

# Bathymetry Cross-Section Test Script

## Overview

This script runs a full pipeline test using `EcoSons` to:

1. Load sonar data from `.raw` files.
2. Compute the bottom detection using parameters defined in a JSON config.
3. Generate bathymetry from the bottom-detected data.
4. Compute transect cross-sections from the bathymetry.
5. Plot and export the resulting transects to a file.

It is designed to be run either:

- As an individual test script.
- Or as part of a full package test using `Pkg.test()`.

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## 1. Transect Cross Computation

```
TRANSECTCROSS, useUTM = computeCrosses(baths;  
    point_subsampling = config["bathycross"]["point_subsampling"],  
    use_utm = config["bathycross"]["useUTM"]  
)
```

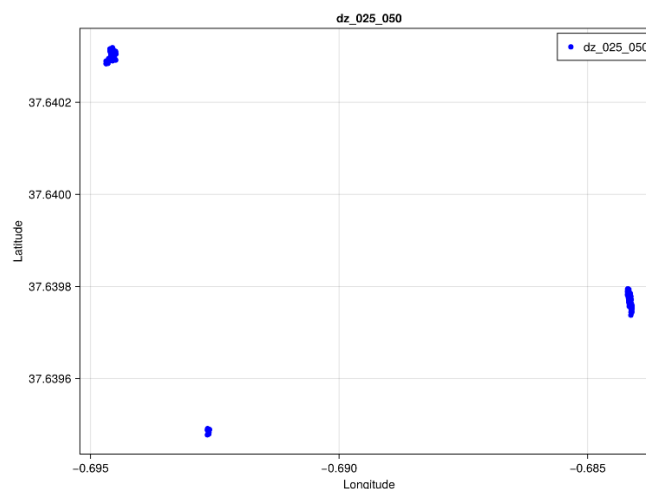
Computes cross-sectional profiles of the seabed. If `useUTM = true`, geographic coordinates are converted to UTM for better planar interpolation.

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## 2. Plotting

```
plot_bathycross(TRANSECTCROSS, useUTM)
```

Generates and displays a cross-sectional plot of the seabed profile.



Bathymetry cross-section where the differences of depth are between 0.25 and 0.5

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### 3. Export to File

```
export_bathycross(TRANSECTCROSS, export_file)
```

Saves transect cross-section data (e.g., distances and depths) to a .dat file specified in the config.