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The importance of organic content to fractal floc properties in estuarine surface waters, insights from video, LISST, and pump sampling: Supporting data

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The importance of organic content to fractal floc properties in estuarine surface waters, insights from video, LISST, and pump sampling: Supporting data

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Files | Description

Main Folders: Cruise Site&Date: Y(ork)R(iver)YY(year)MM(month)DD(day)

Nested Folders/Files

1. CTD:

- a. YRYMMDD_CTD.xlsx: Burst average CTD data, , column descriptions as follows:
 - i. StationID: station id, B-bottom, M-middle, T-top
 - ii. Start Time/ End Time: Start/End time of burst in Hour, Minute, second. Time in EST/EDT.
 - iii. Depth, m
 - iv. Temp: temperature degree C
 - v. Cond: Conductivity, $\mu\text{S}/\text{cm}$
 - vi. Salinity: Salinity, PSU
 - vii. Turbidity: turbidity, NTU
 - viii. n: number of samples averaged in each burst

2. LISST-100X

- a. YRYMMDD_LISST.xlsx: Burst average data processed with Sequoia random shape matrix, column descriptions as follows:
 - i. StationID: station id, B-bottom, M-middle, T-top
 - ii. N: number of samples averaged in each burst
 - iii. Depth: depth from pressure sensor, m
 - iv. temp: Water temperature, degree C
 - v. Vctot: total volume concentration, $\mu\text{L}/\text{L}$.

- vi. d16V, d50V, d84V: 16th , 50th , and 84th percentile of particle size by volume distribution, μm .
- vii. Bin 1-Bin 32: Volume concentration in size bins, $\mu\text{L/L}$. The midpoint size for each is given in row 2.
- viii. ACtot: total area concentration, cm^2/L .
- ix. d50A: 50th percentile of particle size by area distribution, μm .
- x. Bin 1- Bin 32: Area concentration in size bins 1-32, cm^2/L . The midpoint size for each is given in row 2.
- xi. tau: optical transmission
- xii. c: beam attenuation at 670 nm, $1/\text{m}$.
- xiii. b: estimated forward scattering between roughly 0.08° - 15° at 670 nm, $1/\text{m}$.

3. Nortek ADV

- a. YRYMMDD_Nortek.xlsx: Burst average data, column descriptions as follows:
 - i. Station ID: B-bottom, M-middle, T-top
 - ii. U: mean current velocity, cm/s
 - iii. std_U: standard deviation of mean current velocity, cm/s
 - iv. backscatter_x, _y, _z: acoustic backscatter from beam x,y and z
 - v. n: number of samples in each burst

4. Sontek ADV

- a. YRYMMDD_Sontek.xlsx: Burst average data, column descriptions as follows:
 - i. Station ID: B-bottom, M-middle, T-top
 - ii. U: mean current velocity, cm/s
 - iii. std_U: standard deviation of mean current velocity, cm/s
 - iv. backscatter_x, _y, _z: acoustic backscatter from beam x,y and z
 - v. n: number of samples in each burst

5. TSS

- a. YRYMMDD_TSS.xlsx: Total (TSS), fixed (FSS) and volatile/ organic (VSS) suspended from water samples determined via filtration and loss on ignition (LOI). 0.7 micron GF/F and 60 micron mesh filters were used; ">/< " 60 denotes mass greater than or less than 60 microns.

6. PICS

- a. YRYMMDD_PICSLog.xlsx: List of raw PICS sequence files identifying sample ID and Cruise.
- b. YRYMMDD.zip: Compressed file containing raw PICS sequence files, YRYMMDDHHMMSS.seq, (year,month,day,hour,second) collected with StreamPix (image acquisition software used by the PICS).

7. Log Sheets.pdf:

Scanned log sheets from each cruise. Provides lat/lon, sample time, and instruments used for each station.

8. Log Book.pdf (available for some cruises):

Additional information from scanned log book entry from CHSD lab log book.

FILES ARE AVAILABLE AT: <https://doi.org/10.25773/7gbc-6739>

Keywords

York River estuary, suspended sediment, fractal flocs, organic content, particle density

Associated Publications

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