



Database subgroup: Current Status Jan 2017

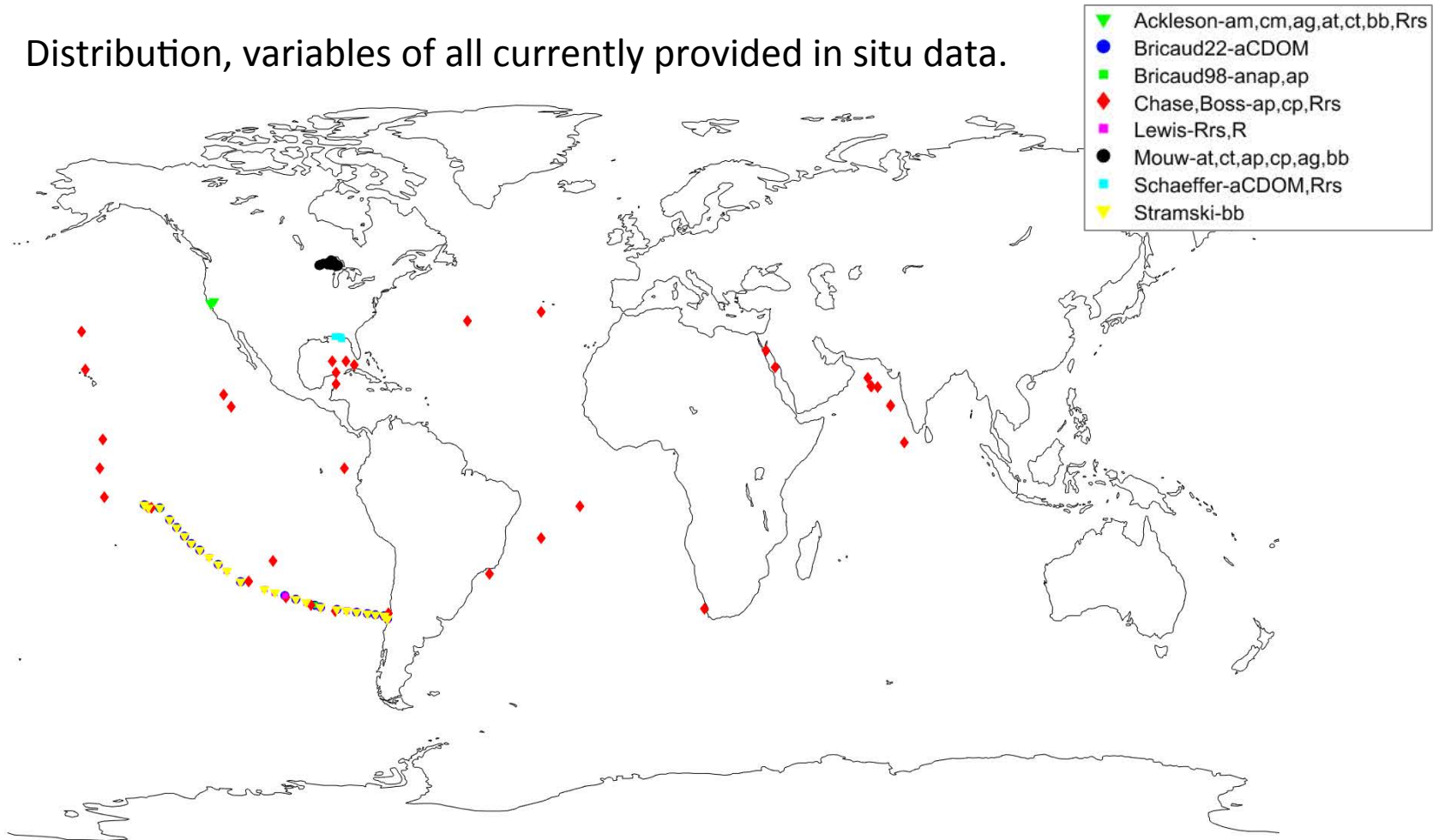
(Kimberly Casey)

In situ hyperspectral data submitted was checked, filtered and added to a database as follows:

- Variables, units, measurement techniques confirmed with provider.
- Metadata is provided at the top of each file, and provides information on the data provider, file source and provider contact information; data publication reference, if provided/available; data coverage and variables provided. Data is then organized in uniform structure.
- IOP variable depths of 0-50 m included.
- When data was provided at fractional wavelengths, wavelength was rounded to nearest integer value.
- Files provided as Excel spreadsheets, organized as one file by contributor and variable type. Current versions of data are on the PACE ST FTP site.

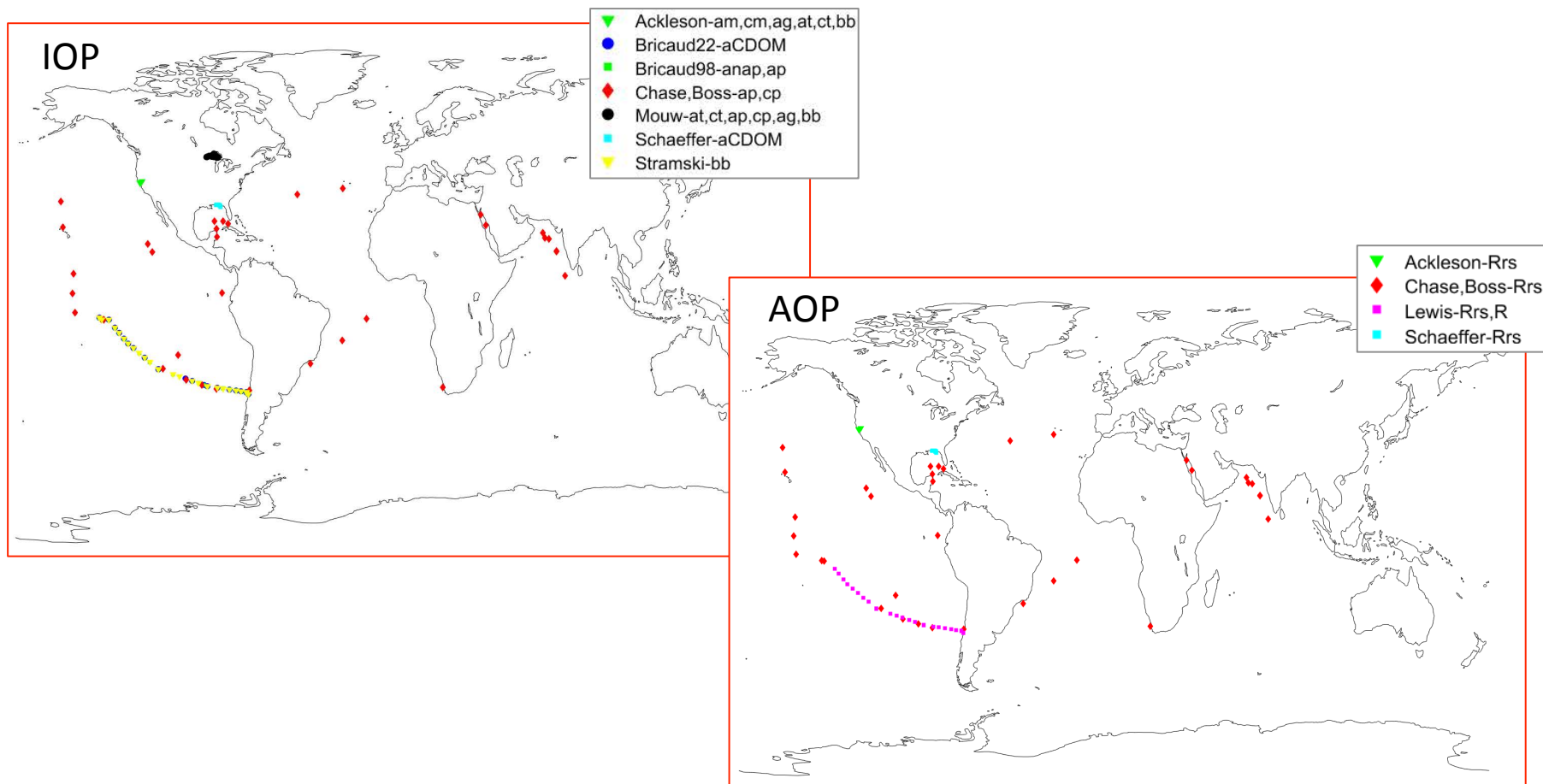
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Distribution, variables of all currently provided in situ data.



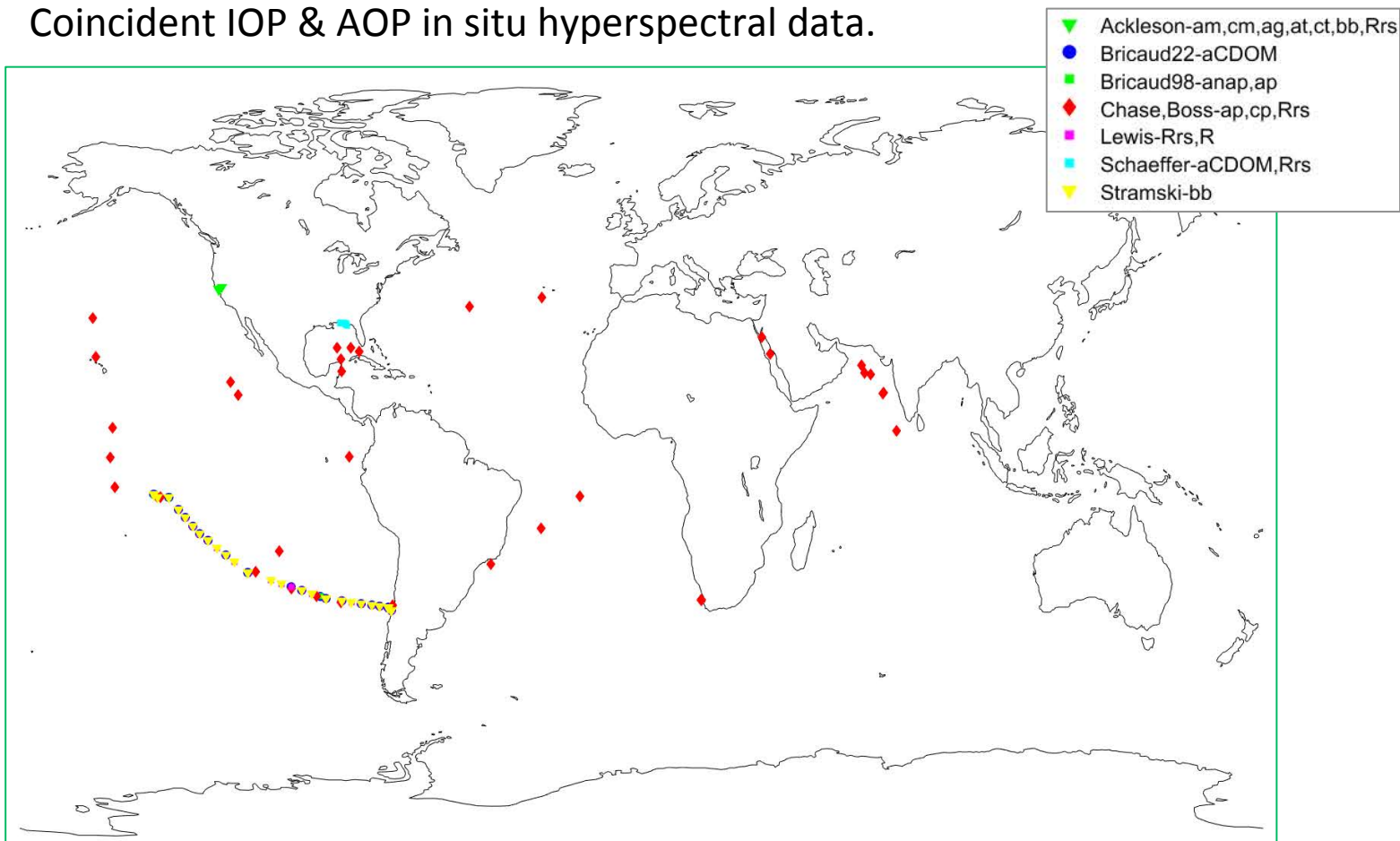
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- IOP/AOP distribution of all currently provided in situ hyperspectral data.



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- Coincident IOP & AOP in situ hyperspectral data.





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Data gaps:

- Locations – No data at high latitudes; Atlantic, Indian and Northern Pacific oceans rely on one in situ dataset.
- Variable gaps – few data sets with multiple IOP variables & AOP. Is there a particular IOP/AOP combination we need for PACE calibration / validation?
- Spectral range – data from 350-890 nm, at 1-5 nm resolution (i.e. matching PACE) would be ideal. Many IOP variables are provided at 2-4 nm resolution from 400-700nm. AOP is often provided at 400-735 or 900nm, 1nm resolution (Schaeffer, Ackleson, respectively), 350-800 2-4nm (Lewis, Chase/Boss).

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Manuscript Status:

- Author list – includes all data set contributors, and database creators.
- Suggested journal – Earth System Science Data (ESSD), a Copernicus Open Access publication, method to publish and identify dataset, with DOI reference number.
- Article will focus on presentation of PACE in situ hyperspectral database collection methods, spatial, temporal and variable coverage, and first-order database metrics & characteristics.
- Suggested timeline:
 - Finalize data base, adding of data – end of Jan 2017
 - First manuscript draft distributed – March 2017
 - Manuscript draft comments due – April 2017
 - Next draft distributed by May if needed
 - Submit paper by Summer 2017

*** Please contact Cecile or Kimberly if you would like to assist with the manuscript. ***

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