

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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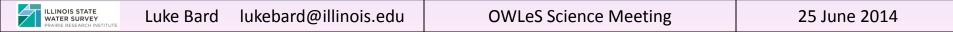
OWLeS Science Meeting

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

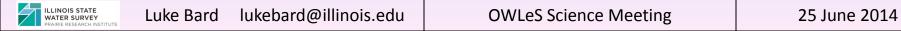
| Institution | Active IOPs | Successful Launches | Failed Launches | Missed Launches |
|--------------|----------------|------------------------|-----------------------|-----------------------|
| Oswego | ~17 | 51 | 13 | |
| HWS | Nearly all | 80+ | 4-5 | 0 |
| Millersville | 16 | 62 | 8* | |
| Utah | 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

