

May 4th Agenda

Time (CT)	Topic	Presenter
8:00 – 8:30	Introduction	
8:30 – 9:00	Delta-X Overview Data Management Plan and Data Archive	Marc Simard Cathleen Jones
9:00 – 10:00	Field Data Overview and Access <i>Break 15'</i>	Alex Christensen
10:15 – 11:15	Field Data Analysis	Alex Christensen
11:15 – 12:00	AVIRIS-NG Data Overview and Access <i>Lunch 90'</i>	Daniel Jensen
13:30 – 15:45	AVIRIS-NG Application <i>Break 15'</i>	Daniel Jensen
16:00 – 18:00	AirSWOT Data Overview, Access and Application	Michael Denbina

Field Data

Delta-X Workshop

May 4, 2022

Alexandra Christensen

Jet Propulsion Laboratory, California Institute of Technology

May 5th Agenda

Time (CT)	Topic	Presenter
8:00 – 9:30	AirSWOT Application Continued	Michael Denbina
9:30 – 10:00	UAVSAR Data Overview and Access <i>Break 15'</i>	Talib Oliver Cabrera
10:15 – 12:00	UAVSAR Application <i>Lunch 90'</i>	Talib Oliver Cabrera
13:30 – 15:30	ANUGA Model <i>Break 15'</i>	Kyle Wright
15:45 – 17:45	Delft3D Model	Luca Cortese
17:45 – 18:00	Closeout	

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Field Datasets

- Wetland vegetation:
 - [Aboveground biomass](#)
 - [Belowground biomass](#)
 - Vegetation Structure
 - Wetland sediment:
 - Soil Properties
 - [Sediment Accretion Rates](#)
 - Real-Time Kinetic GPS elevation
 - Hydrology:
 - [Acoustic Doppler Current Profiler](#)
 - Sonar Bathymetry
 - [Water Level Gauges](#)
 - Water quality:
 - [Indicators](#)
 - [Total suspended solids](#)
 - Spectral reflectance
 - Beam attenuation and particle size (LISST)
 - Sediment Transport:
 - [Suspended and bed sediment grain size \(Wax Lake only\)](#)
 - Mike island turbidity time series
- Module 1**

 - Compare live biomass, carbon, nitrogen, and phosphorus between sites and HGM zones
 - Calculate root/shoot ratio and compare between sites and HGM zones

Module 2

 - Compare soil properties (bulk density, OM, carbon, nitrogen) between sites and HGM zones
 - Compare sediment accretion rates between sites and HGM zones. Discuss implications for sea level rise
- Module 3**

 - Map average discharge of transects.
 - Compare discharge values at multiple points along Wax Lake Outlet
 - Discuss connectivity

Module 4

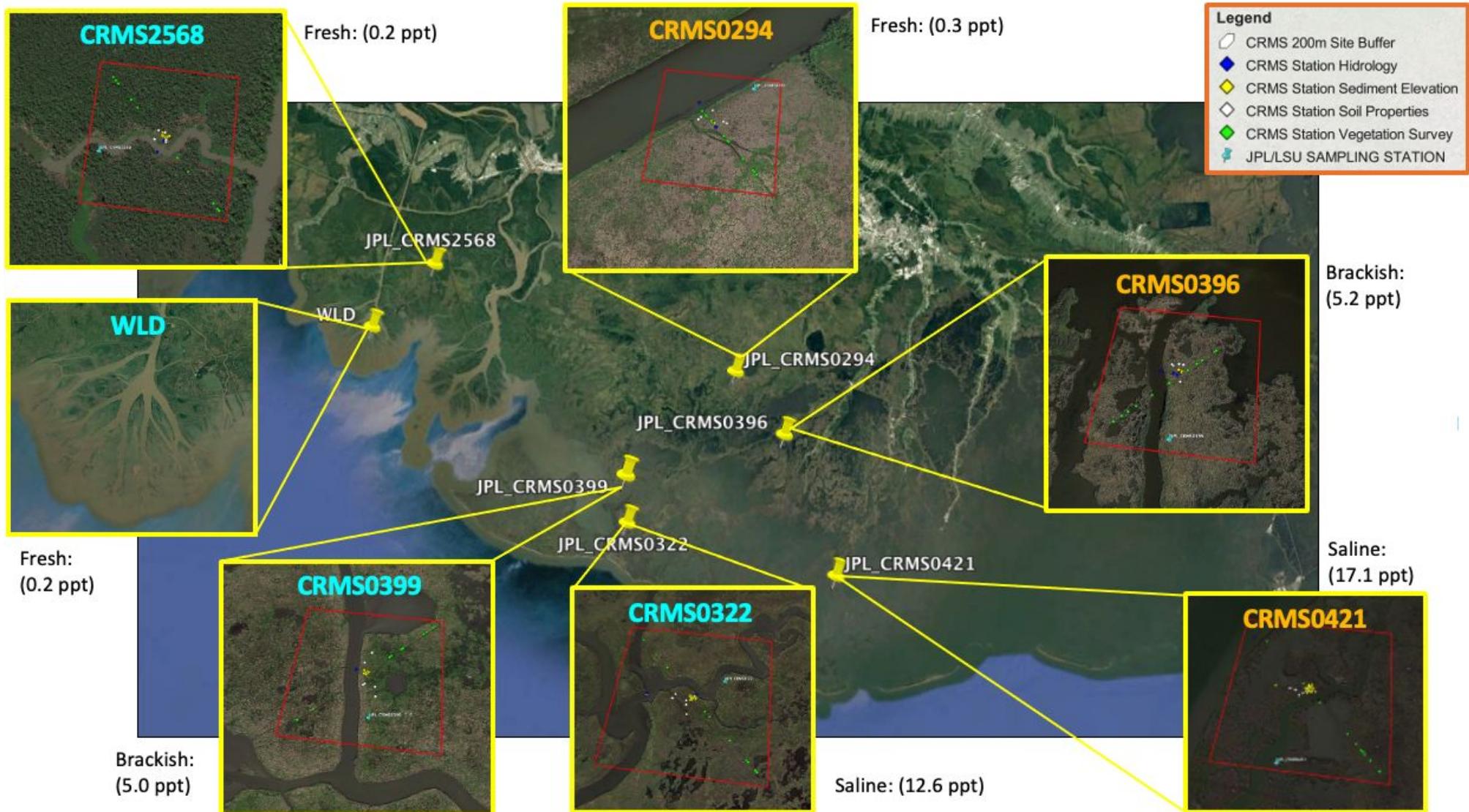
 - Plots time series of water level at a few sites
 - Look for signal from Hurricane Ida and compare basins
- Module 5**

 - Map turbidity, TSS, salinity, temperature, and chl a at all sites
 - Compare average turbidity, TSS, salinity, chl a between Atchafalaya and Terrebonne
 - Test correlations between water quality parameters

Module 6

 - Plot grain size distribution curves of a few samples
 - Compare mike island interior to larger distributary channels. Discuss differences

Intensive Study Sites



Wetlands: Vegetation

Aboveground biomass, belowground biomass, structure

Aboveground Biomass

- Data:
 - Stem biomass (g/m²) (living or dead)
 - Total carbon (mg/g)
 - Total nitrogen (mg/g)
 - Total phosphorus (mg/g)
- Collection methods:
 - 6 intensive sites
 - 2 hydrogeomorphic zones per site
 - 2 sampling stations per zone
 - 2 plots per station (0.5 or 1 m² quadrat)
- Processing methods:
 - Clip vegetation at sediment surface
 - Sort by species
 - Oven dry at 60 C until constant mass
 - Ground to <40 µm
 - Processed on NA1500 Elemental Analyzer for total carbon and total nitrogen
 - Processed with HCL extraction and colorimetric analysis for total phosphorus.
- Data file format:
 - 1 csv file with columns describing date, location, site, hydrogeomorphic zone, station, plot and data variables



AGB: Data Access

- Access through ORNL
- Citations:
 - Castañeda-Moya, E., and E. Solohin. 2021. Delta-X: Aboveground Biomass and Necromass across Wetlands in the MRD, LA, USA, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/2000>



Edward Castañeda



Elena Solohin

Belowground Biomass

- Data:
 - Root biomass (g/m²) (living or dead)
 - Total carbon (mg/g)
 - Total nitrogen (mg/g)
 - Total phosphorus (mg/g)
- Collection methods:
 - 6 intensive sites
 - 2 hydrogeomorphic zones per site
 - 2 sampling stations per zone
 - 2 cores per station (0-50cm)
- Processing methods:
 - Collect core using a modified soil gouge auger (11 cm diameter x 50 cm length)
 - Cut into 10cm intervals and store in plastic bags
 - Rinse with water through a 1-mm mesh to remove soil
 - Separate into live and dead
 - Sort live roots into fine (<2mm) and coarse (>2mm)
 - Oven dry at 60 C until constant mass
 - Ground to <40 µm
 - Processed on NA1500 Elemental Analyzer for total carbon and total nitrogen
 - Processed with HCL extraction and colorimetric analysis for total phosphorus.
- Data file format:
 - 1 csv file where each row is a sample with columns describing date, location, site, hydrogeomorphic zone, station, plot and data variables



BGB: Data Access

- Access through ORNL
- Citations:
 - Castañeda-Moya, E., and E. Solohin. 2021. Delta-X: Belowground Biomass and Necromass across Wetlands in the MRD, LA, USA, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1999>



Edward Castañeda



Elena Solohin

Module 1: Biomass

- https://github.com/achri19/DeltaXWorkshop_Field

The screenshot shows a GitHub repository page for 'achri19 / DeltaXWorkshop_Field'. The repository is private, as indicated by the 'Private' badge in the top right corner. The main navigation bar includes links for Code, Issues, Pull requests, Actions, Projects, Security, Insights, and Settings. Below the navigation bar, there are buttons for Go to file, Add file, and Code. The repository has one branch ('main') and no tags. The last commit was made 18 hours ago, with 26 commits, and the commit hash is 9e721f2. The repository contains three files: 'Delete Sediment Accretion.ipynb', 'notebooks', and 'README.md'. The 'Delete Sediment Accretion.ipynb' file was updated 18 hours ago. The 'notebooks' folder was updated 18 hours ago. The 'README.md' file was updated 21 hours ago. The README file content is as follows:

```
DeltaXWorkshop_Field

Modules related to field data

This is where you can find access to the Google Colab notebooks to be used in the Delta-X Workshop on May 4-5.

Module 1: Biomass Open in Colab
Module 2: Accretion Open in Colab
Module 3: ADCP Open in Colab
Module 4: Gauges Open in Colab
Module 5: Water quality indicators Open in Colab
Module 6: Total Suspended Solids Open in Colab
Module 7: Sediment Grain Size Open in Colab
```

Vegetation Structure

- Data:
 - Dominant species
 - Stem density (#/m²)
 - Mean height (cm)
 - Mean diameter (mm)
- Collection methods:
 - 6 intensive sites
 - 2 hydrogeomorphic zones per site
 - 2 sampling stations per zone
 - 1 plot per station (0.5 or 1 m² quadrat)
 - 4 quarters per plot, only 1-2 were measured
- Processing methods:
 - Stem density was calculated by counting all individual plant stems within the plot
 - After clipping vegetation, plants were sorted by species
 - Stem height and diameter were measured using a meter stick (1mm resolution) and digital caliper (0.01mm resolution), respectively
- Data file format:
 - 1 csv file where each row is a sample with columns describing date, location, site, hydrogeomorphic zone, station, plot and data variables



Structure: Data Access

- Access through ORNL
- Citations:
 - Castañeda-Moya, E., and E. Solohin. 2021. Delta-X: Aboveground Vegetation Structure for Herbaceous Wetlands across MRD, LA, USA. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1997>



Edward Castañeda



Elena Solohin

Wetlands: Sediment

Sediment accretion, soil properties, elevation

Marsh Soil Properties

- Data:
 - Soil bulk density (g/cm³)
 - Soil organic matter content (%)
 - Soil total carbon density (mg/cm³)
 - Soil total nitrogen density (mg/cm³)
 - Soil total phosphorus density (mg/cm³)
- Collection methods:
 - 6 intensive sites
 - 1 transect perpendicular to marsh edge with 2 hydrogeomorphic zones
 - 2 sampling stations per hydrogeomorphic zone
 - 1 50-cm Russian peak corer (5cm diameter)
 - Cores were cut into 10-cm intervals
- Processing methods:
 - In the lab, cores were drier and ground to pass through a 250 μ m mesh
 - Organic matter content was determined from Loss-On-Ignition by combusting samples at 550C for 4 hours
 - Total carbon and total nitrogen were determined on a NA1500 elemental analyzer
 - Total organic carbon is calculated as the difference between total carbon and total inorganic carbon, determined by running combusted samples for total carbon.
- Data file format:
 - 1 csv file where each row is a sample with columns describing date, location, site, hydrogeomorphic zone, station, plot and data variables



Soil Properties: Data Access

- Access through ORNL
- Citations:
 - Castañeda-Moya, E., and E. Solohin. 2021. Delta-X: Soil Properties for Herbaceous Wetlands across MRD, LA, USA, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1995>



Edward Castañeda



Elena Solohin

John O'Connor

Sediment Accretion

- Data:
 - Sediment accretion rate (mm/yr)
 - Soil bulk density (g/cm³)
 - Soil organic matter content (% dry mass)
 - Soil organic carbon (% dry mass)
- Collection methods:
 - 6 intensive sites
 - 2-3 hydrogeomorphic zones per site
 - Vegetated vs. ponded stations
 - 3 50x50cm feldspar marker horizon plots per station
 - 3 cryocores per plot
 - 3 soil cores adjacent to the horizon plots to the depth of measured accretion.
- Processing methods:
 - Using cryocores, the height of soil above the horizon was measured with calipers
 - Soil cores were dried at 60°C were collected within each plot and C until constant mass
 - Samples were homogenized and group
 - Organic matter content was determined from Loss-On-Ignition by combusting samples at 550C for 2 hours
 - Organic carbon was extracted by fumigating samples for 8 hours in 12M HCL to remove inorganic carbonates
 - Percent organic carbon was measured with an ECS 4010 elemental analyzer
- Data file format:
 - 1 csv file where each row is a sample with columns describing date, location, site, hydrogeomorphic zone, station, plot and data variables



Sediment Accretion: Data Access

- Access through ORNL
- Citations:
 - Twilley, R., A. Fontenot-Cassaway, and A. Rovai. 2021. Delta-X: Feldspar Sediment Accretion Measurements for Coastal Wetlands, MRD, LA, USA. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/1998>



Robert Twilley



Andre Rovai



Amanda
Fontenot-Cassaway



John O'Connor

Module 2: Accretion

- https://github.com/achri19/DeltaXWorkshop_Field

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- Module 1: Biomass [Open in Colab](#)
- Module 2: Accretion [Open in Colab](#)
- Module 3: ADCP [Open in Colab](#)
- Module 4: Gauges [Open in Colab](#)
- Module 5: Water quality indicators [Open in Colab](#)
- Module 6: Total Suspended Solids [Open in Colab](#)
- Module 7: Sediment Grain Size [Open in Colab](#)

Marsh Elevation

- Data:
 - Elevation wrt NAVD88 (m)
- Collection methods:
 - Using a Trimble R12 RTK-GPS, surface elevation measurements were taking along 2 50-m transects perpendicular to the marsh/channel boundary at each site. Points were sampled every 10m, starting at the boundary of marsh and channel and moving inland.
- Processing methods:
 - Data were converted to NAVD88 using Geoid 18.
- Data file format:
 - 1 csv file where each row represents a sample with columns for location, date/time, site characteristics, and elevation



Marsh Elevation: Data Access

- Access through ORNL
- Citations:
 - Twilley, R. 2022. Delta-X: Real Time Kinematic Elevation Measurements for Coastal Wetlands, LA, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAA/2071>



Robert Twilley



Andre Rovai



Amanda
Fontenot-Cassaway



Channels: Hydrology

Discharge, bathymetry, water level

Acoustic Doppler Current Profiler

- Data:
 - Channel discharge (m^3/s)
 - Vertical velocity profiles (Fall data only)
 - Channel cross-section shape
- Collection methods:
 - Before collection, instrument compass is calibrated
 - Transects were collected perpendicular to flow with the ADCP instrument mounted either to the front or side of the boat
 - When possible 2 replicates were collected with <5% difference in total discharge
- Processing methods:
 - Data are processed in WinRiver II or RiverSurveyor Live
- Data file format:
 - 1 summary csv file where each row represents a transects and columns include information on location, date/time, channel width, mean speed, flow direction, and discharge estimations
 - Individual transect files include river depth at every point along the transect



ADCP: Data Access

- Search the ORNL DAAC for "ADCP Delta-X"

The screenshot shows the ORNL DAAC website interface. At the top, there is a search bar with the placeholder "Search ORNL DAAC" and a green "Search" button. Below the search bar, it says "Welcome back, Alexandra: Cart History Profile". A "DAAC Home" link is also present. The main content area displays the dataset information for "Delta-X: Acoustic Doppler Current Profiler Channel Surveys, Coastal Louisiana, 2021". It includes a "Get Data" button, documentation revision date (2021-10-29), dataset version (1), and a "Summary" section. The summary text is partially visible.

- Citations:

- Christensen, A.L., J.M. Mallard, J. Nghiem, M. Simard, T.M. Pavelsky, and M.P. Lamb. 2022. Delta-X: Acoustic Doppler Current Profiler Channel Surveys, MRD, Louisiana, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.

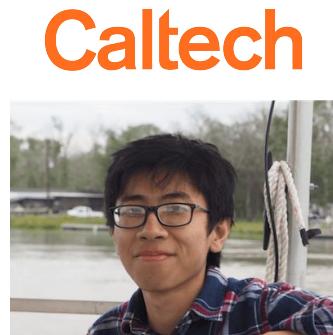
<https://doi.org/10.3334/ORNLDAAC/2081>



Bill Gibson



Michael Lamb



Justin Nghiem



Tamlan Pavelsky
John Mallard
Wayana Dolan



Marc Simard
Michael Denbina
Alex Christensen
Talib Oliver Cabrera
Daniel Jensen



Caltech

Module 3: ADCP

- https://github.com/achri19/DeltaXWorkshop_Field

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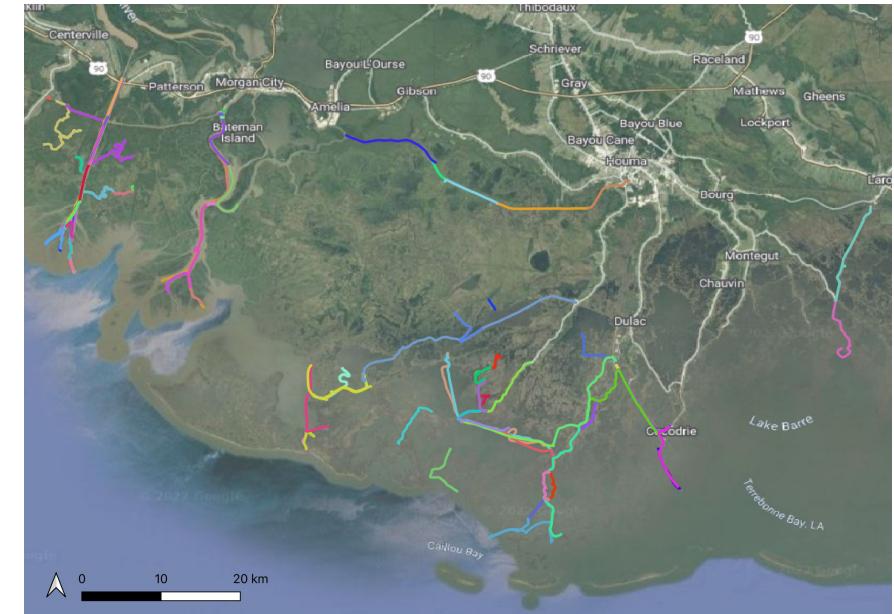
Module 5: Water quality indicators [Open in Colab](#)

Module 6: Total Suspended Solids [Open in Colab](#)

Module 7: Sediment Grain Size [Open in Colab](#)

Sonar Bathymetry

- Data:
 - Water depth (m)
 - Bathymetry wrt NAVD88 (m)
- Collection methods:
 - Sonar instruments (Lawrence HDS-Live Fish Finder with Active Imaging 3-in-1 Transducer or SonarMite Echo Sounder sounder) were attached to all field boats
 - Depth measurements were collected during all field activities
- Processing methods:
 - Data were filtered to remove depth measurements at high boat speeds
 - Water depths were converted to bathymetry using nearby CRMS gauge stations of water surface elevation:
 - Depth = water surface elevation (NAVD88) – water depth
 - When available, survey-grade GPS instruments were used to correct depths to bathymetry
- Data file format:
 - Individual survey files include location, date/time, depth and bathymetry data for all points within a survey period.



Sonar: Data Access

- Not yet available through ORNL

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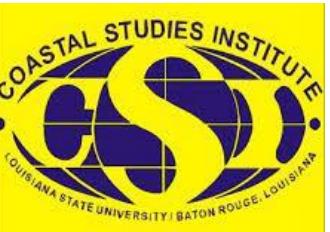
Cedric Fichot



Josh Harringmeyer



Matt Weiser



Bill Gibson



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at CHAPEL HILL



Michael Lamb



Justin Nghiem



Tamlin Pavelsky
John Mallard
Wayana Dolan



Water Level Gauges

- Data:
 - Water depth (cm)
 - Water surface elevation (coming soon)
- Collection methods:
 - Gauges were installed before the spring campaign
 - 10ft PVC pipes were installed into the sediment
 - Vertical slips allow water to flow through preventing artificial water elevations within the pipe
 - Gauges were removed after the fall campaign
 - Barometers were installed on land across the study area
- Processing methods:
 - Water level gauge data were downloaded and compensated using barometer gauge data
 - Raw water levels were converted to water depths using vertical offsets measured between the instrument and the sediment surface
 - Water depths were converted to water surface elevations using measurements of sediment elevation collected during a GNSS survey. These data are still being processed
- Data file format:
 - Individual csv files with time series data for each gauge



Gauges: Data Access

- Not yet available through ORNL



Bill Gibson



Jet Propulsion Laboratory
California Institute of Technology

Marc Simard
Michael Denbina
Alex Christensen
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Module 4: Gauges

- https://github.com/achri19/DeltaXWorkshop_Field

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Module 6: Total Suspended Solids [Open in Colab](#)

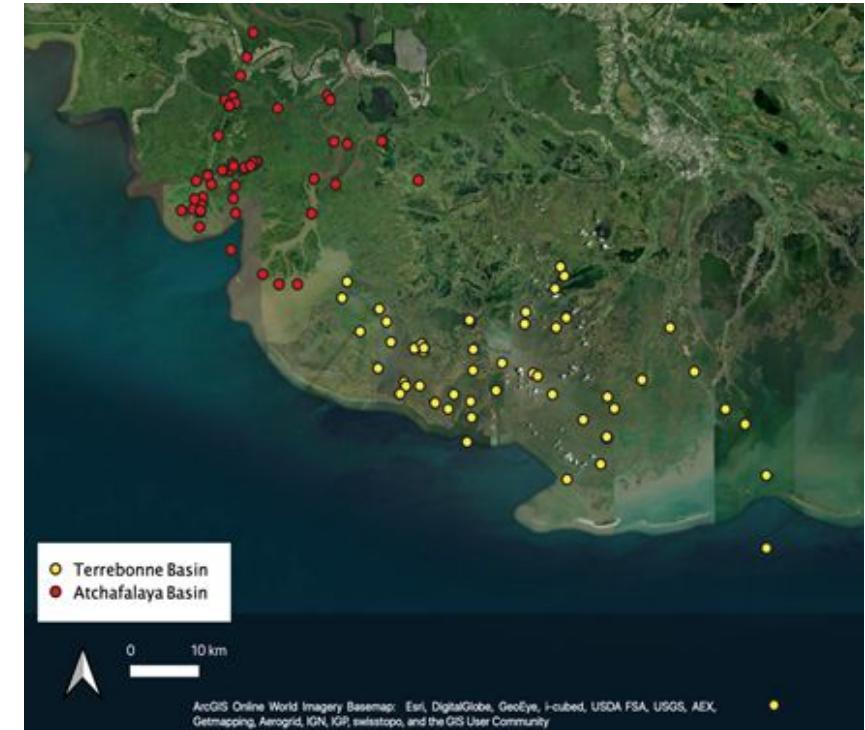
Module 7: Sediment Grain Size [Open in Colab](#)

Channels: Water Quality

Water quality indicators, total suspended solids, surface reflectance, particle size

Water Quality Indicators

- Data:
 - Salinity (PSU)
 - Turbidity (FNU)
 - Temperature (deg C)
 - Chlorophyll a Fluorescence ($\mu\text{g/L}$)
- Collection methods:
 - Water samples were collected in small and large channel throughout the study area
 - A ProDSS was lowered approximately 50cm into the water from the side of the boat and data was collected for 2 minutes.
- Processing methods:
 - Average and standard deviation were calculated for each 2 minute sample.
- Data file format:
 - 1 csv where each row is a sample with columns for location, date/time, depth, and all data variables.



Water Quality: Data Access

- Access through ORNL
- Citations:
 - Fichot, C.G., J. Harringmeyer, and M. Weiser. 2021. Delta-X: In Situ Water Quality Indicators across MRD, LA, USA, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1992>



Cedric Fichot



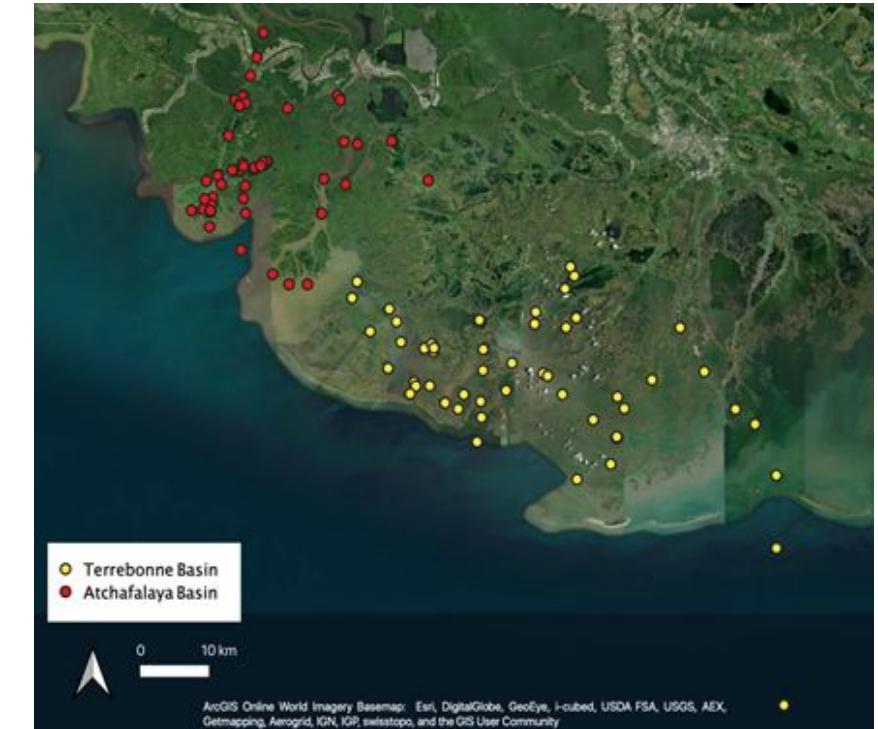
Josh Harringmeyer



Matt Weiser

Total Suspended Solids

- Data:
 - Total suspended solids (mg/L)
- Collection methods:
 - Water samples were collected from the boat by submerging a 4-L van Dorn sampler 50cm beneath the water surface.
- Processing methods:
 - In the lab, 3 sub-samples were filtered through pre-combusted and pre-weighed 47-mm diameter, $0.7 \mu\text{m}$ glass fiber filters.
 - Filters were dried at 75C for 24 hours, cooled in a desiccator and weighed again
 - TSS = dry collected material/volume of water filtered
- Data file format:
 - 1 csv file where each row is a sample with columns for location, date/time, depth, and data variables



TSS: Data Access

- Access through ORNL
- Citations:
 - Fichot, C.G., N. Ghosh, J. Harringmeyer, and M. Weiser. 2021. Delta-X: Total Suspended Solids Concentration across MRD, LA, USA, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDAAC/1991>



Cedric Fichot



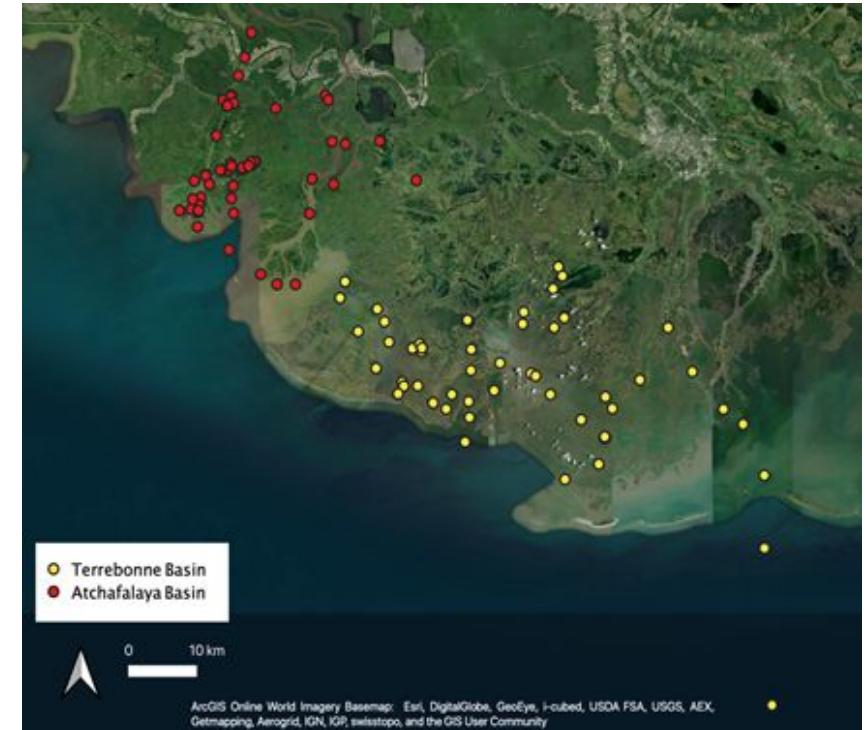
Josh Harringmeyer



Matt Weiser

Water Surface Reflectance

- Data:
 - Reflectance per steradian at multiple wavelengths in 1nm intervals between 360-900nm (s/r)
- Collection methods:
 - These measurements were collected to correspond with in-situ measurements.
 - A Portable SpectroRadiometer was used to measure radian from
 - A Lambertian Spectralon panel (high reflectance reference)
 - The sky (40deg from solar zenith and 135 deg from sun azimuthal plane)
 - The water (40 deg from nadir and 135 deg from sun azimuthal plant)
 - 5-12 replicate measurements were combined using a median filter for each target
- Processing methods:
 - Spectra were estimated using:
$$Rrs(\lambda) = (DN_{water+sky} - DN_{sky} * \rho) / (\pi * DN_{panel} / R),$$
 - Sun glint was removed using an empirical correction
- Data file format:
 - 1 csv file where each row is a sample with columns for location, date/time, depth, and 1 nm intervals of wavelength between 360-900nm.



Reflectance: Data Access

- Access through ORNL
- Citations:
 - Fichot, C.G., and J. Harringmeyer. 2021. Delta-X: In Situ Spectral Reflectance of Water Surface at MRD at LA, USA, Spring 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLD AAC/1994>



Cedric Fichot



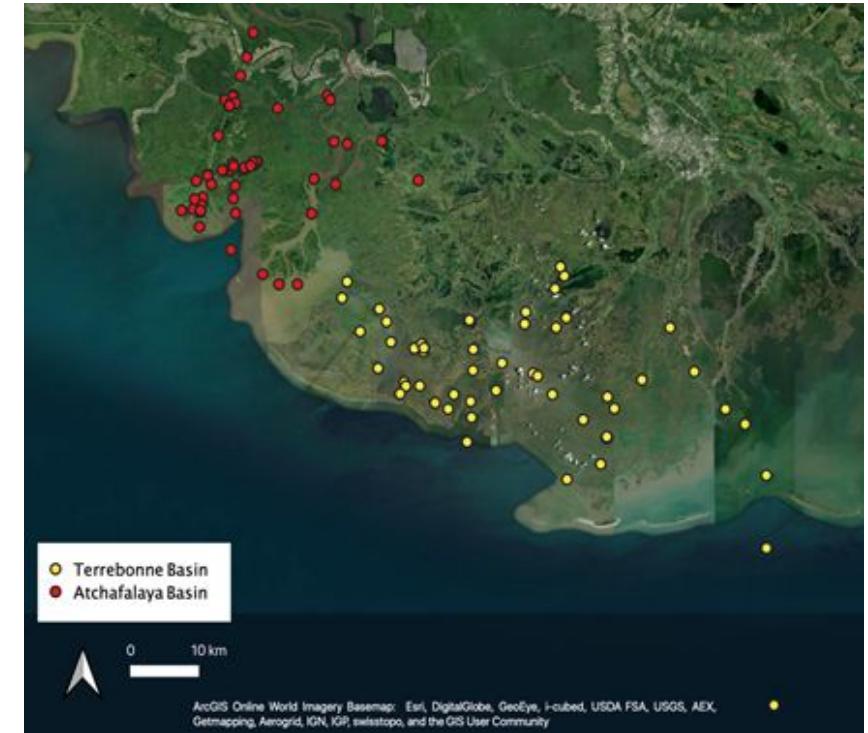
Josh Harringmeyer



Matt Weiser

Beam Attenuation and Particle Size

- Data:
 - Temperature (deg C)
 - Average beam attenuation coefficient at 670nm (1/m)
 - Average suspended particle size (μm)
- Collection methods:
 - These measurements were collected to correspond with in-situ measurements.
 - A LISST-200X was lowered from the boat approximately 50cm beneath the water surface.
 - Measurements were collected for 2 minutes
- Processing methods:
 - Data over 2 minutes were averaged
- Data file format:
 - 1 csv file where each row is a sample with columns for location, date/time, and data variables



LISST: Data Access

- Access through ORNL
- Citations:
 - Fichot, C.G., and J. Harringmeyer. 2021. Delta-X: In situ Beam Attenuation and Particle Size from LISST-200X, Spring 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLD AAC/2001>



Cedric Fichot



Josh Harringmeyer



Matt Weiser

Module 5: Water Quality and TSS

- https://github.com/achri19/DeltaXWorkshop_Field

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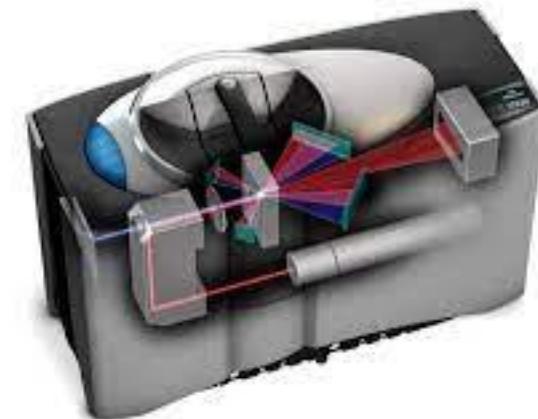
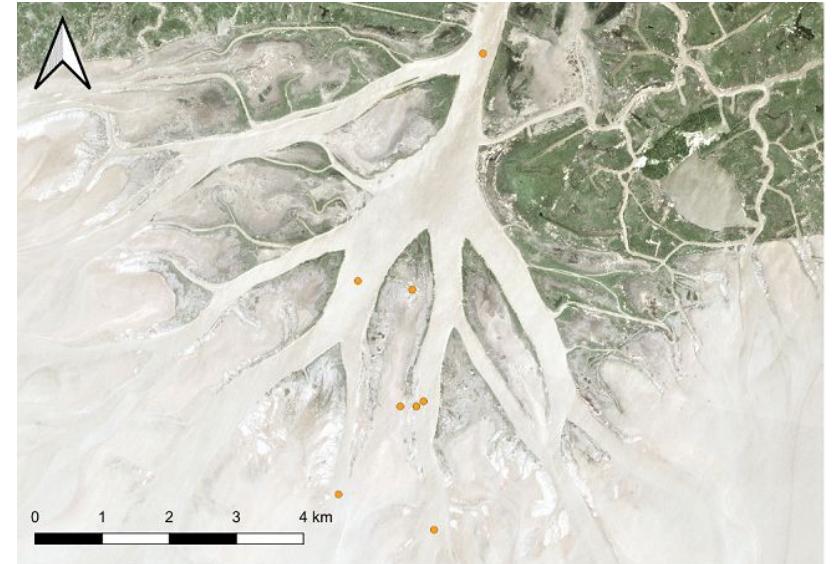
- Module 1: Biomass
- Module 2: Accretion
- Module 3: ADCP
- Module 4: Gauges
- Module 5: Water quality indicators
- Module 6: Total Suspended Solids
- Module 7: Sediment Grain Size

Channels □□ Wetlands: Sediment Transport

Suspended and bed sediment grain size

Suspended and bed sediment grain size

- Data:
 - Water velocity (m/s)
 - Water temperature (deg C)
 - Water salinity (ppt)
 - Water depth (m)
 - Total sediment concentration (mg/L)
 - Sediment concentration for each grain size range (mg/)
 - Particulate organic carbon centration (mg/L)
- Collection methods:
 - Suspended sediment samples were collected using a Van Dorn sampler from a boat drifting at the same velocity as the water flow
 - Bed samples were collected using a Ponar bed sampler
- Processing methods:
 - In the lab, samples were filtered through polyethersulfone filters to recover sediment.
 - Sediments were removed from the filters and dried to measure total sediment concentration
 - Samples were decarbonated and oxidized from remove organic material and run on a Malvern Mastersizer 3000E laser diffraction particle size analyzer
- Data file format:
 - 1 csv file where each row represents a sample with columns for location, date/time, site characteristics, and data parameters



Grain Size: Data Access

- Access through ORNL
- Citations:
 - Nghiem, J., and G. Salter. 2022. Delta-X: Bed and Suspended Sediment Grain Size, Wax Lake Delta, LA, USA, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDaac/2061>

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Michael Lamb



Justin Nghiem



Gerard Salter

Module 6: Grain Size

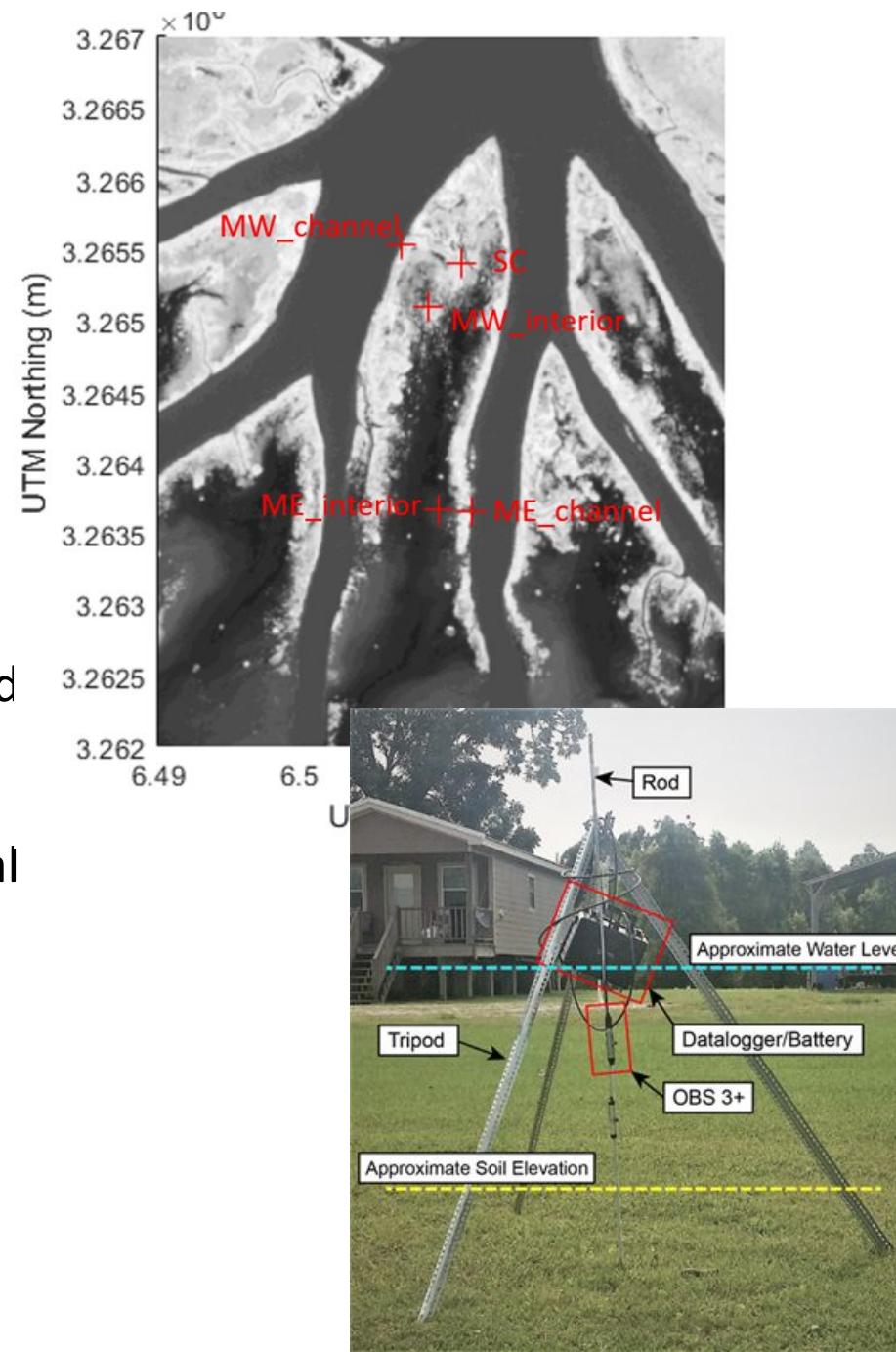
- https://github.com/achri19/DeltaXWorkshop_Field

The screenshot shows a GitHub repository page for 'DeltaXWorkshop_Field'. The repository is private, as indicated by the 'Private' badge in the top right corner. The main navigation bar includes links for Code, Issues, Pull requests, Actions, Projects, Security, Insights, and Settings. Below the navigation bar, there are buttons for Go to file, Add file, and Code. The repository has one branch ('main') and no tags. The last commit was made 18 hours ago, with 26 commits, and the commit hash is 9e721f2. The repository contains three files: 'Delete Sediment Accretion.ipynb', 'notebooks', and 'README.md'. The 'Delete Sediment Accretion.ipynb' file was updated 18 hours ago. The 'notebooks' folder was updated 18 hours ago. The 'README.md' file was updated 21 hours ago. The 'README.md' file is displayed below, showing the title 'DeltaXWorkshop_Field' and a section titled 'Modules related to field data'. It describes the repository as a place to find access to Google Colab notebooks for the Delta-X Workshop on May 4-5. Seven modules are listed, each with a 'Open in Colab' button:

- Module 1: Biomass [Open in Colab](#)
- Module 2: Accretion [Open in Colab](#)
- Module 3: ADCP [Open in Colab](#)
- Module 4: Gauges [Open in Colab](#)
- Module 5: Water quality indicators [Open in Colab](#)
- Module 6: Total Suspended Solids [Open in Colab](#)
- Module 7: Sediment Grain Size [Open in Colab](#)

Mike Island Tripods

- Data:
 - Turbidity (NTU)
 - Water pressure (kPa)
- Collection methods:
 - OBS turbidity sensors and water pressure sensors were deployed on tripods at 5 sites on Mike Island
- Processing methods:
 - The minimum, maximum, mean, and standard deviation are calculated for each 1 minute interval
- Data file format:
 - Individual turbidity and water pressure files for each tripod include time series data for each parameter.
 - A metadata file includes information on installation configuration for each tripod.



Grain Size: Data Access

- Access through ORNL
- Citations:
 - Salter, G., and J. Nghiem. 2021. Delta-X: Turbidity and Water Pressure Measurements, Mike Island in Wax Lake Delta, LA. ORNL DAAC, Oak Ridge, Tennessee, USA.
<https://doi.org/10.3334/ORNLDaac/1993>

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Michael Lamb



Justin Nghiem



Gerard Salter

Field Data

Delta-X Workshop

May 4, 2022

Alexandra Christensen

Jet Propulsion Laboratory, California Institute of
Technology

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Government Sponsorship acknowledged

May 4th Agenda

Time (CT)	Topic	Presenter
8:00 – 8:30	Introduction	
8:30 – 9:00	Delta-X Overview	Marc Simard
	Data Management Plan and Data Archive	Cathleen Jones
9:00 – 10:00	Field Data Overview and Access	Alex Christensen
	<i>Break 15'</i>	
10:15 – 11:15	Field Data Analysis	Alex Christensen
11:15 – 12:00	AVIRIS-NG Data Overview and Access	Daniel Jensen
	<i>Lunch 90'</i>	
13:30 – 15:45	AVIRIS-NG Application	Daniel Jensen
	<i>Break 15'</i>	
16:00 – 18:00	AirSWOT Data Overview, Access and Application	Michael Denbina

May 5th Agenda

Time (CT)	Topic	Presenter
8:00 – 9:30	AirSWOT Application Continued	Michael Denbina
9:30 – 10:00	UAVSAR Data Overview and Access	Talib Oliver Cabrera
	<i>Break 15'</i>	
10:15 – 12:00	UAVSAR Application	Talib Oliver Cabrera
	<i>Lunch 90'</i>	
13:30 – 15:30	ANUGA Model	Kyle Wright
	<i>Break 15'</i>	
15:45 – 17:45	Delft3D Model	Luca Cortese
17:45 – 18:00	Closeout	



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