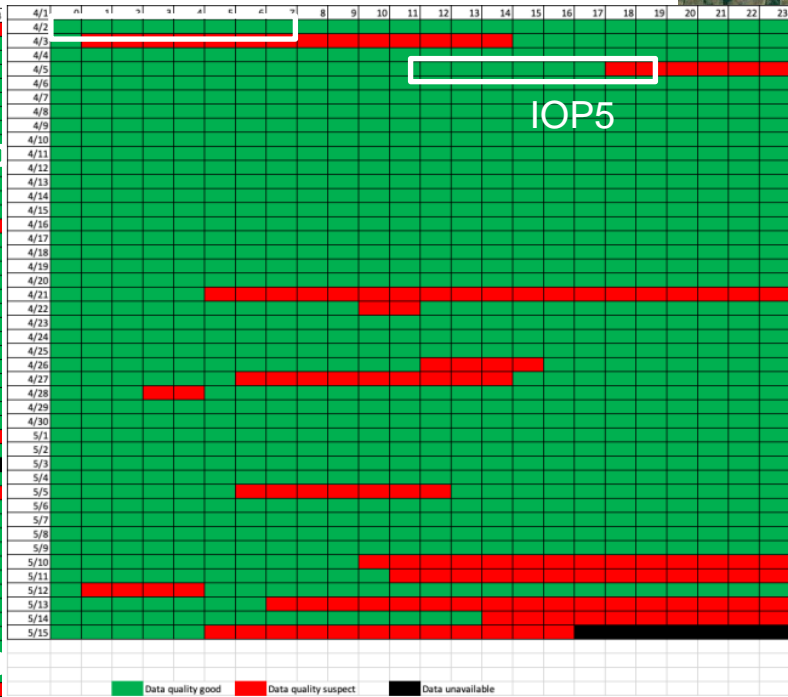
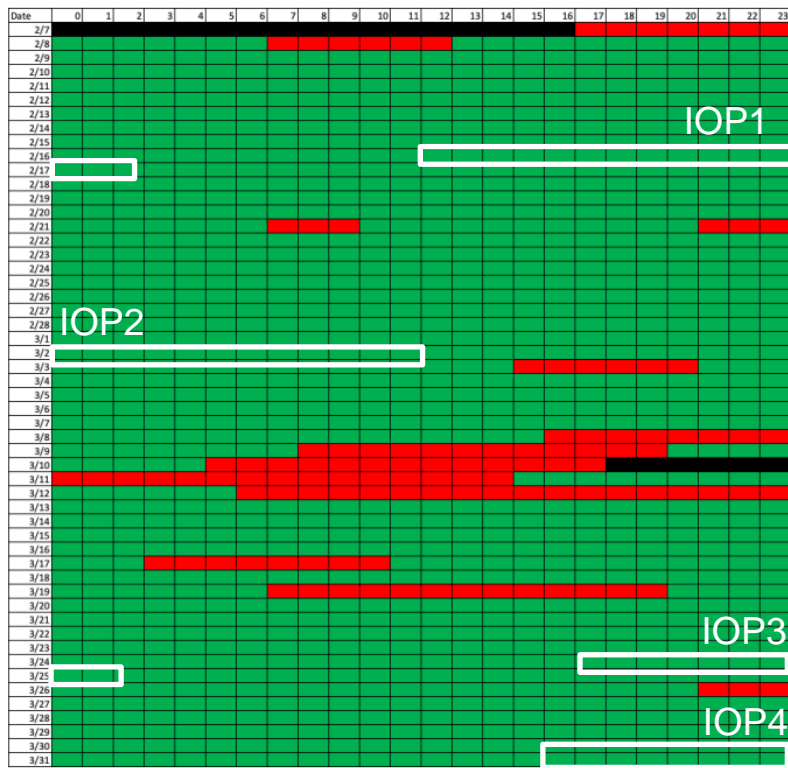


2023

Lake Village: 33.36354N, 91.262W



CLAMPS2 VAD



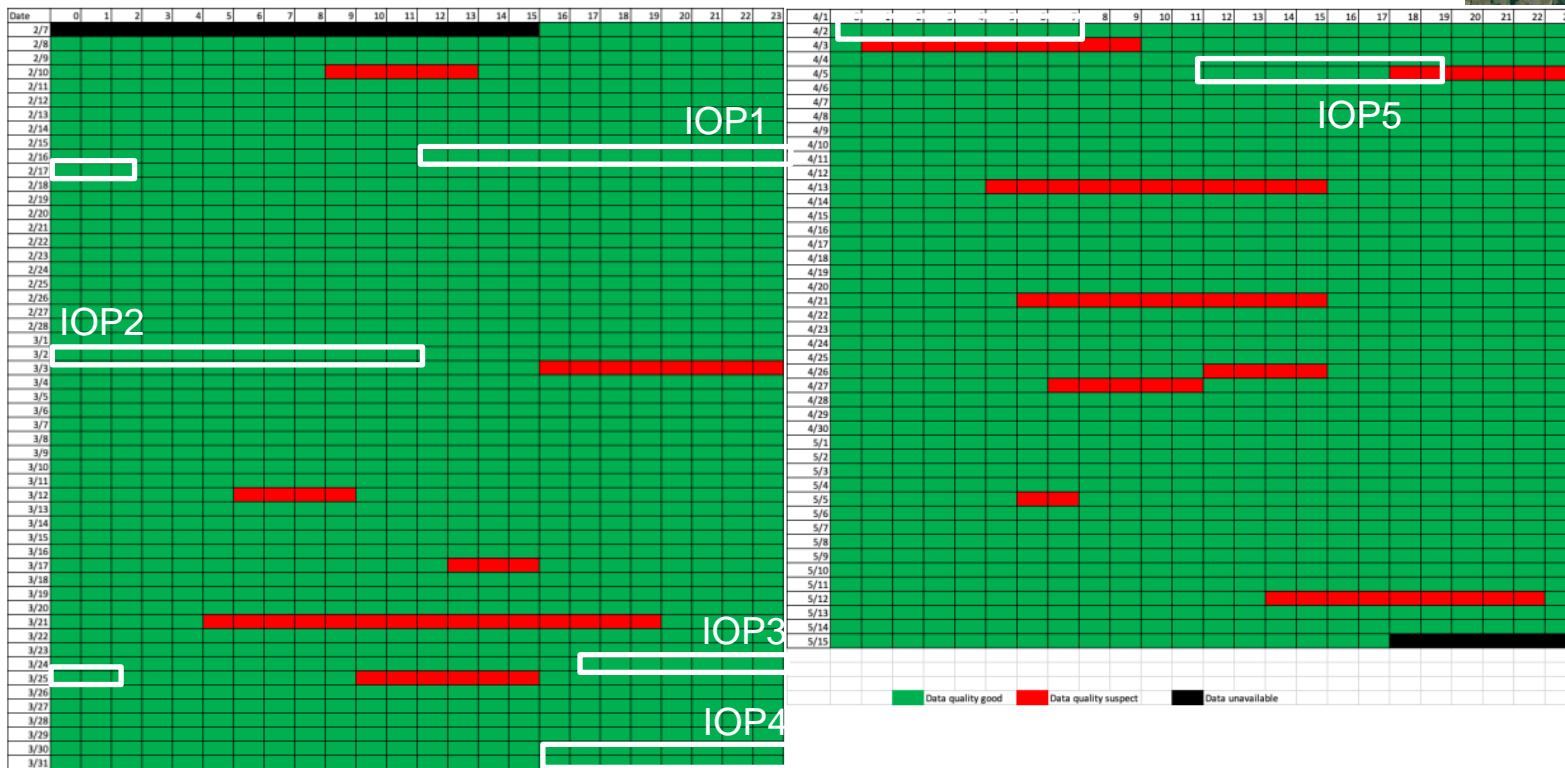
Green Data quality good Red Data quality suspect Black Data unavailable

2023

Lake Village: 33.36354N, 91.262W



CLAMPS2 Stare



IOP1

IOP5

IOP2

IOP3

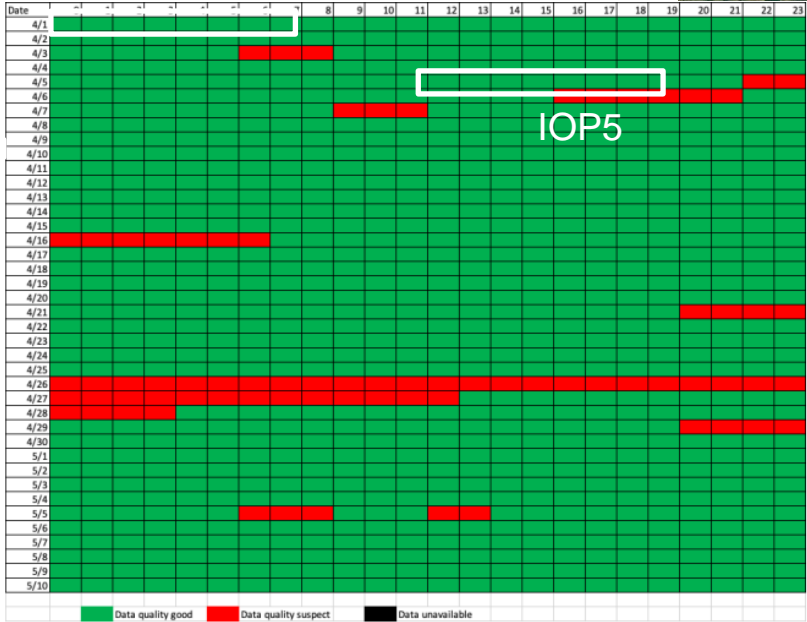
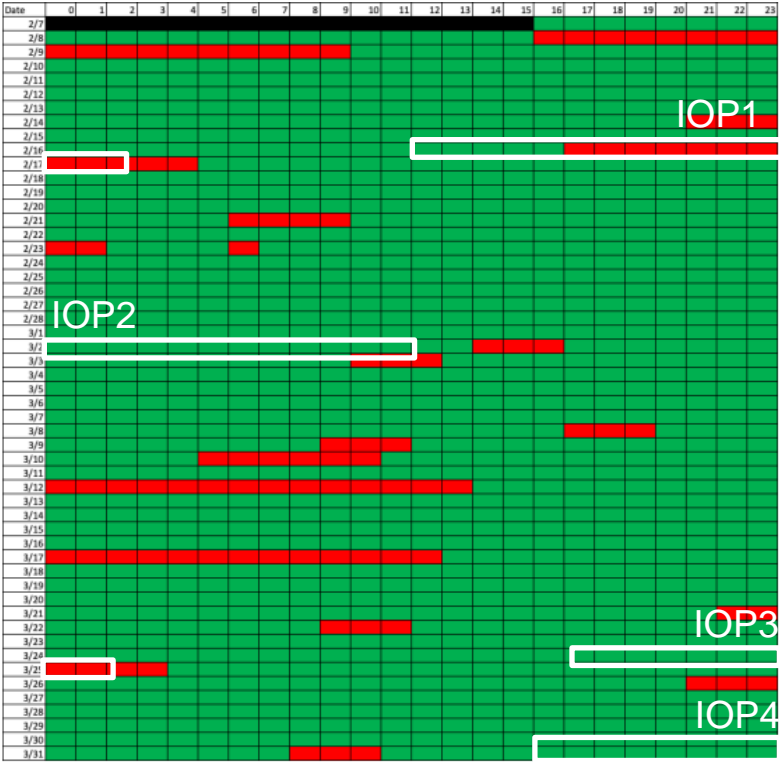
IOP4

2023

Lake Village: 33.36354N, 91.262W



CLAMPS2 MWR TROP_{oe}



■ Data quality good
 ■ Data quality suspect
 ■ Data unavailable

IOP 01 - 16 Feb 2023

Flights			Altitudes (m)		
Total:	27		Average:	579.85	
Yazoo City	Schlater	Lake Village	Yazoo City	Schlater	Lake Village
9	8	10	640.67	571.13	532.10
Flight ops:	4:31:10	2:37:06	Maximum:	1293	
	<i>operating time</i>	<i>flight time</i>			

IOP 02 - 3 March 2023

Flights			Altitudes (m)		
Total:	53		Average:	243.19	
Yazoo City	Schlater	Lake Village	Yazoo City	Schlater	Lake Village
18	17	18	243.33	226.24	259.06
Flight ops:	7:07:00	3:31:02	Maximum:	464	
	<i>operating time</i>	<i>flight time</i>			

IOP 24 - 3 March 2023

Flights			Altitudes (m)		
Total:	47		Average:	834.98	
Yazoo City	Schlater	Lake Village	Yazoo City	Schlater	Lake Village
17	16	14	866.82	870.56	755.64
Flight ops:	0:00:00	3:31:02	Maximum:	1380	
	<i>operating time</i>	<i>flight time</i>			

IOP 04 - 31 March 2023

Flights			Altitudes (m)		
Total:	50		Average:	402.44	
Yazoo City	Schlater	Lake Village	Yazoo City	Schlater	Lake Village
14	18	18	527.57	369.33	338.22
Flight ops:	7:00:00	4:16:02	Maximum:	1012	
	<i>operating time</i>	<i>flight time</i>			

IOP 05 - 5 April 2023

Flights			Altitudes (m)		
Total:	58		Average:	729.41	
Yazoo City	Schlater	Lake Village	Yazoo City	Schlater	Lake Village
22	20	16	884.27	652.90	612.13
Flight ops:	8:00:00	7:35:30	Maximum:	1211	
	<i>operating time</i>	<i>flight time</i>			

2023

PERiLS CopterSonde Stats

	All Sites	Yazoo City	Schlater	Lake Village
Max. altitude (m)	1380	1380	1300	1247
Avg. altitude (m)	557.97	632.53	538.03	499.43
Total flight count	235	80	79	76
Total flight time (hh:mm:ss)	26:38:10			

Coming REALLY soon to data archive!

2023 NSSL lidar Truck

Halo Photonics Streamline XR+ Doppler lidar

- ~ 12 km range (depending on aerosol properties), but typically 1-2 km in vertical (in cloud & precip. free conditions)
- Bandwidth +/- 38 m s⁻¹



8-pt VADs every 5 minutes with vertical stares in between, with 30-m range gates

- Deployed for all 5 IOPs near center to southeast portion of the radar config.
- Started $\sim t_0 - 4$ h and ending as precip. overtakes location (or meso approached as in IOP4)
- Data mostly complete (outside precip./fog/etc.) except for last ~ 2 h of IOP4 (user error ☹)

Released Windsonds within 1-h of convection, as frequently as every 3-min

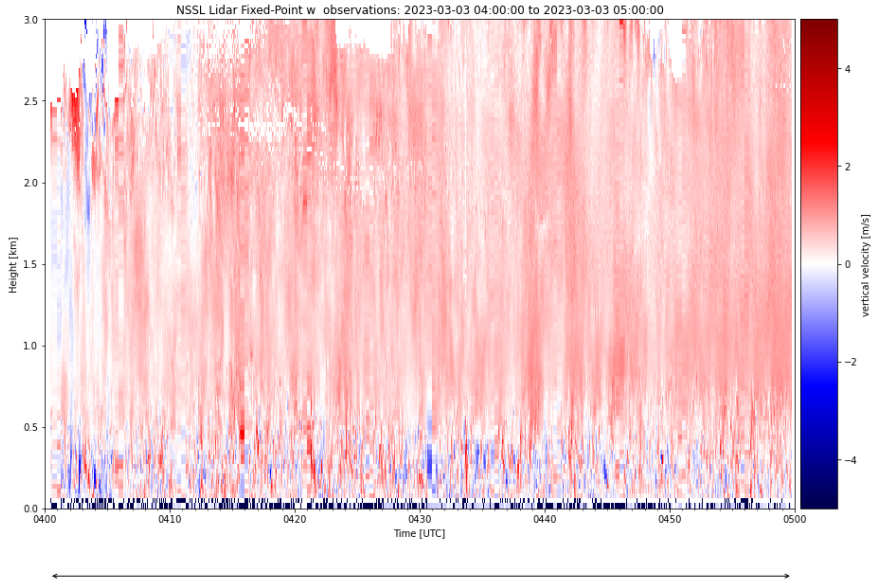
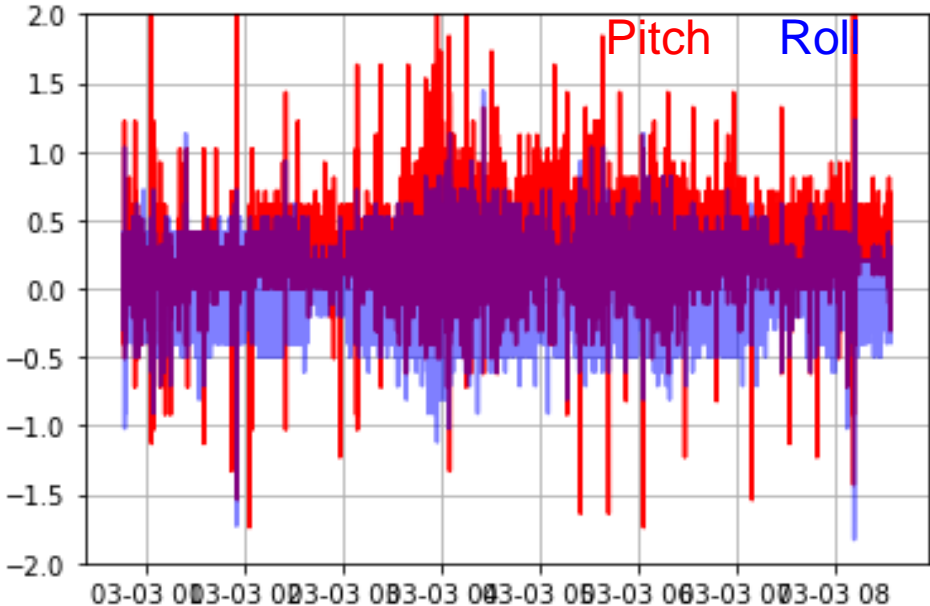
- Data still in the queue to be QC'ed

2023 Lidar Truck ... data processing ongoing

Issue: Persistent + or - w fields superimposed on reasonable measurements

Source: Likely issues with lidar leveling (mechanical, user-based, or extreme broad-side winds)

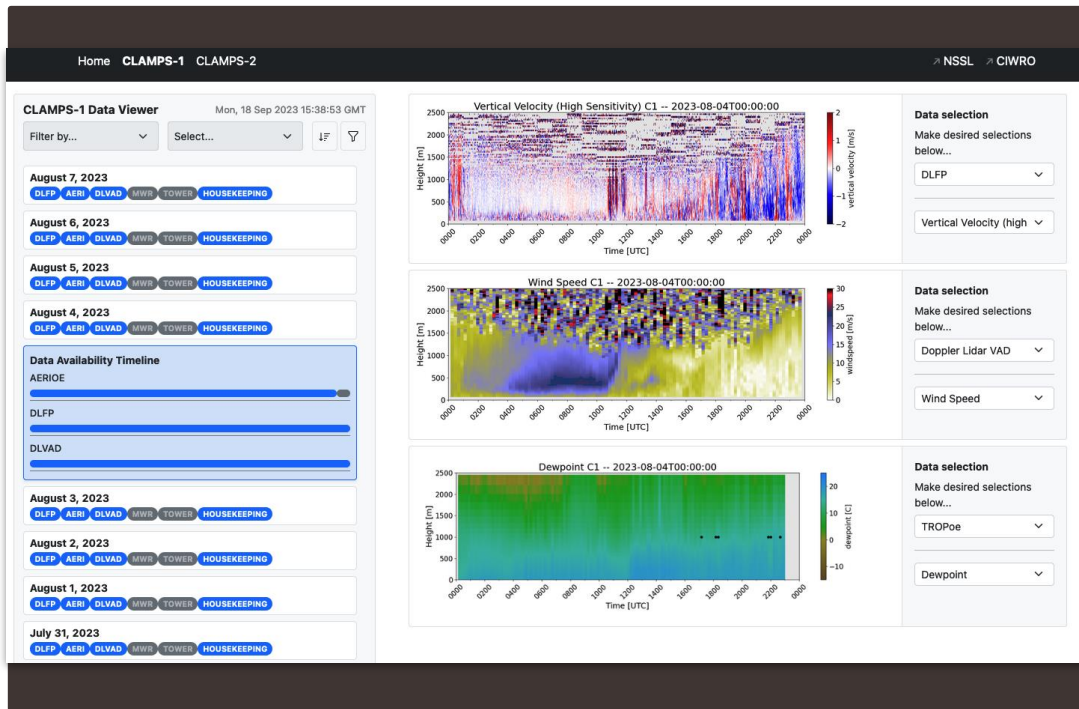
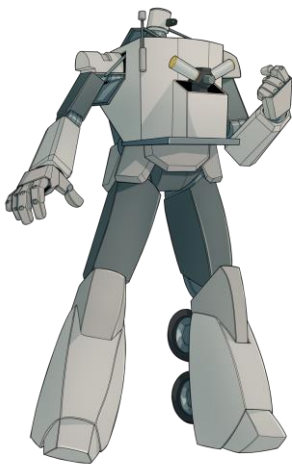
Solution: Pitch/roll corrections; different for every deployment. Work ongoing



CLAMPS Web Access



Data Viewer



<https://apps.nssl.noaa.gov/CLAMPS/data/>



THREDDS
Data
Access



Get started using our data with tools
at bliss.science/resources/code

Created by OU UG
Victor Alvarez

