

April, 2015
Ocean group 4th section
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Caris HIPS software

Bug with processing data in MB41 format

We regret to inform you that we found a problem that occurs when the MB41 data obtained with SeaBeam2112 is imported into Caris HIPS multi-beam data processing software. Caris is now working on fixing this bug as soon as possible. We apologize for causing you trouble because of this bug and would appreciate your patience until it is fixed.

Bug details

If SeaBeam2112 system's MB41 data is imported into HIPS, the draft value set for Delta Draft in the Seabeam system is loaded as well so that the draft correction is done redundantly with the draft value set in Vessel config. Caris has announced that this bug occurs on HIPS5.4 (released in 2004) and later versions.

Cause

When data in the MB41 format is imported, the draft value in the header of the sound profile part included in this data is imported and saved inappropriately as Delta Draft.

Workaround

With the currently available versions, the Delta Draft cannot be changed and so the draft value in the Vessel config needs to be set to 0 as a workaround until this bug is fixed by Caris.

We verified a way to correct data already processed with redundant draft values on HIPS. Usually, MB41 data is processed by "Load tide" and "Merge" on HIPS without the SVC process. So we compared output sounding data between when 0 was set as the draft value in Vessel config and when the correct draft value was set. Furthermore, to verify which sounding values are correct, we made a comparison also with sounding values in the MB41 file (more specifically values to which the draft value has been added in the Seabeam system).

The detailed conditions are as below:

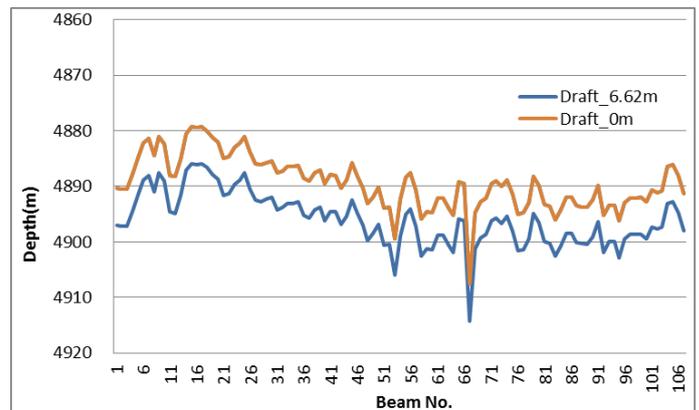
- Water depth: about 4900m
- Swath width: about 50 degrees
- Sea area condition: Flat
- Comparison scope: 1 swath
- Correct draft value: 6.62

As a result, we have found the differences in all the beams of one swath between the draft settings “0” and “6.62” were equal to just the amount of the draft. This means the HIPS software does not correct the sound velocity and adds the draft value to sounding values in the Merge process. We also confirmed that the sounding values when the draft is set to 0m completely match those in the MB41 file (values with the draft value added in the Seabeam system) for all the points in one swath.

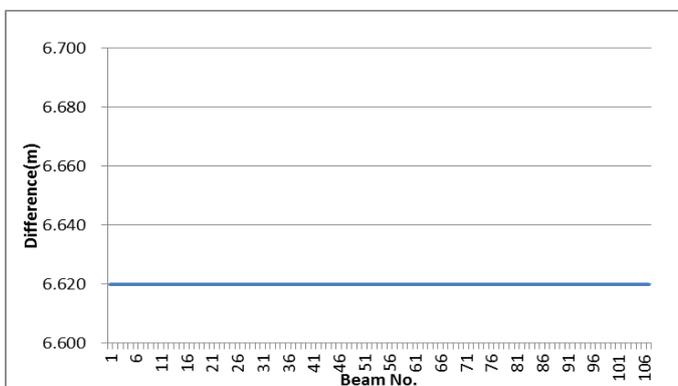
From this verification, we have confirmed that setting the draft value to 0 in Vessel config would yield the same sounding values as what Seabeam outputs in real-time with the draft added.

Therefore, sounding data already output in the Lat-Lon-Depth format can be corrected by deducting the draft value set in Vessel config for the HIPS process from the sounding values.

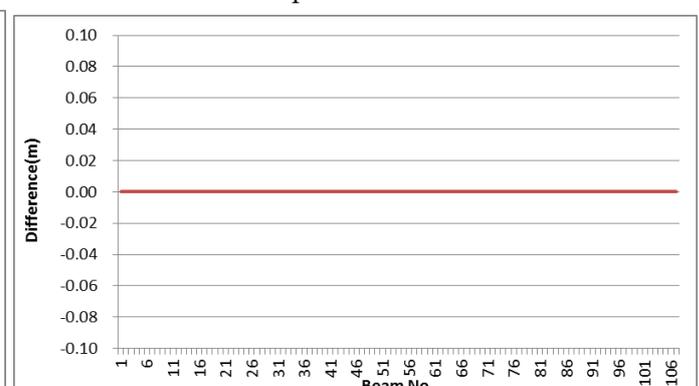
Once again, we apologize for all the inconveniences.



Depth cross-section view



Difference (draft 6.62m VS 0m)



Difference (draft 0m VS depth in MB41)