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Water Quality - ADCP

HYPACK 2022 – Training Event

Objectives of this session

1

Collecting ADCP Data

- **Displaying the profile information**
- **Viewing individual Ensembles**

2

Processing ADCP Data

- **Displaying the profile information**
- **Viewing individual Ensembles**

3

Processing ADCP Insitu Data

- **Displaying the profile information**

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ADCP Data Collection

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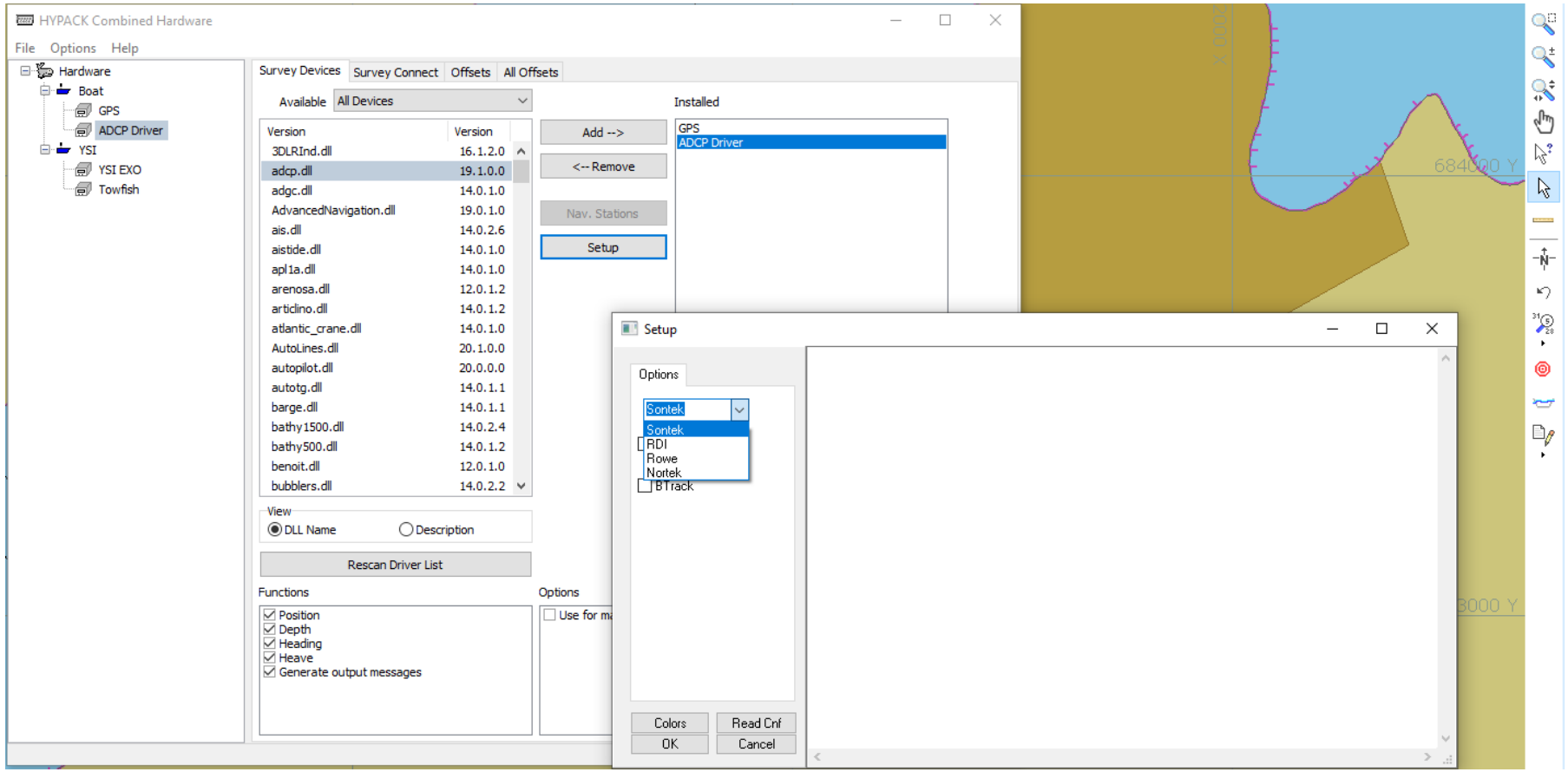
ADCP Hardware

A common ADCP driver is used to read multiple manufacturers hardware to ensure a standard display is used

Supports

- Sontek
- RDI
- Rowe Instruments
- Nortek



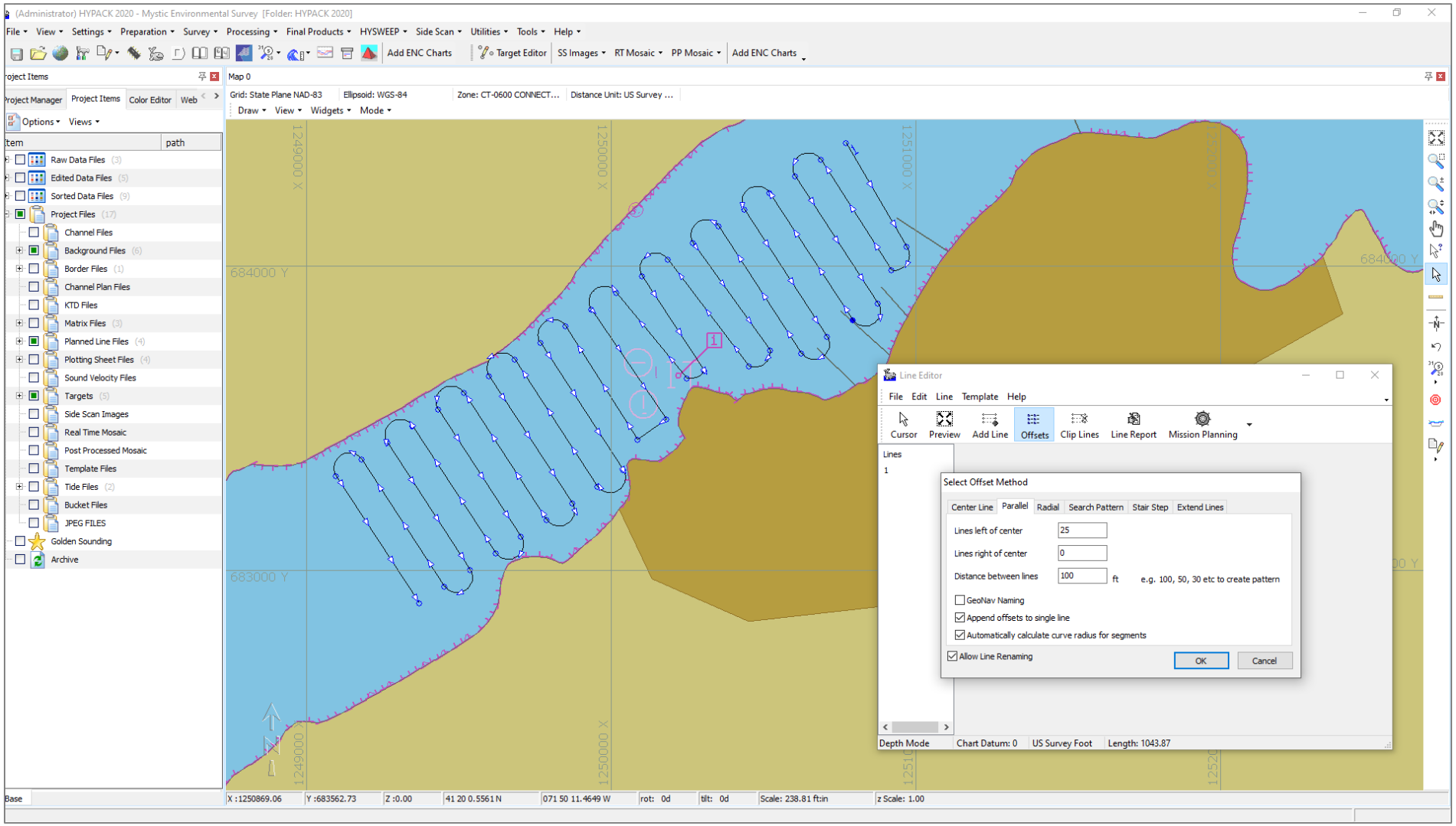
Shallow Water - ADCP

Many projects involve remote data collection in challenging environments

ADCP Planned Lines

Planned Lines can be created and exported to a MAVLINK file for autonomous survey

ADCP lines must be collected from bank to bank



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ADCP Processing

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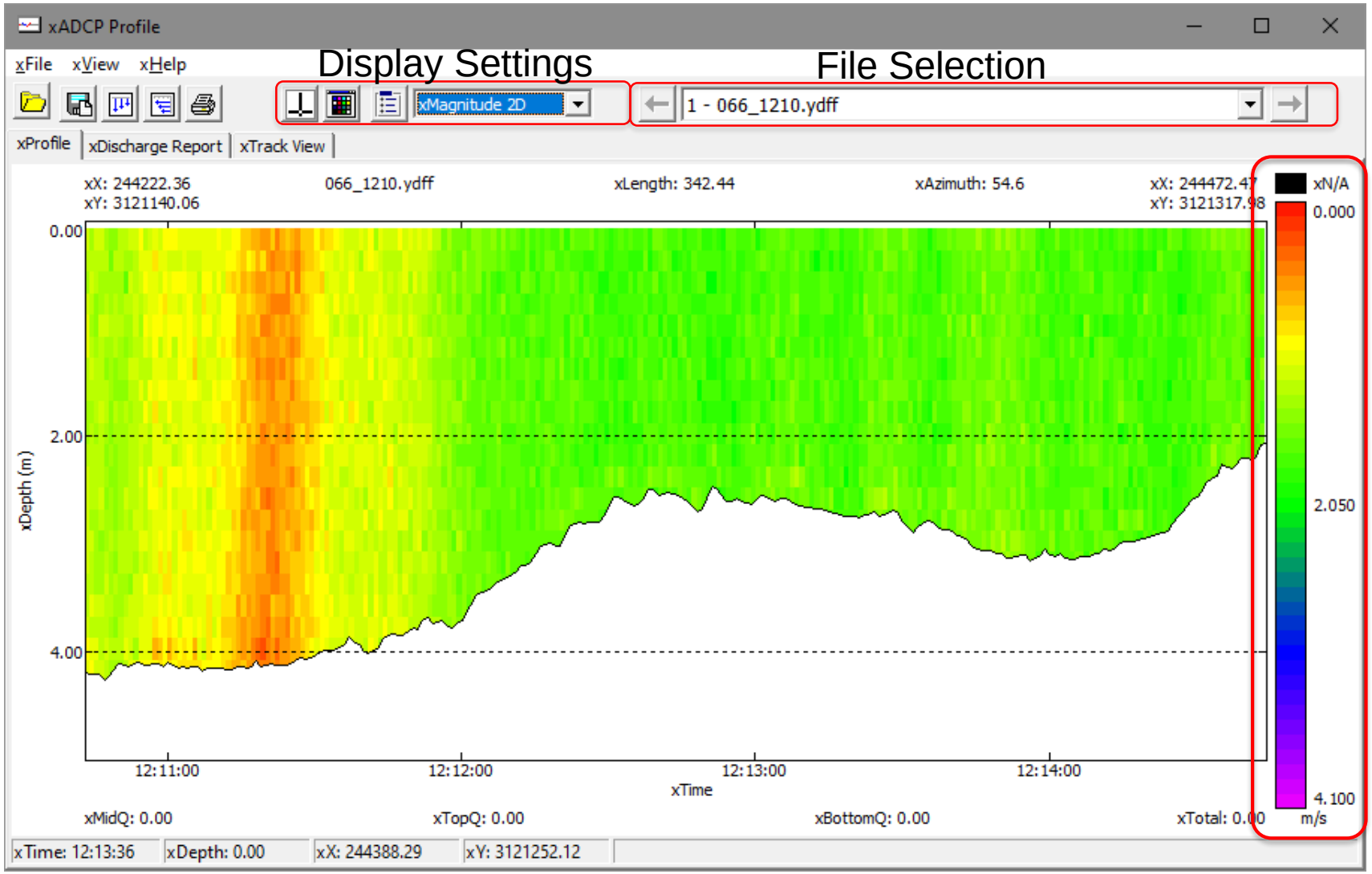
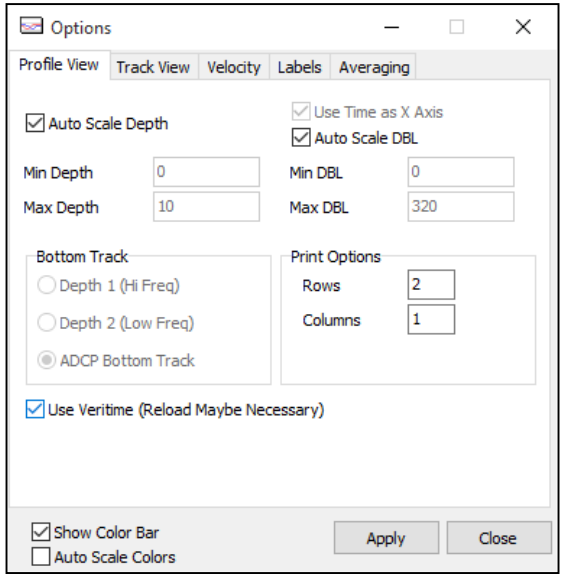
ADCP Profile

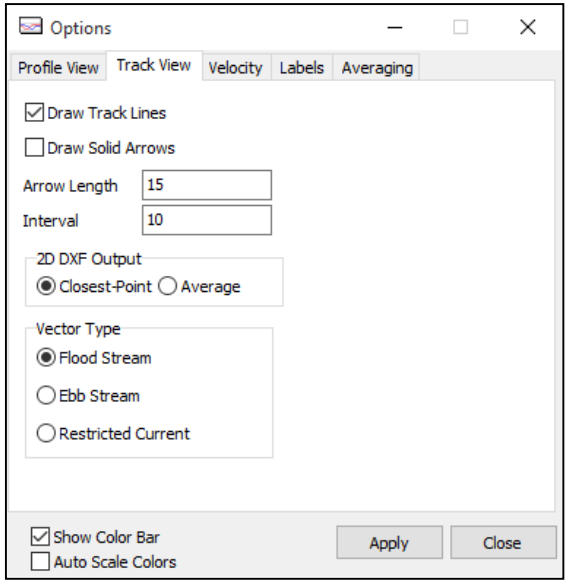
ADCP profile has been designed to show each profile cross section

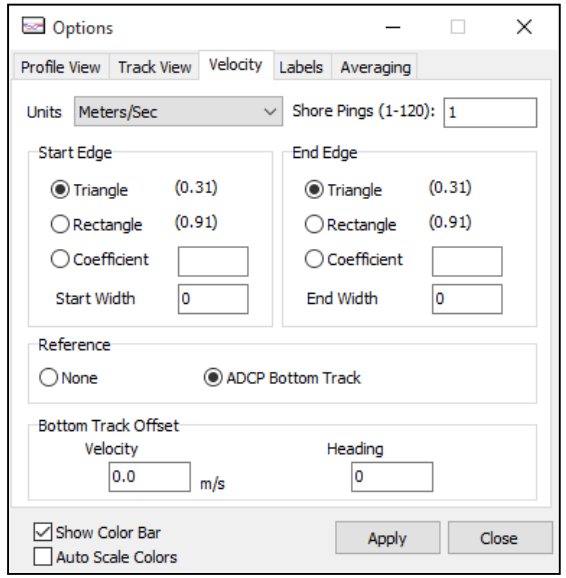
The colors can be adjusted using the Color Dialog in Display Settings



ADCP PROFILE Settings







Profile View Tab:
Controls:

- Scaling of Chart
- Bottom Track
- Print Layout

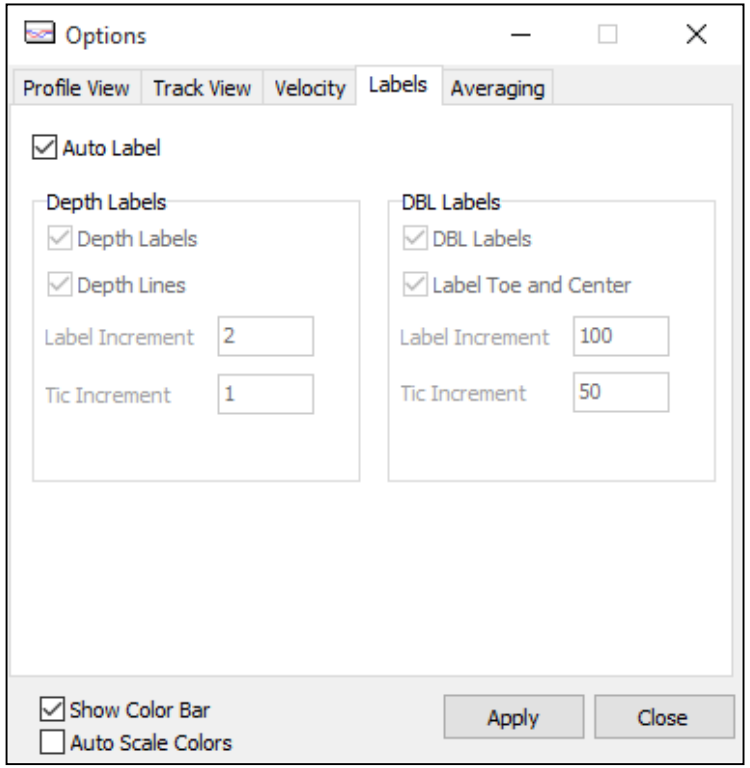
Track view Tab:
Controls:

- Arrow Length
- Spacing
- Vector Type

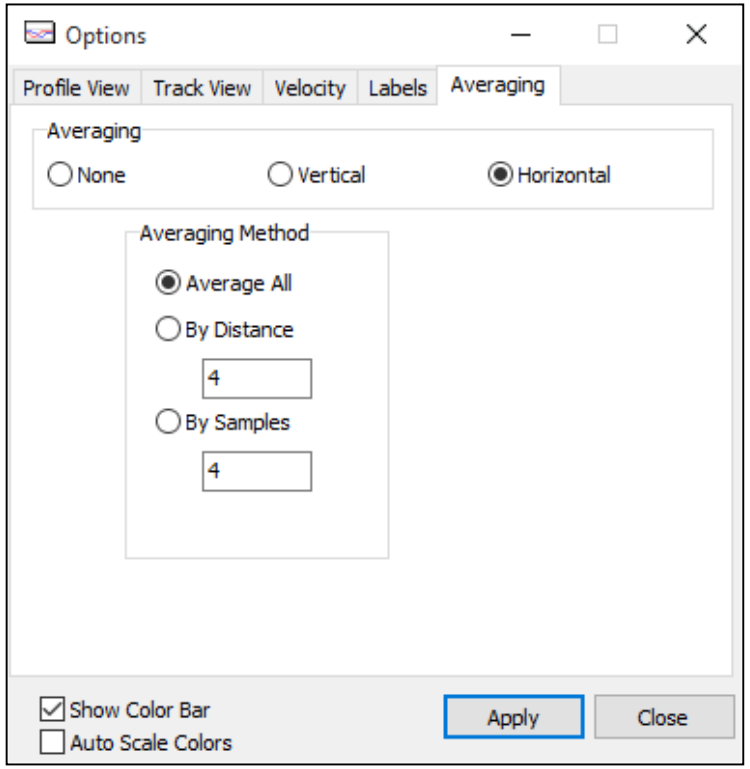
Velocity Tab:
Controls:

- Units
- Visible Pings
- Flow Options

ADCP PROFILE Settings



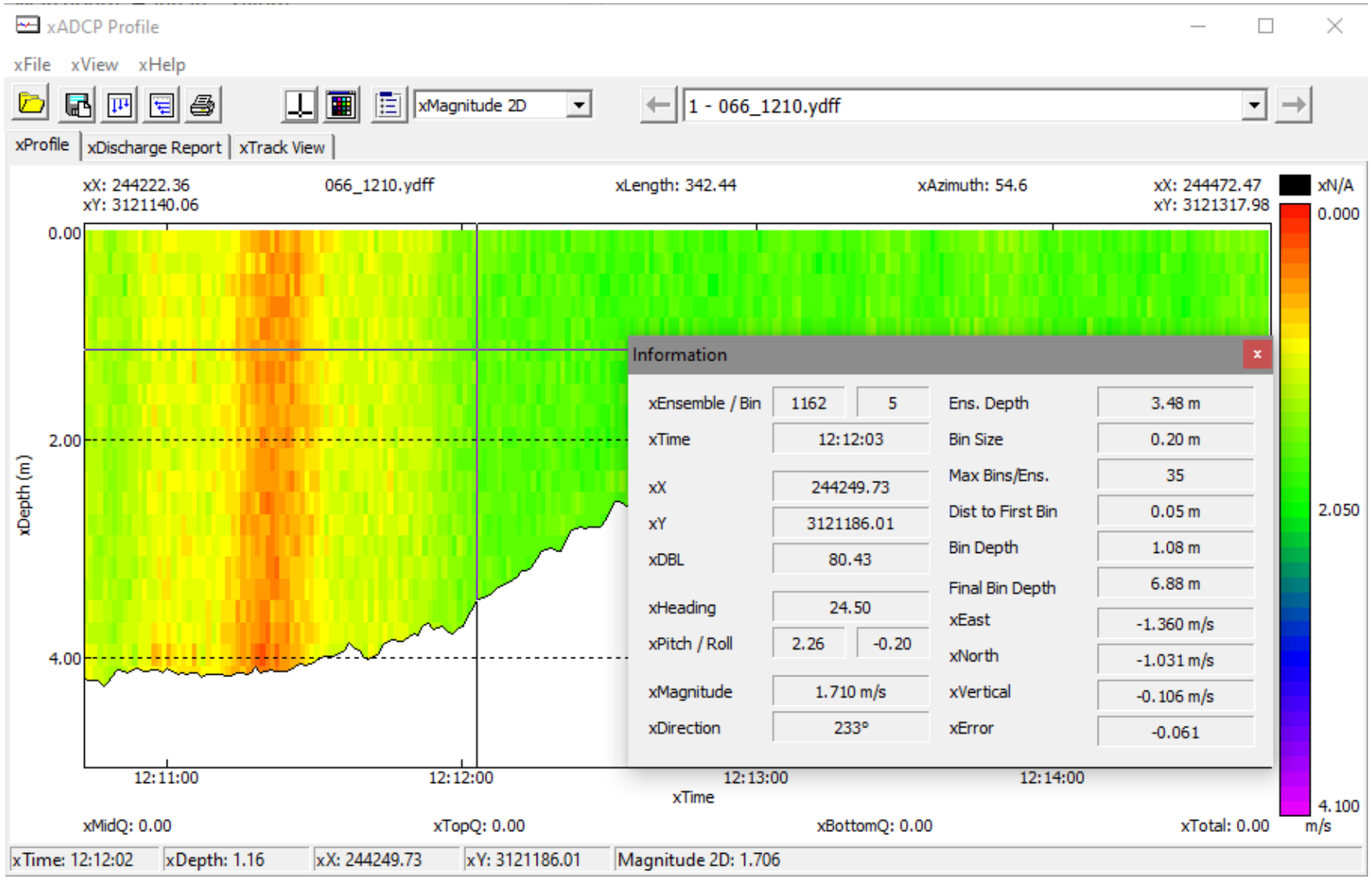
Labels Tab:
Controls:
Labeling for Chart and for DXF Output.



Averaging Tab:
Apply averaging by:
Vertical or Horizontal
Number of bins or Distance

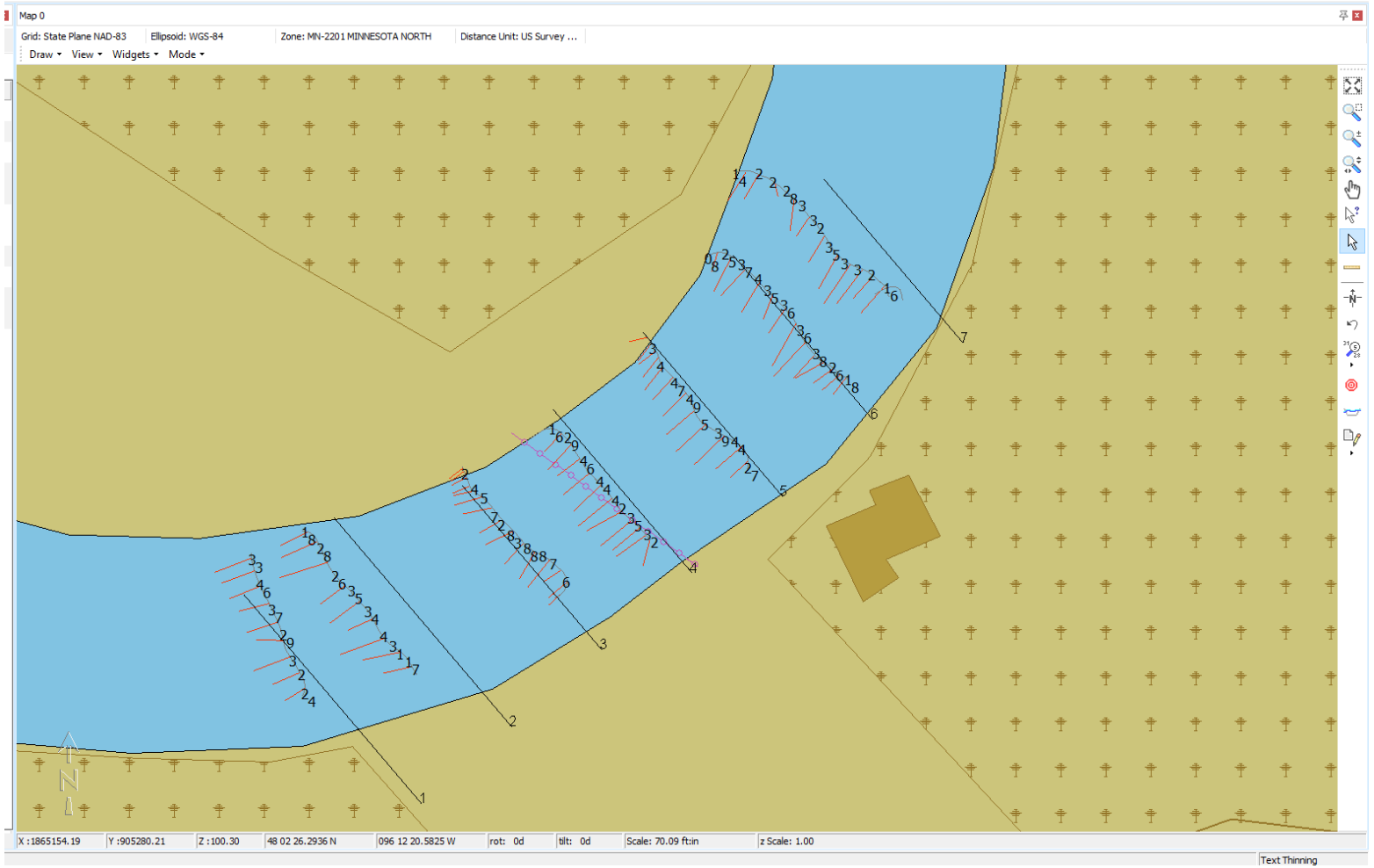
ADCP Profile

Ensemble Information can be displayed at the cursor location



ADCP Profile – DXF output

ADCP Profile has the ability to output DXF Vectors



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ADCP – Insitu

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ADCP IN SITU Features

ADCP IN SITU is used to process data produced by profiling current meters:

Instantaneous pressure measurements (on certain instruments);

Instantaneous temperature measurements;

Heading, roll and pitch measurements;

Current measurements integrated over a period (integration period);

Measurement of the back-scattered echo or of the amplitude of the received signal according to the instrument in question.

ADCP = Acoustic Doppler Current Profiler.

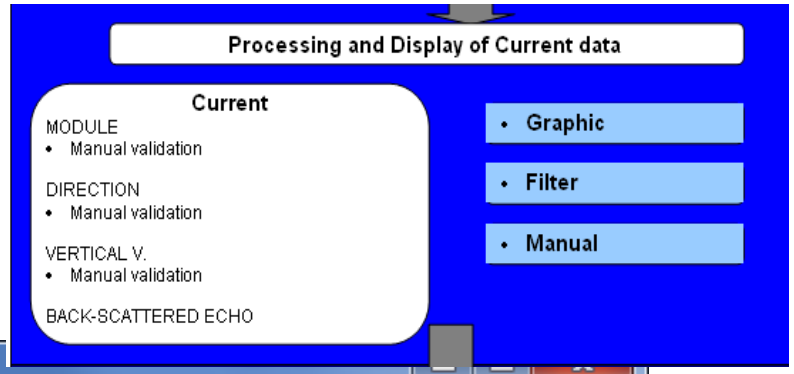
Input Data

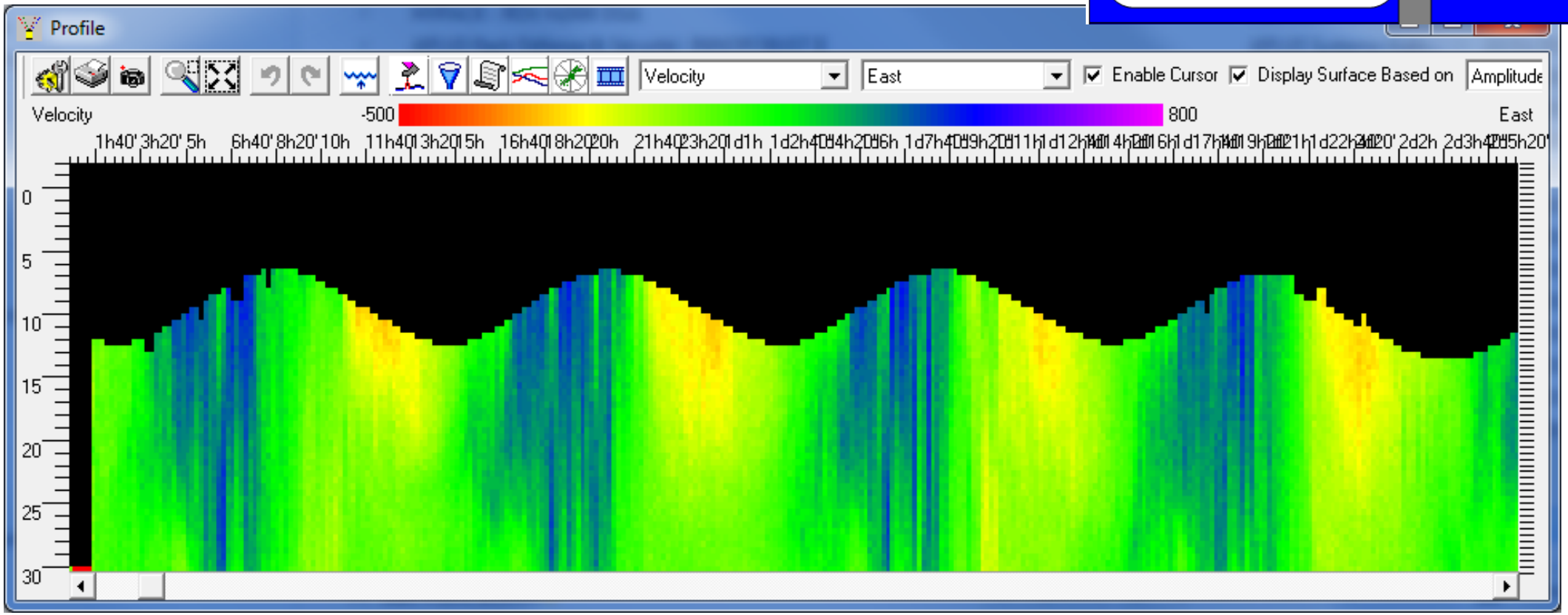
Reads the raw data coming from Sontek, Nortek and RDI equipment.

- **Sontek**
  - *.adp format
- **Nortek NDP**
  - *.adp format
- **Nortek Aquapro**
  - *.prf format
- **Nortek Aquadopp (single point current meter)**
  - *.aqd format
- **Nortek Awac**
  - ***.wpr format
- **Nortek continental**
  - *.cpr format
- **Teledyne-RDI**
  - *.000 format

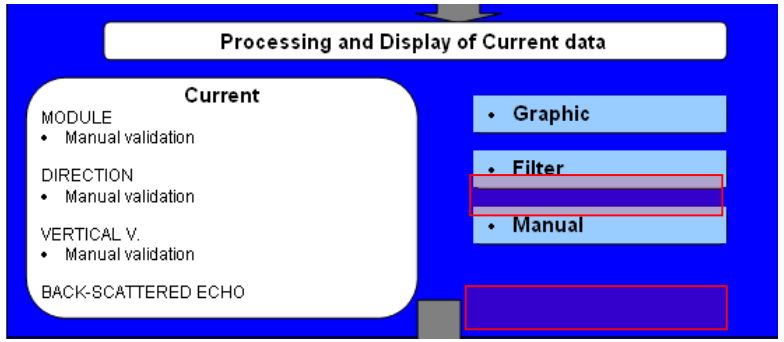
Profile Display

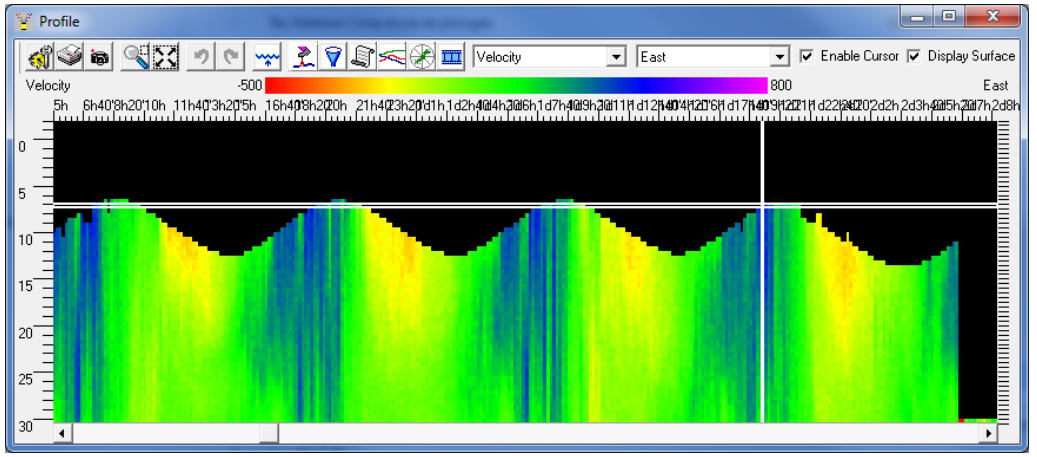
Operating data is displayed by clicking on the Profile icon.

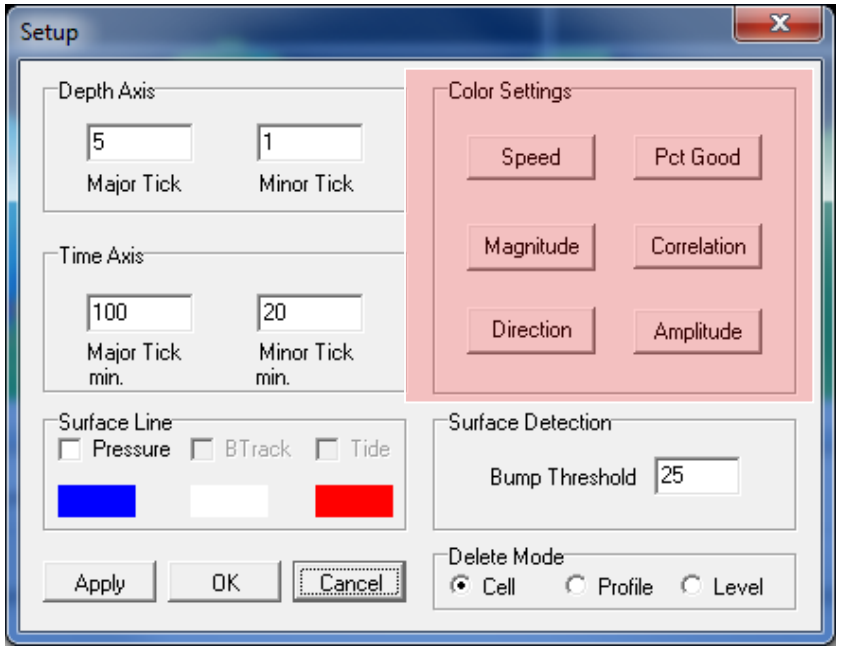




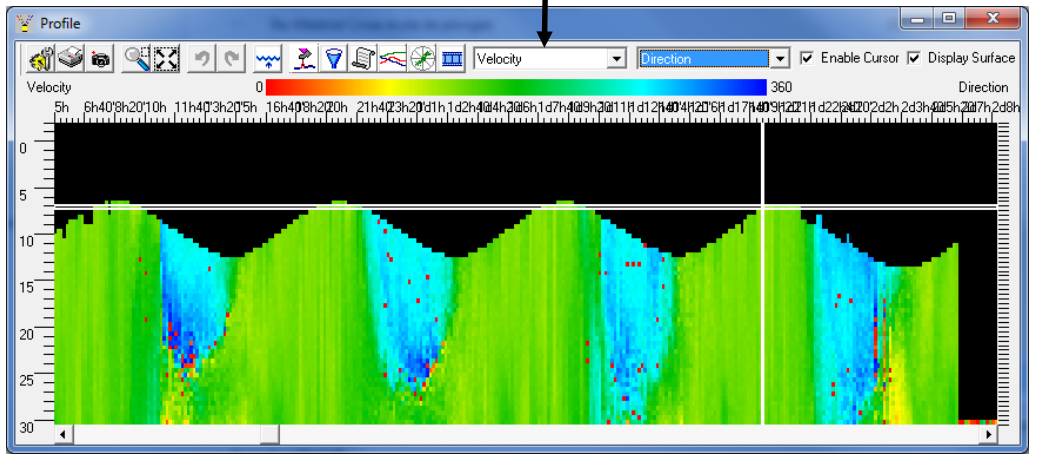
Profile Color Settings



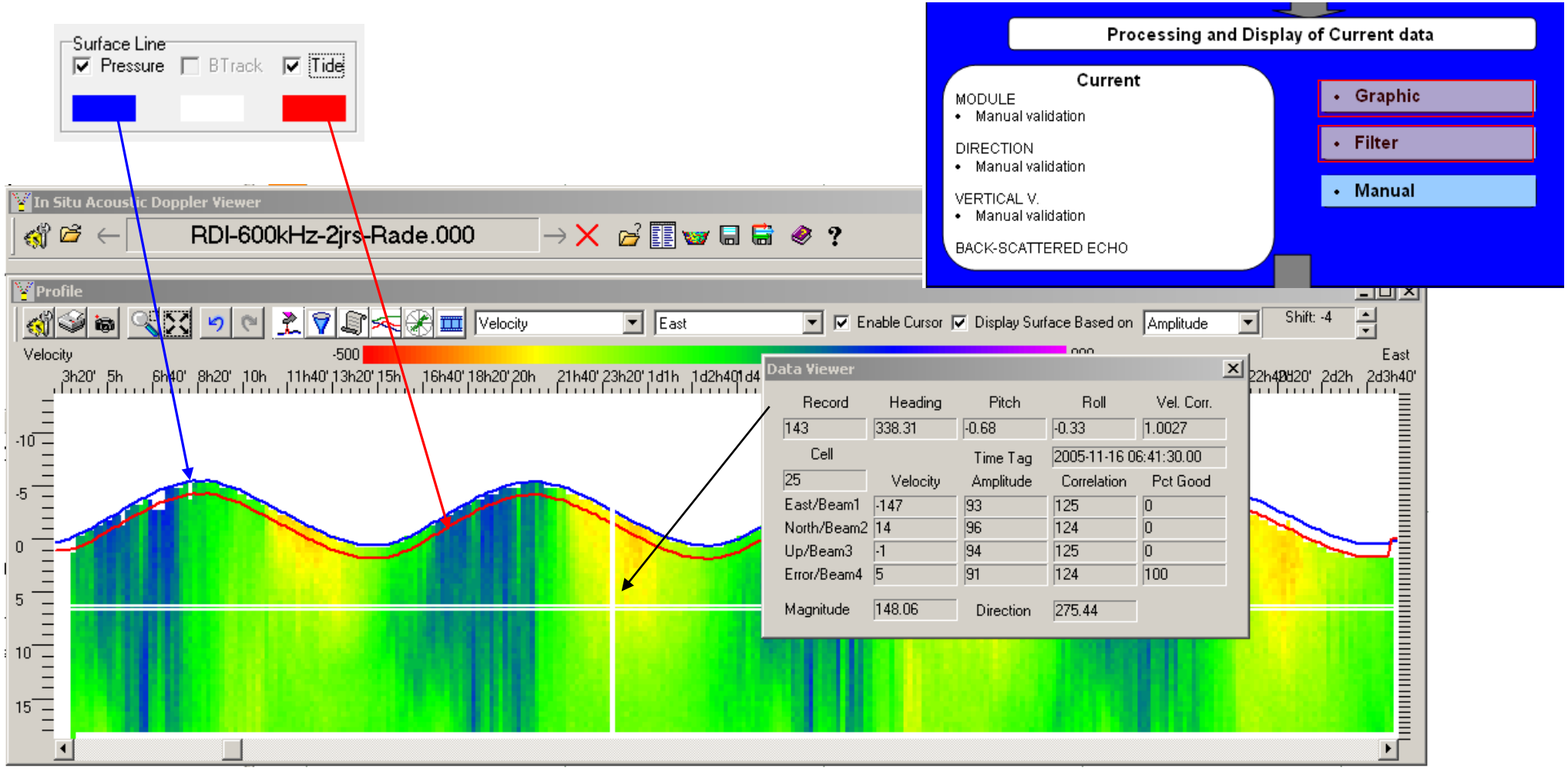




Independent color settings for each component.

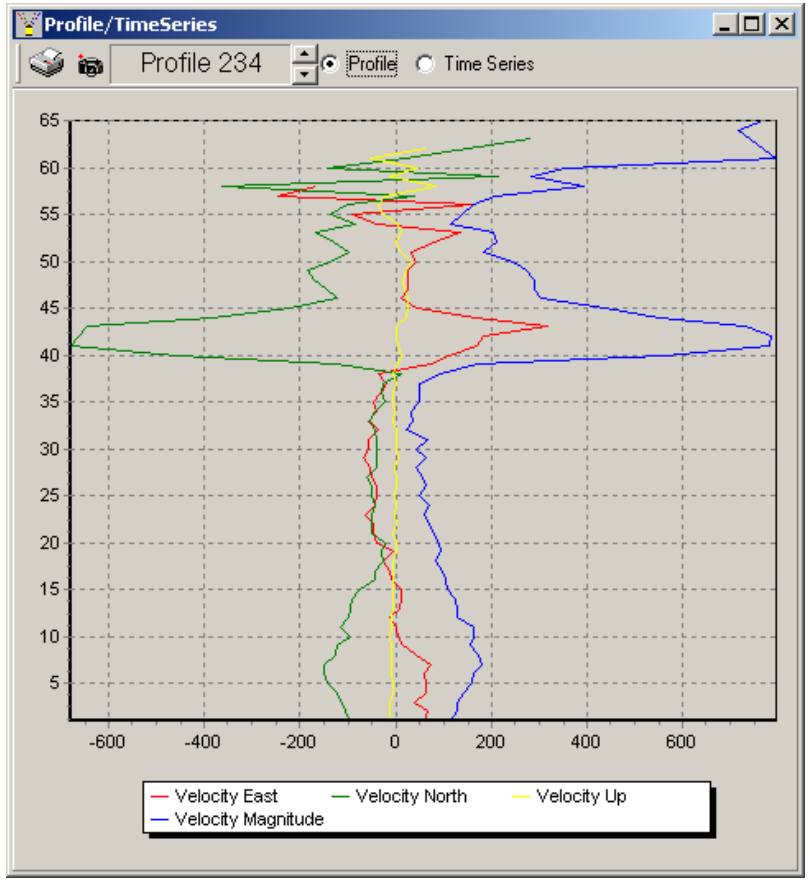


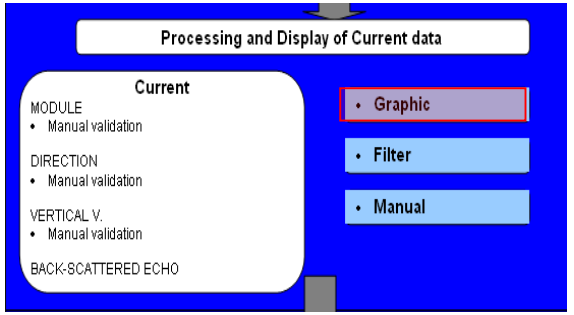
Data Viewer

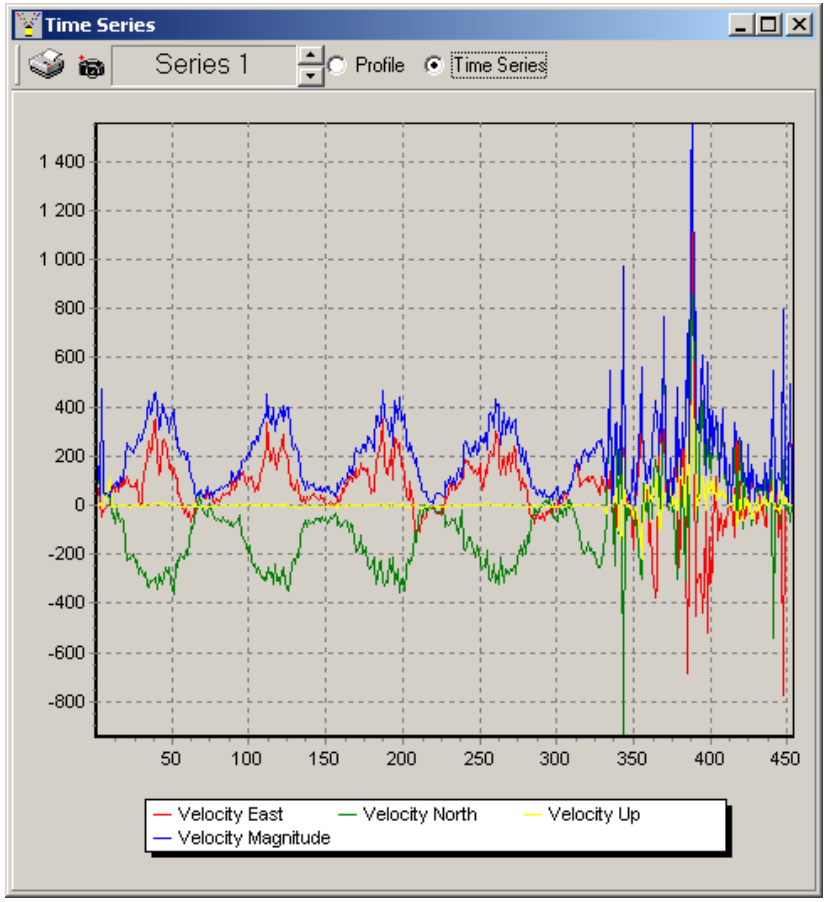


Data Viewer displays the data indicated by the cursor.

Profile and Time Series View

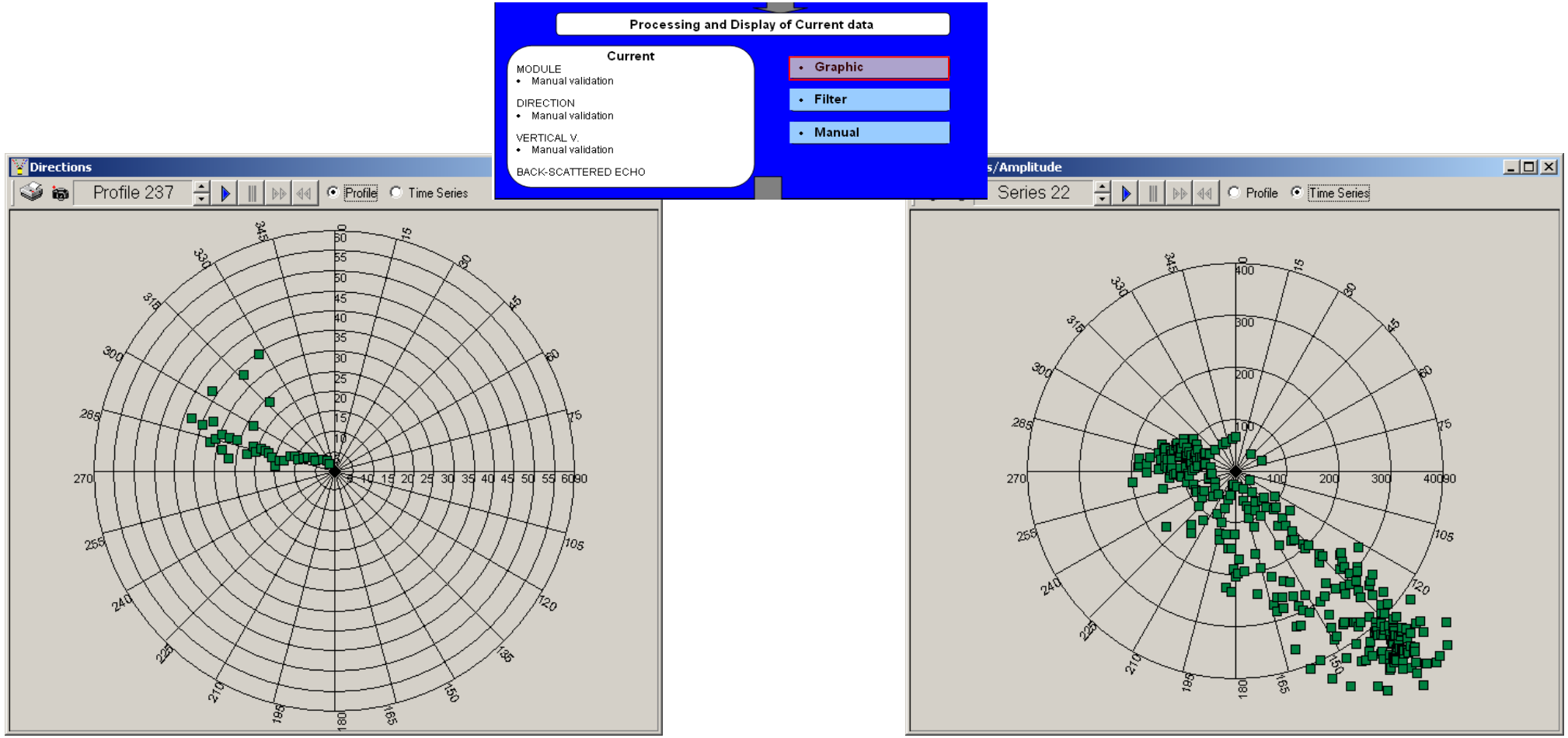






Display of graphic data by profile or time series

Profile and Time Series View



Display of data by direction. By profile or time series.

ODV Export

Export in ODV format from the ASCII export by loading the previously created configuration file **odv.ini**, available in Hypack 20XX/ADCP.

The ODV software configuration file for importing the HYPACK export is also available in HYPACK 20XX/ADCP. It is the **Config_type_odv.cfg** file.