

# Sounding Data Collection Operations: A Summary

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### Overview

- Sounding teams & acknowledgements
- IOP launch statistics
- Commentary of university-based systems
- Lessons learned
- Summary





#### SUNY Oswego

- PI: Dr. Scott Steiger
- Team: Andrew Janiszeski,
  Dillon Ulrich, Stephen
  Piechowski, Michael
  Ginnick, Tyler Pelle,
  Lauren Cutler
  (and Karen Kosiba too!)





- Hobart and William Smith
  - PIs: Dr. Neil Laird and Dr. Nick Metz
  - Team: Chad Hecht, Caitlin Crossett, Brooke Adams, Macy Howarth, Raleigh Grysko, Zack Dameron, Pamela Eck, Nicole Desko, Abou Okeke-Diagne





**OWLeS Science Meeting** 

#### • Millersville

- PIs: Dr. Rich Clark and Dr. Todd Sikora
- Team: 20+ students involved thanks to all!

#### IOP 4 12/15/2014

Andrew Yarosh Andrew Henry Mike Yalch Jimmy Fowler



**OWLeS Science Meeting** 

### • Utah

- PI: Dr. Jim Steenburgh
- Team: Leah Campbell (Utah), Peter Veals (Utah), Ted Letcher (Albany), numerous additional Utah students – thank you all!







Local school kids and residents came over and assisted with a few of our launches. -JS

University of Utah/University at Albany

University of Utah/University at Albany



**OWLeS Science Meeting** 

### Illinois

- PI: Dr. Dave Kristovich
- Team: Dr. Sharon
  Kristovich, Luke Bard
  (ISWS), Jason Keeler
  (UIUC & Oswego alum),
  Jesse Olsen (Oswego
  alum), Sarah Trojniak
  (SLU), Zac Suriano (U.
  Delaware), additional
  supporters











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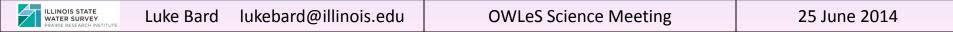
**OWLeS Science Meeting** 

25 June 2014



### Rawinsonde Equipment

Institution	Ground Station Software	Ground Check Set	Sondes	GPS Windfinding
Oswego	Vaisala MW41	Vaisala GC25	Vaisala RS92-SGP	yes
HWS	GRAWmet V5	Kestrel / manual input	GRAW DFM-09	yes
Millersville	Vaisala MW41	Vaisala GC25	Vaisala RS92-SGP	yes
Utah	GRAWmet V5 5.0.8	Kestrel / manual input	GRAW DFM-09	yes
Illinois	GRAWmet V5 5.9.2.4	Kestrel / manual input	GRAW DFM-09	yes





### Launch Locations

Institution	Sites
Oswego	Oswego campus, Sodus Point, others?
HWS	near Penn Yan, Ontario Beach Park, Hamil Beach, SE of Cayuga lake, Ithica, others?
Millersville	Sandy Creek Central School, Finger Lakes Technology and Career Center
Utah	North Redfield, others?
Illinois	Darlington Provincial Park, Cobourg Harbour





### **IOP Launch Statistics**

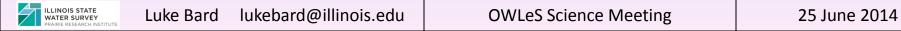
Institution	Active IOPs	Successful Launches	Failed Launches	Missed Launches
Oswego	~17	51	13	
HWS	Nearly all	80+	4-5	0
Millersville	16	62	8*	
Utah	10	40	TBD / not many	TBD / not many
Illinois	17	62	6	0
		* Re:	serve sondes, more ir	nfo on the next slide





### **IOP Launch Statistics**

Institution	Successful Launches	Notes
Oswego	51	
HWS	80+	
Millersville	62	4 early terminations, 3 missing wind data, 7 with correctable data display issues on field catalog
Utah	40	Ground values taken with Kestrels, kept in 'unprocessed' directory; 'processed' directory replaces ground values with those collocated North Redfield Snow Study Station
Illinois	62	





### **IOP Launch Statistics**

Institution	Failed Launches	Notes
Oswego	13	Majority were technical issue failures, a couple ran into trees
HWS	4-5	
Millersville	8?	8 reserve sondes failed upon launch (some ran into trees), 3 sondes DOA (delivered broken)
Utah	TBD	
Illinois	6	4 failed prior to launch, 2 failed after launch





### **University Sounding Systems**

Institution	Comments
Oswego	Overall pleased with the system. Ours is over 5 years old so we have some updating to doSS
HWS	GRAW system worked well for our groupNL
Millersville	MU sounding system provided data necessary for MU / PSU research and afforded an excellent field training experience for MU studentsTS
Utah	Our system worked well. We launched from a garage, which greatly aided the effort given the difficult and challenging weatherJS
Illinois	GRAW system provided a reliable dataset that compared well with other systems, was relatively easy to set up, & handled well by students - DK





### Lessons Learned

Institution	Notes
Oswego	Using a college 12-passenger van was difficult at times, especially having to fill the balloon outside with little shelterSS
Utah	A heated garage is a big help! Experienced users are a big help with the GRAW system. We bough too much helium, and it was high grade JS
Illinois	Check crime rates —DK (In Canada? Really?) Late-night suspicious activity at Cobourg Harbour —LB High-ceiling trailer worked very well in winter, except for indoor rain - DK



### Summary

- Sounding operations
  - As a whole, wildly successful... and fun too!
  - Some soundings failed
    - Ballpark 10% (all groups)
    - A subset thereof "missed"
    - Could finalize these tallies
  - Some valuable / unexpected lessons learned
    - Fine-tune logistics
  - I'd do it again

