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# Water Resources

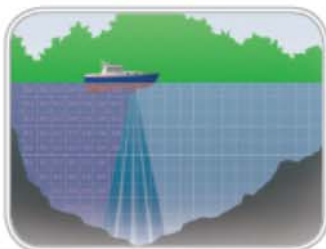
**ADCP's for discharge measurement.**

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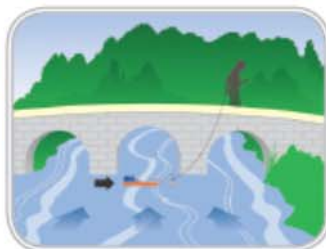
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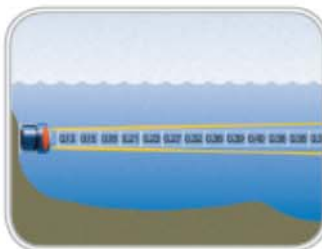
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**Boat Mount:**  
Collect current profiles and discharge measurements from a moving boat or platform.



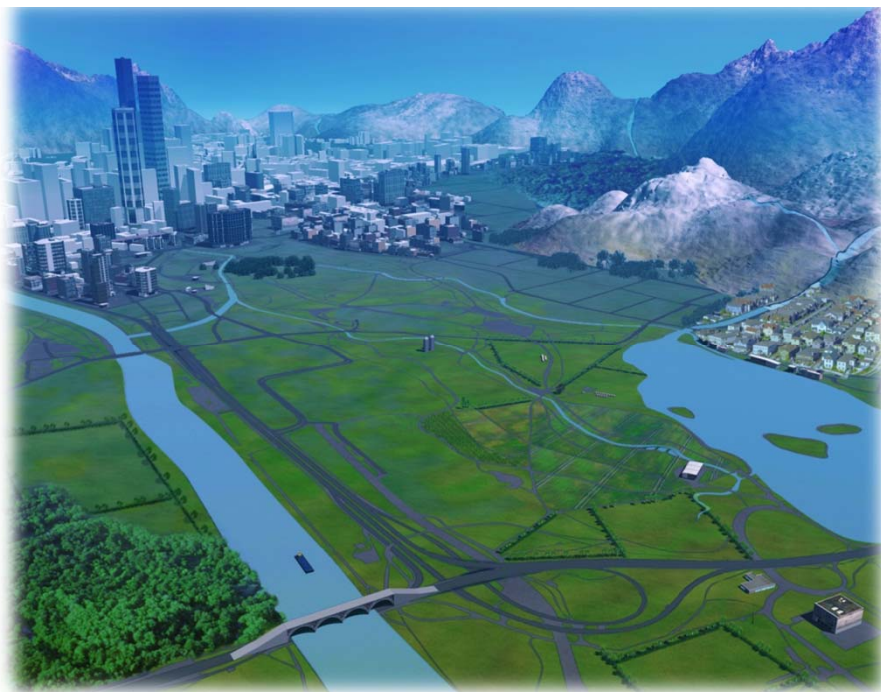
**Float Mount:**  
Collect velocity and discharge measurements in shallow-water environments without entering the water.



**Fixed Mount-Side:**  
Collect water velocity, stage, and discharge data across an entire waterway.



**Fixed Mount-Bottom:**  
Collect current or flow profiles from environments ranging from open channels to riverbeds to coastal areas.



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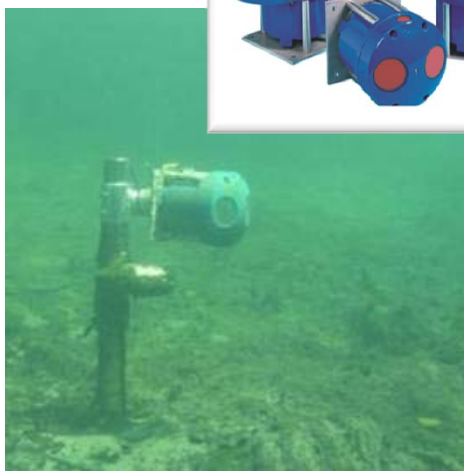




## Water Resource Product Line

### ADCPs for Open Channels Discharge Measurements

- Discharge for Rivers 1-60m deep
- Mobile and Permanent real time monitoring



**Stationary Index  
Discharge**



**Moving Boat  
Discharge**



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# RiverRay



**... a new ADCP for moving discharge measurement**

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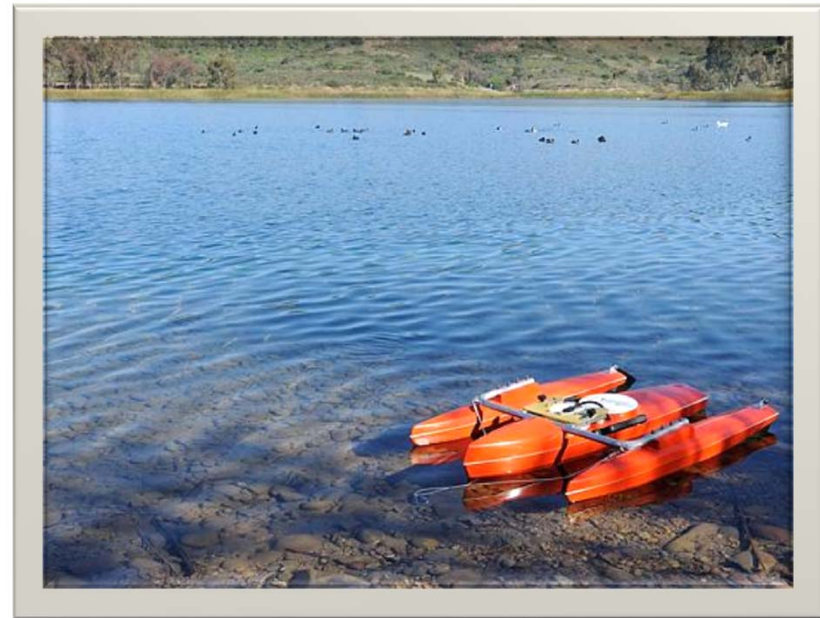
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# Design Improvements

- Innovative, small size, low frequency Phased Array transducer technology
- Embedded intelligence, fully automated system
- Improved bottom tracking performance
- Improved flow-rider Trimaran float design
- New low power, NGSP electronics

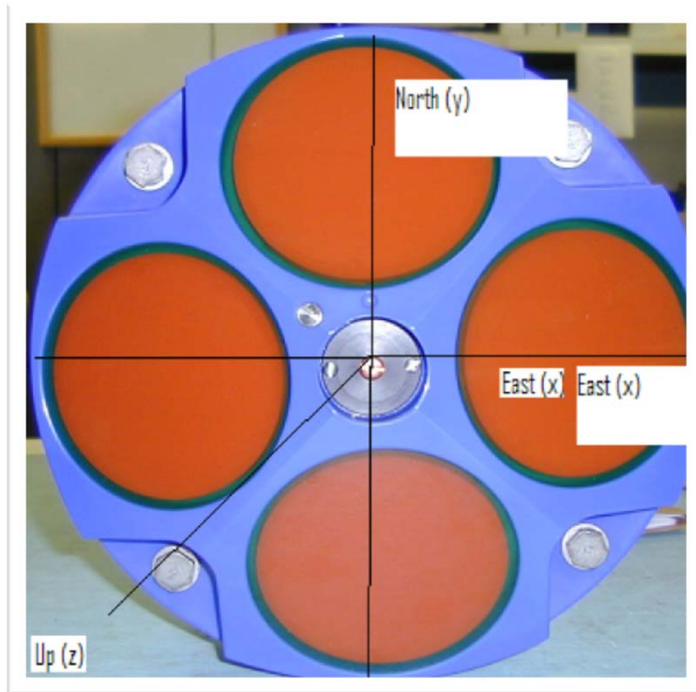


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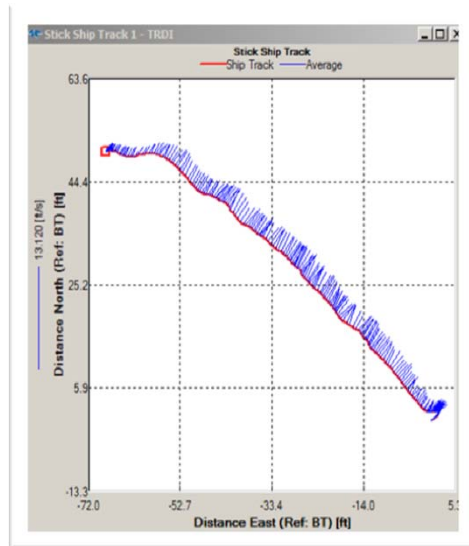


# Phased Array Advantages

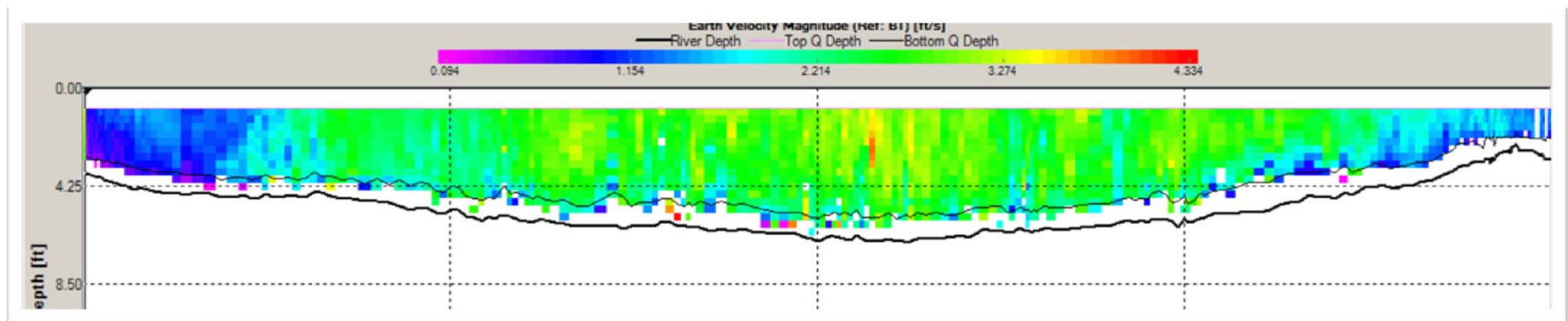


- Convenient, compact, design with single flat face
- Less is More
  - Less size & weight
  - Less submersion depth and drag
  - Less flow disturbance & bubbles
  - Less bias in estuarine velocity data
  - Less risk of bias in bottom tracking

# From Shallow Sections...



Acquire, display, and record reliable discharge transects in a simple process



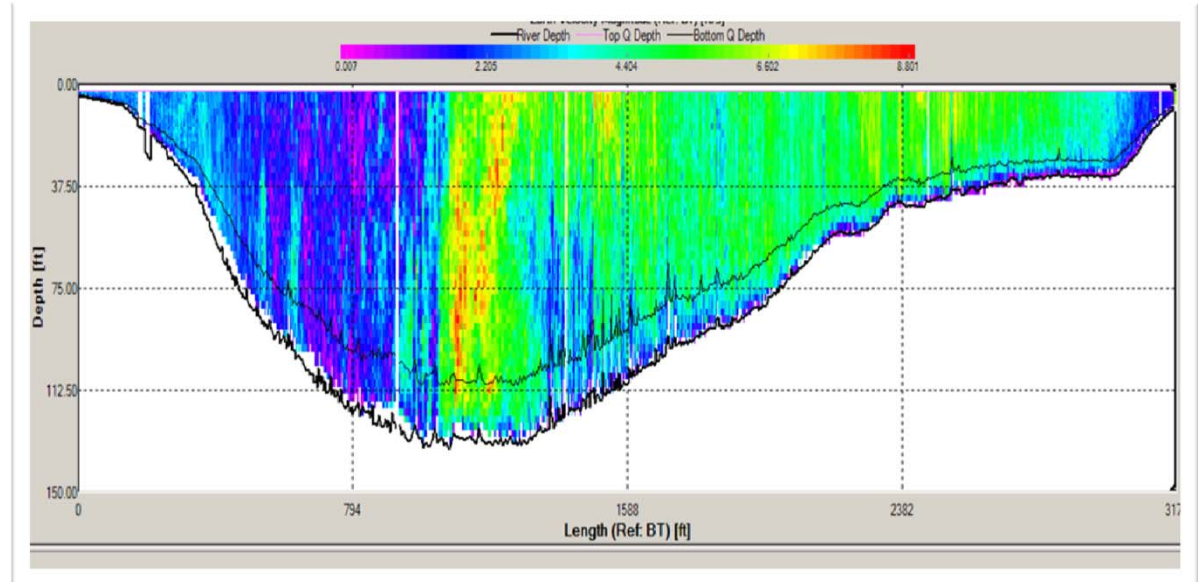
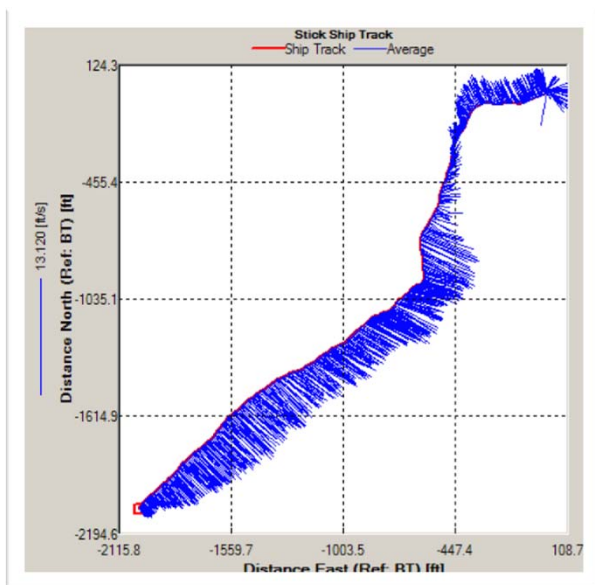
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# ...to Deep Rivers



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# What's New for RiverRay



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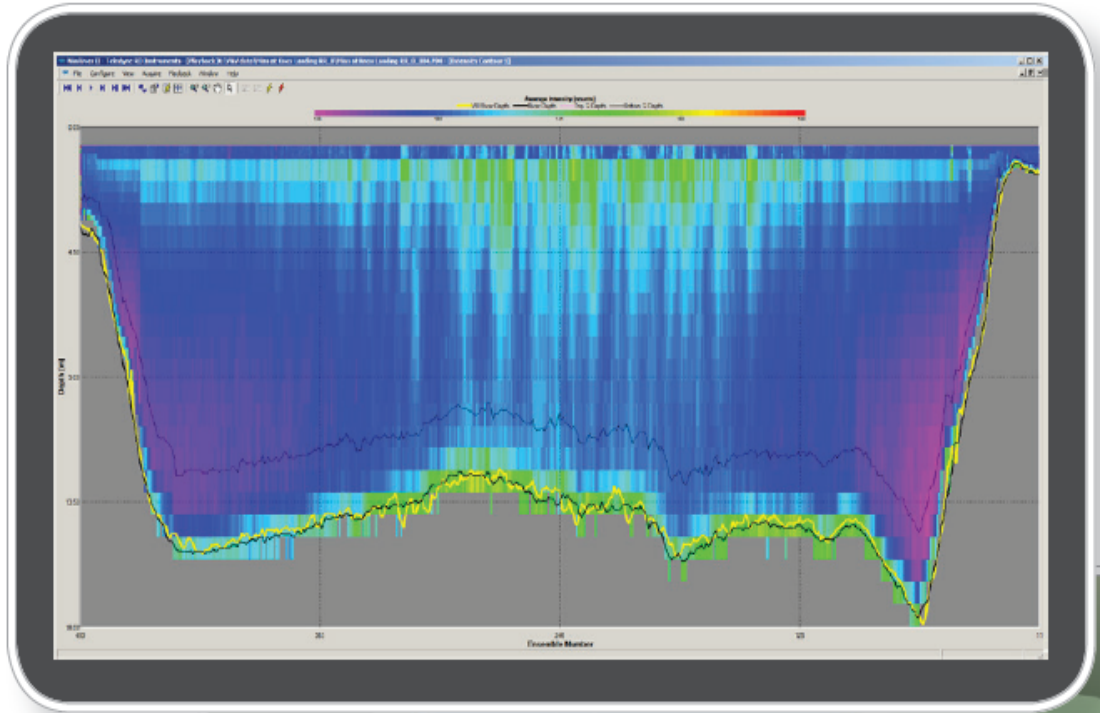
# Vertical Beam

- Depth measurement directly below ADCP
  - More precise bathymetric data
  - Better definition of cross-sectional shape
- Increased beam width:
  - Reduced sensitivity to
    - Instrument pitch and roll
    - Reduced sensitivity to bottom slope



# Vertical Beam

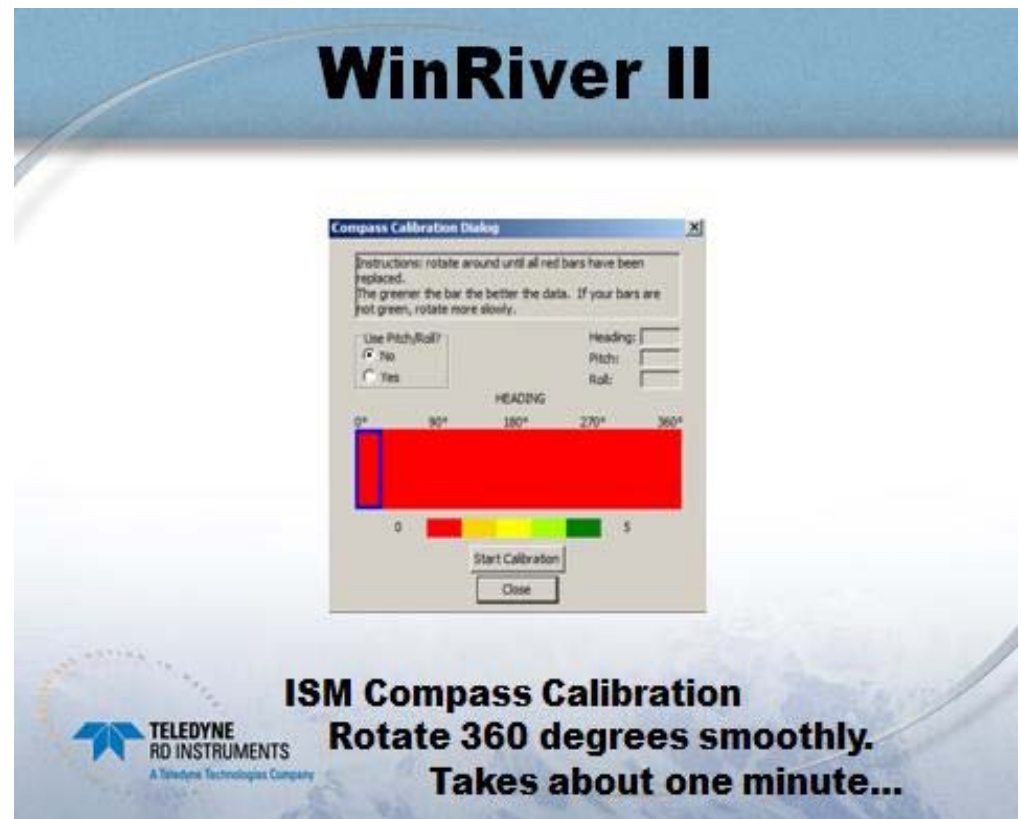
- Composite Option
  - Auto selection between
    - Vertical Beam
    - Bottom Track
    - Depth Sounder
- All depth sources displayed in the Intensity Contour Plot
- Range 0.2m – 80m. Resolution of 1mm



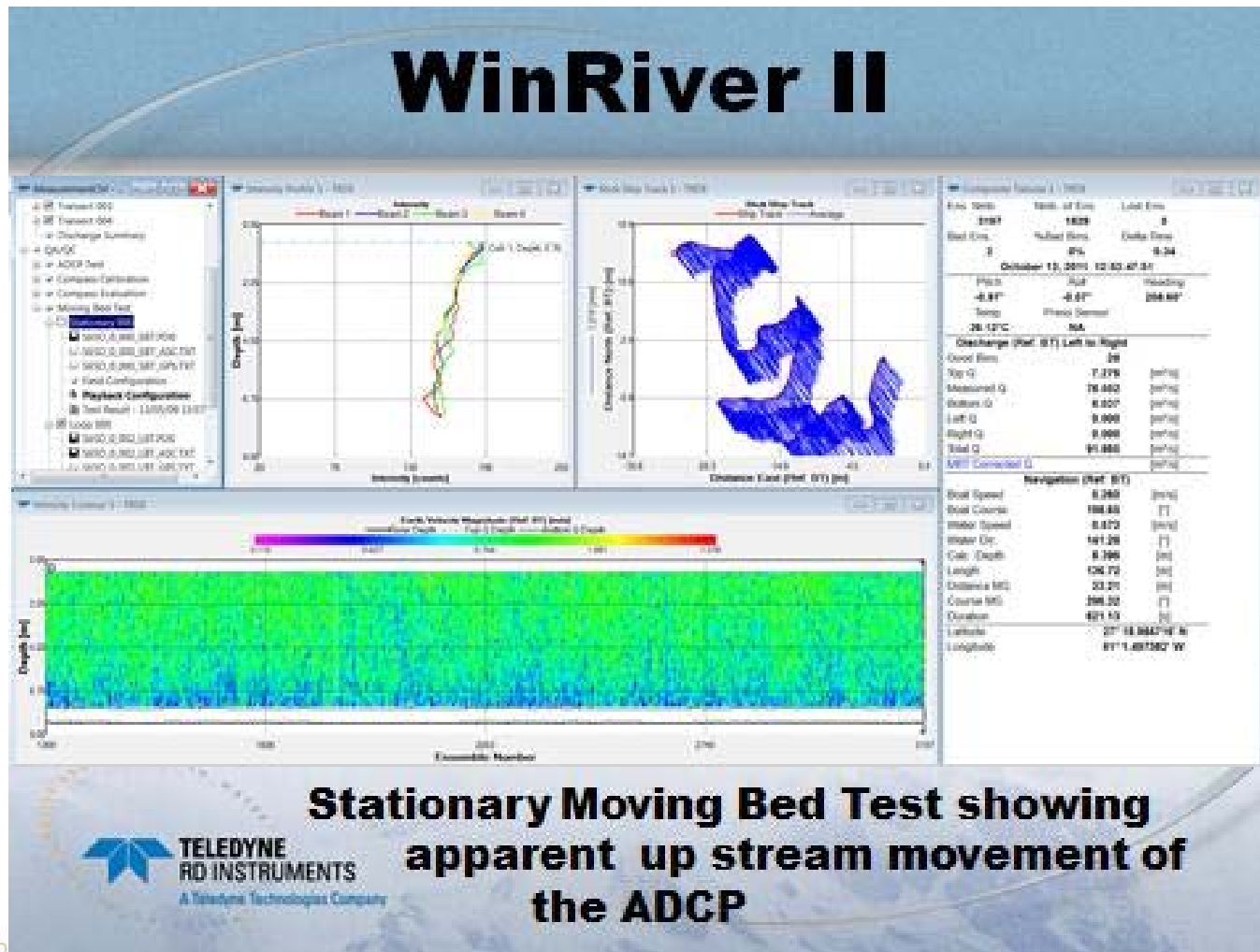


# Performance Upgrade Package

- New ISM Compass and Calibration Routine
- Improved Surface Bin Algorithms
- Triple Transmit Power



# WinRiver II Upgrades - SMBA

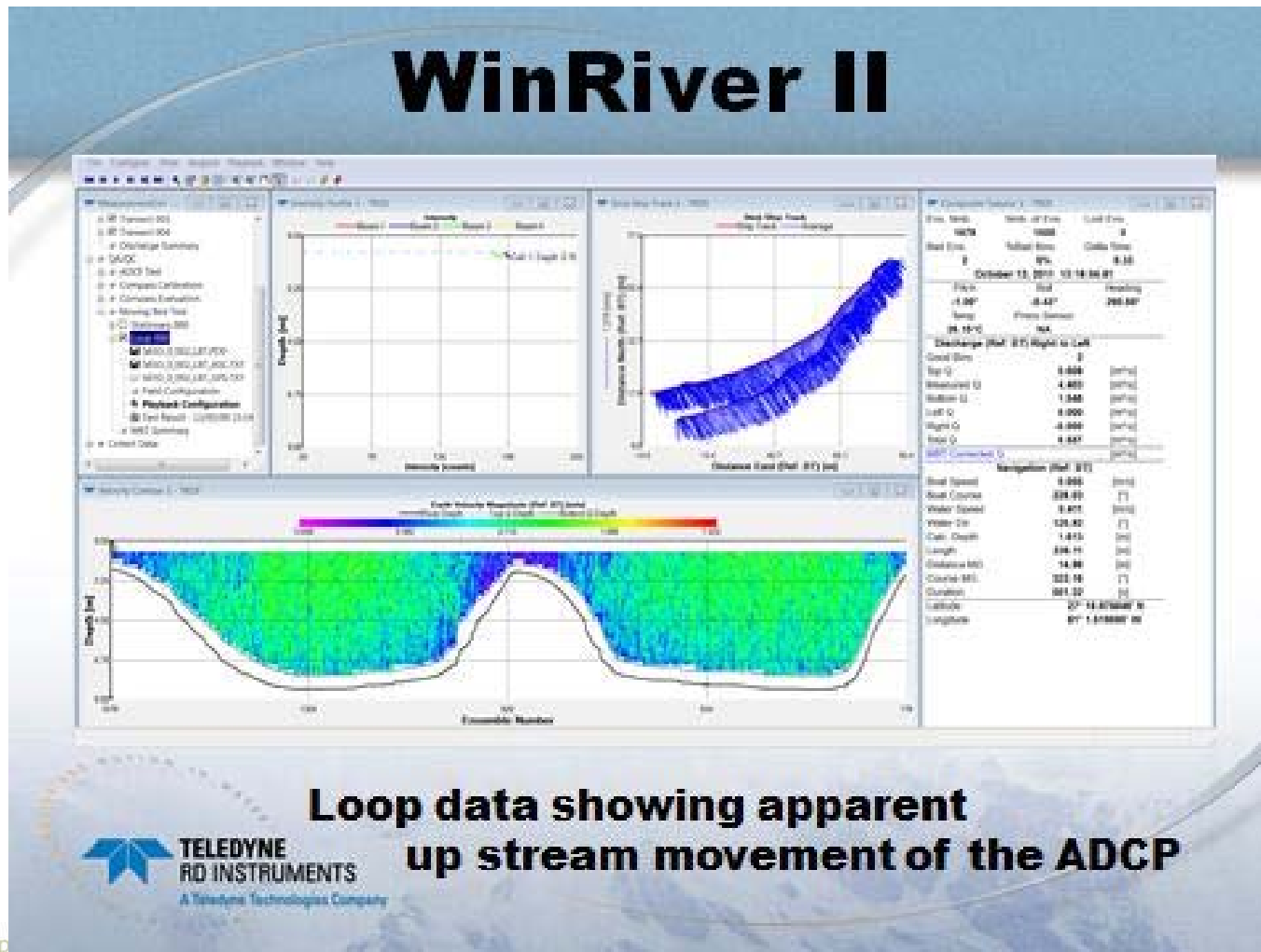


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# WinRiver II Upgrades – Loop Test



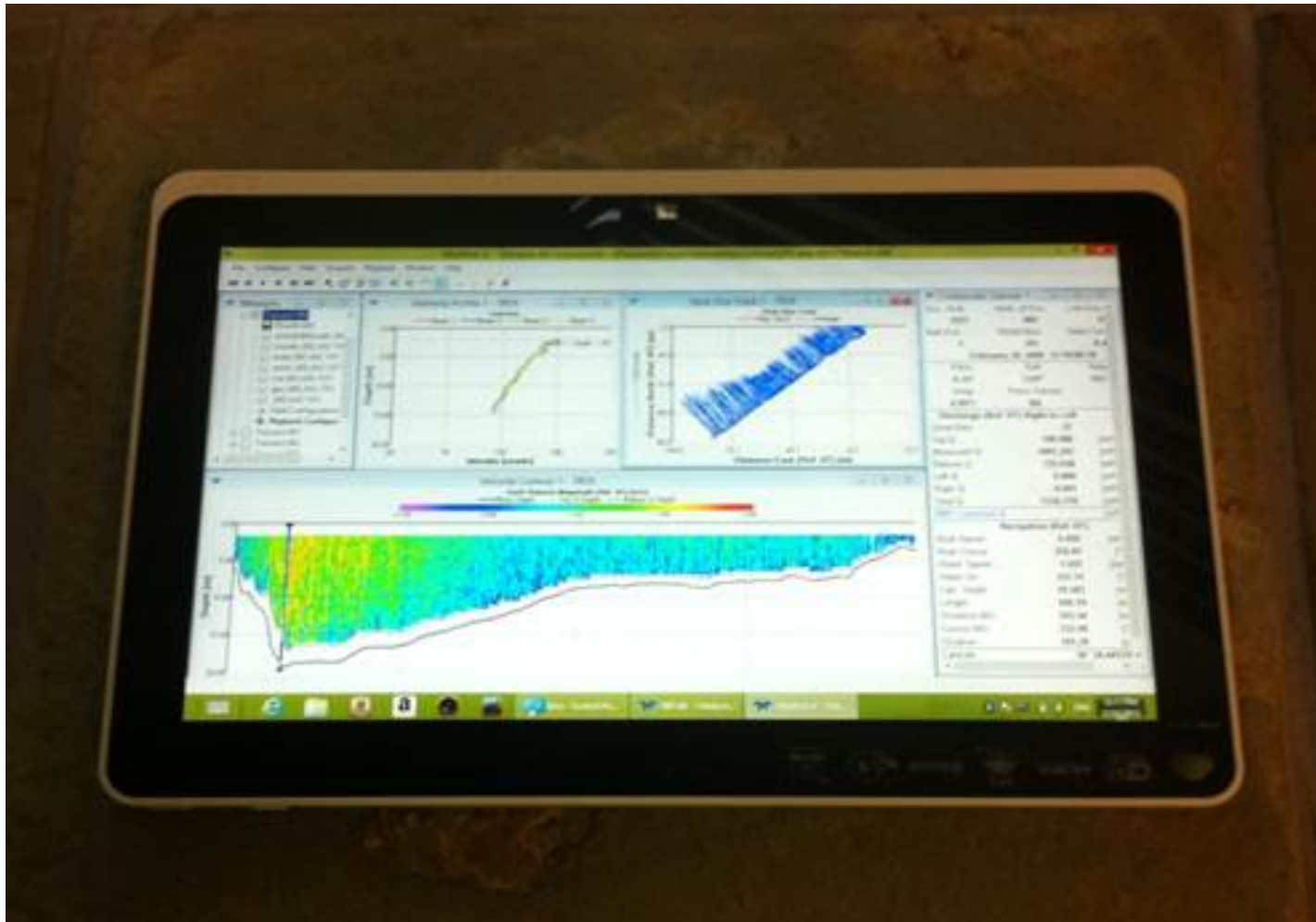
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# Tablet Interface – Windows 8



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