AmeriFlux Tech Team site visits

What to expect before, during, and after a site visit

US-TON

US-KBS

US-AUD

CA-Mer

US-ICs

US-EML

US-Prr

US-SO4

Purpose and objectives

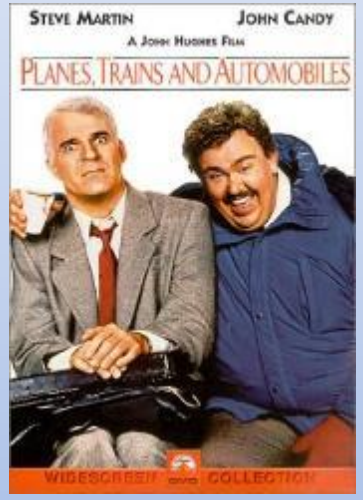
Site visits help maintain the data quality reported to the network

- Tech Team works in a collaborative effort with site staff;
- Identify differences in systems whether due to instrumental bias, instrumental error, or data processing;
- Site visits are short term (~2 week), side-by-side comparisons using an independent Portable Eddy Covariance System (PECS). Portable profile system (PPS) also available.

Scheduling and logistics

Sites envisaged are selected during winter (Dec-Feb)

- Contact Tech Team to request site visit
- Initial contact – gauge interest/availability, discuss possible date ranges;
- Follow-up – confirm dates;
- Send site visit questionnaire.



Logistics

- Tech Team arranges lodging and transport options;
- All costs of visit are covered by the AMP.

preparation | site visit (~2 weeks) | wrap up

Just prior to visit

For site staff:

- Ensure site access and normal site operations (data, power, communications, etc).

For Tech Team:

- Ship equipment (10-16 large cases, 500+ lbs)
- Contact staff and confirm arrival and site access dates/plans;
- Fall protection permit (if necessary);
- Check weather;
- Rent appropriate vehicle.

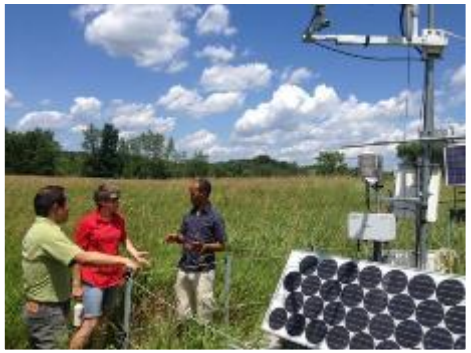
preparation | site visit (~2 weeks) | wrap up

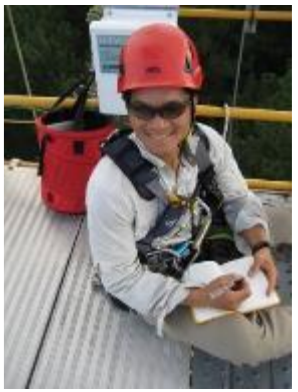
Upon arrival

- Meet site staff;
- Pickup equipment, purchase supplies (dist. H_2O; oil, fuel, etc.);
- Calibrate gas analyzers:
  - Will usually occur the day prior to setup;
  - Prefer lab setting to conduct calibration, if available.
  - Bench top and power outlet.

preparation | site visit (~2 weeks) | wrap up

Setup day





- Meet site staff at site;
- Discuss site safety and rules;
- Site orientation;
- Discuss AmeriFlux setup plans:
  - Minimize interfering with site operations/instrumentation;
  - Find optimal location for PECS instruments;
- Tech Team can usually complete installation in a single day;
- After setup complete, Tech Team will document and photograph.

preparation | site visit (~2 weeks) | wrap up

During visit

- Tech Team remain local for duration of visit:
  - Monitor PECS and ensure data continuity;
  - May collect additional observations
  - Help with BADM and link with Data team;
  - Available for consulting with site team.
- Mid-visit comparison
  - Preliminary data comparison between systems will be conducted and shared with site staff;
  - Valuable opportunity to identify issues and resolve prior to end of comparison.

preparation | site visit (~2 weeks) | wrap up

Take down day

- Tech Team may request site staff assistance;
- Post-visit calibration of gas analyzers may be performed;
- Tech Team will arrange transportation and shipment of equipment (but assistance appreciated!).

preparation | site visit (~2 weeks) | wrap up

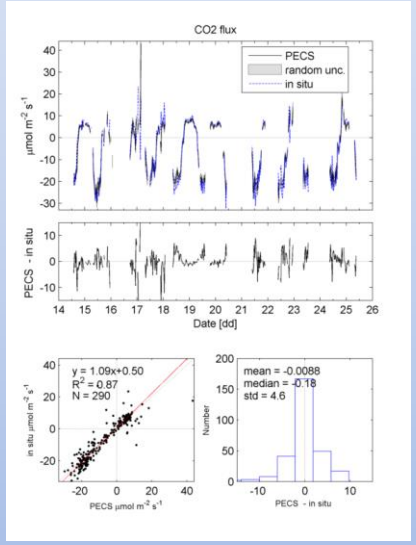
Post visit – data sharing

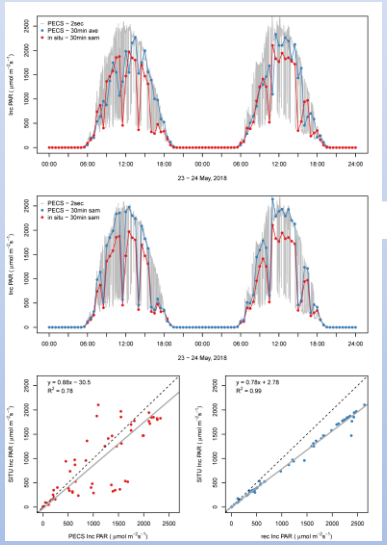
- Files should include headers, units, metadata;
- Description of processing steps, algorithms, and corrections applied. Don't assume we know.
- Do not gap fill data.
- High frequency data:
  - Tech Team will conduct independent data processing;
  - Shared folder can be provided (i.e. Dropbox).
- 30 minute processed data:
  - Fluxes, covariances, correction terms;
  - Statistics (mean, variance) for high frequency variables;
  - Meteorological, radiation, ancillary data.

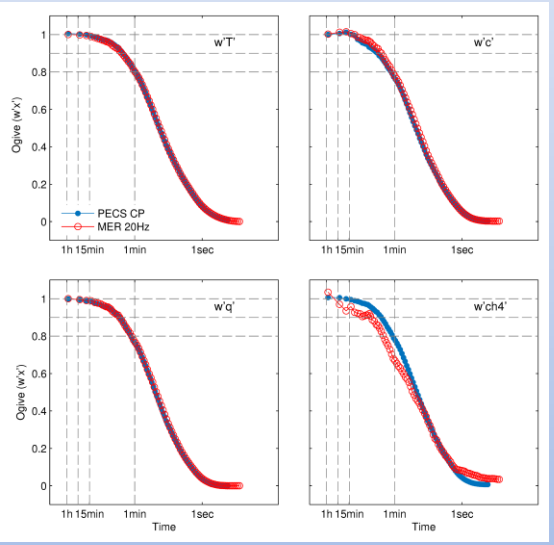
preparation | site visit (~2 weeks) | wrap up

Tech Team reports

- Site visit reports shared with site staff, providing key recommendations; Extensive comparisons, analysis;
- Site benchmarked against cumulative record of site visits;
- Tech Team data available upon request;
- Feedback from site staff requested.







preparation → site visit (~2 weeks) → wrap up

Site visit feedback

We want to hear from you! Goto: PollEv.com/ameriflux010

Ice breaker: Share your favorite recreational activity.

Start the presentation to see live content. Still no live content? Install the app or get help at **PollEv.com/app**

What remaining questions to you have about the site visit process?

Top

Start the presentation to see live content. Still no live content? Install the app or get help at **PollEv.com/app**

Have you participated in an AmeriFlux site visit?

Total Results: 1

Start the presentation to see live content. Still no live content? Install the app or get help at **PollEv.com/app**

What have you enjoyed about the site visit process? or what aspects seem most beneficial?

Top

Start the presentation to see live content. Still no live content? Install the app or get help at **PollEv.com/app**

What could be improved about the site visit process?

Top

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Have you read an AmeriFlux site visit report?

yes

no

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Do the site visit reports have:

too much detail

the right about of detail

the wrong level of detail

Start the presentation to see live content. Still no live content? Install the app or get help at **PollEv.com/app**

What type of analyses or findings would you like to see included in site visit reports?

Top

Start the presentation to see live content. Still no live content? Install the app or get help at **PollEv.com/app**

Future of site visits

The AmeriFlux Network is growing faster than the Tech Team.

- We would like to visit more sites but our resources are capped.

We have asked for suggestions and brainstormed. Please help!

1. Keep status quo (longer return interval)
2. Site visit lite (less intensive, more total visits)
   - Various levels of site examination could be done…
   - No instruments. Focused on in depth data review (in person and remote).
3. Delegate to regional site visit teams
   - Partner with local experienced staff to help conduct site visits
   - Strengthens regional collaboration
4. Your idea?!