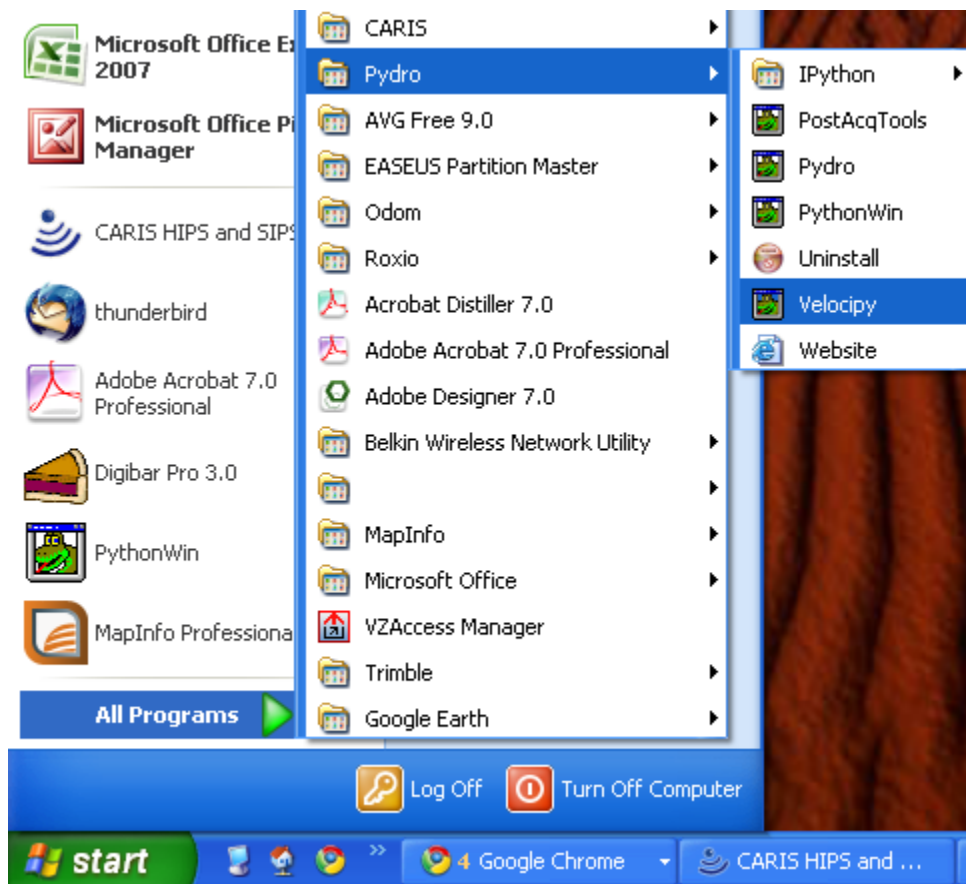


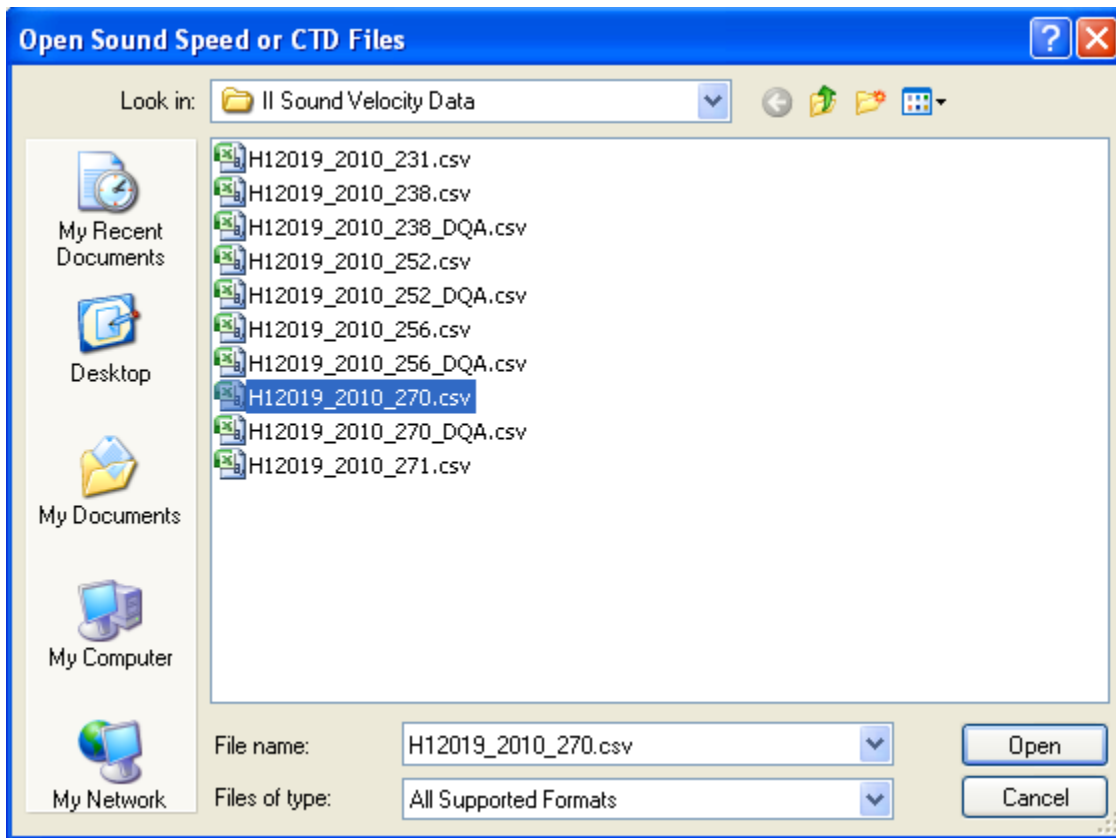
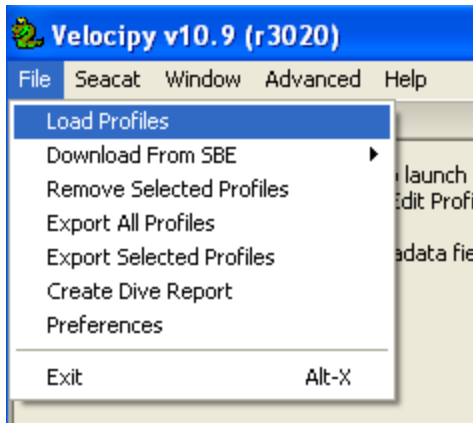
VELOCIPY QUICK REFERENCE / SOP

Foreword: This Quick Reference is not aiming at covering all the functionalities that are offered in Velocipy. Instead it is presenting a simple SOP to help the user transfer Sound Speed Profiles data into a .svp file for use in Caris.

- a) Velocipy is part of Pydro v10. It is accessible through the Windows *START* button/*All Programs/Pydro/Velocipy*



- b1) To load casts that were recorded with an **Odom Digibar Pro**, use *File/Load Profiles* and point at your .csv file previously transferred to your computer with the Digibar Pro software.

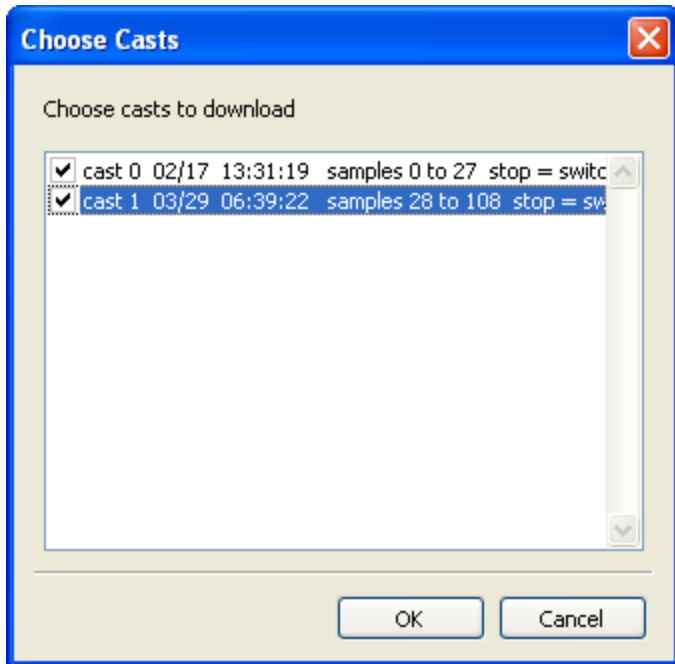


b2) To load a cast that was recorded using a **SBE Seacat**, you will have to download and install a program extension that is available on the Hydrosoft website :

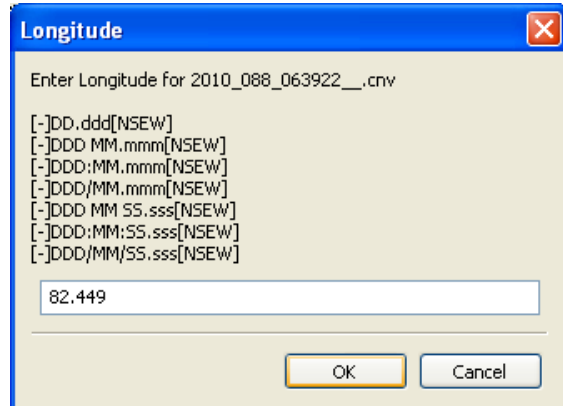
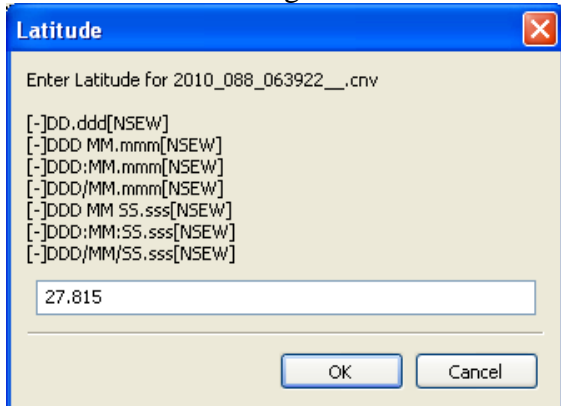
<https://inside.nos.noaa.gov/hydrosoft/welcome.html>

Under the Pydro section, look for: *SBEDataProcessing_Win32_V7_20c.exe*

Then go to *File/ Download from SBE*. You will have the options between download All / Selected / Cast.



and enter Lat and Long



c) Enter Cast's Attributes:

Enter your project#, Survey#, NOAA Unit, Instrument used, user name, process date, and Latitude and Longitude of your cast.

Then press the 'APPLY' button, and notice the cast attributes in the 'Loaded Profiles' window.

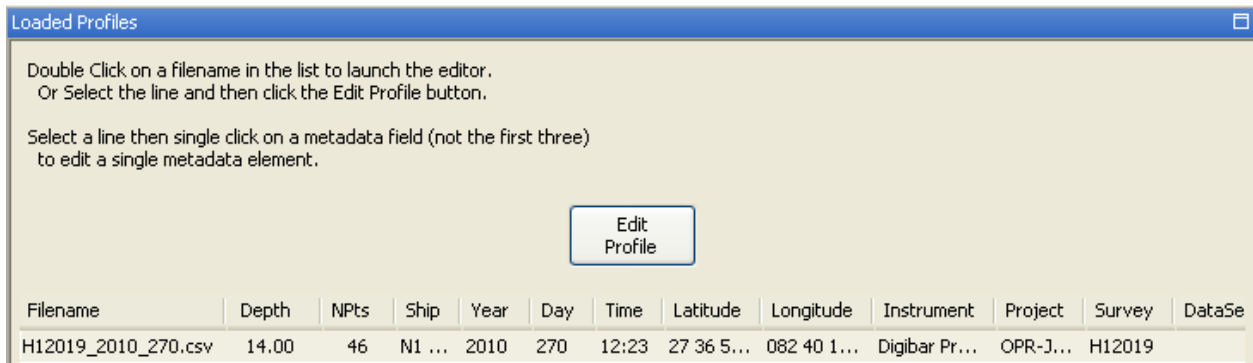
Note 1: If needed, Velocipy has the capacity to extend the depth of your cast, and also do some Edits of the plot.

Note 2: Remember that Velocipy WILL NOT change the metadata of your initial .csv or .hex cast. If you close your cast with *File/Remove Selected Profile* or close out of Velocipy, and then re-load the cast, you will have to re-enter the attributes in the metadata.

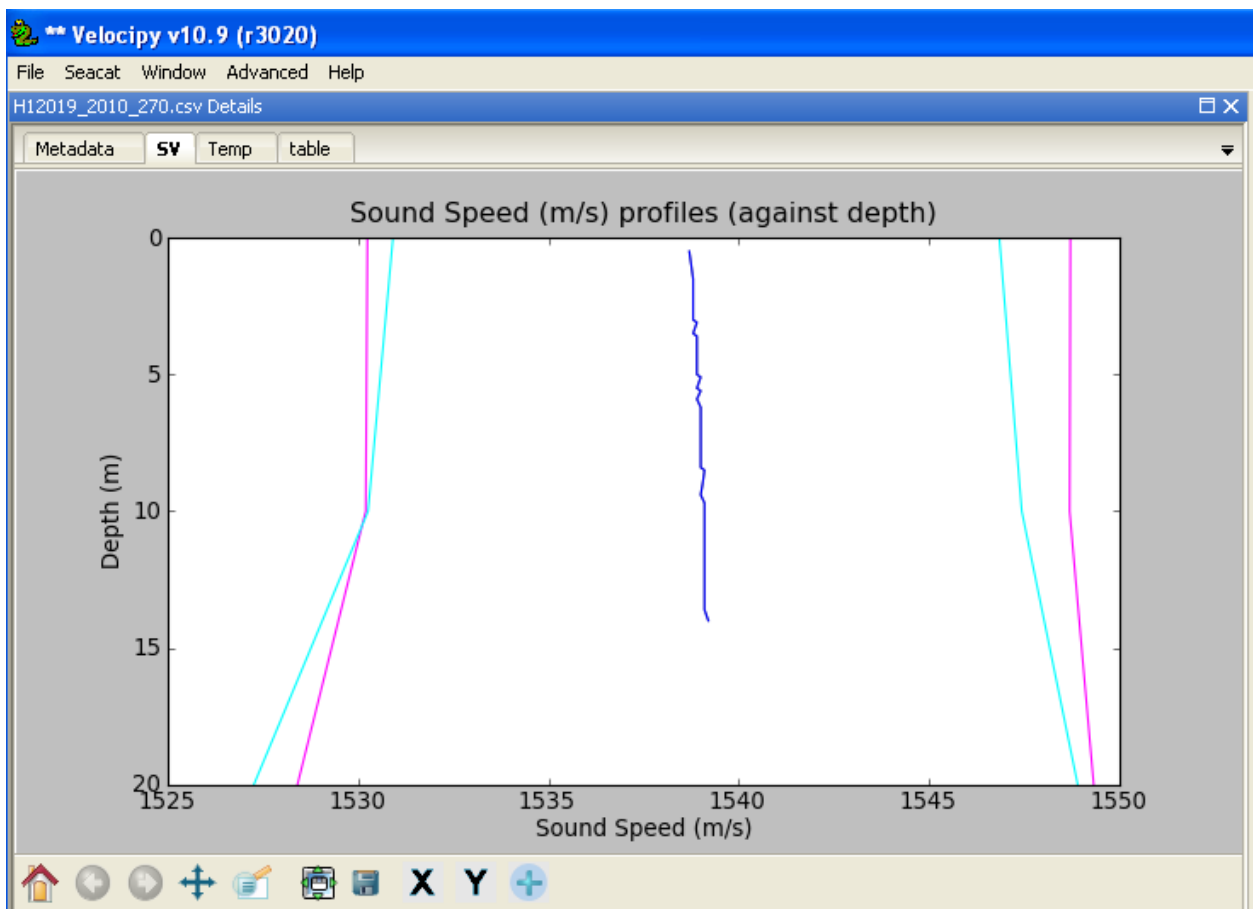
The screenshot shows the 'Metadata' window in the Velocipy v10.9 (r3020) software. The window title is 'H12019_2010_270.csv Details'. The 'Metadata' tab is selected, showing a form with the following fields and values:

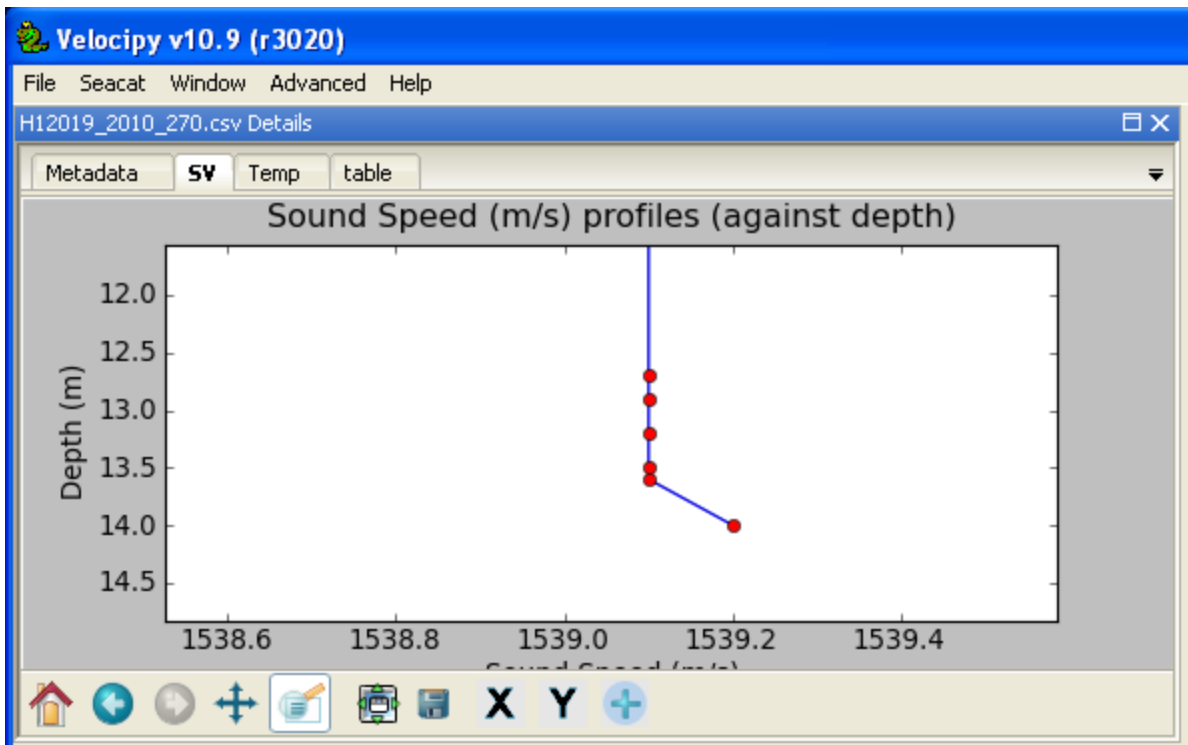
Project	OPR-J417-NRT1-10	Survey	H12019
Data Set Identifier		Simrad Files Path	<input type="text"/> <input type="button" value="Browse"/>
Year	2010	NOAA Unit	N1 NRT-1 GULF
Day of Year	270	Time HH:MM	12:23
Lat	27 36 54.0000N	Lon	082 40 12.0000W
Instrument	Digibar Pro#98294	Draft (meters)	<input type="text"/>
Username	abp	Process Date	10/5/2010

At the bottom of the window, there are several buttons: 'Extend Cast', 'Smooth Cast', '(Re)Compute Sound Speed', 'Plot Additional Measurement', 'Add/Replace Measurement', 'Apply', and 'Reset Metadata'.



- d) A sound velocity graph is viewable by clicking on the *SV tab* in the Metadata window, and you can change the sound speed/depth units (X and Y buttons), zoom in (Magnifier tool), and take a look/edit cast points (+ button). You can select the other tabs to see additional representation of your data: Temperature (n/a for Digibar Pros) and Table view.





2010_088_063922_._HEX Details

Metadata SV Temp Sal **table**

	pressure	conductivity	temperature	salinity	density	soundspeed
0	0.1786	3.1697	19.8145	22.2211	15.0903	1506.7111

e) Data Quality Assurance (DQA) / Compare 2 casts

To compare two casts taken simultaneously, select both casts and right-click to choose 'DQA Compare 2 casts'

The screenshot shows the Velocipy v10.9 (r3020) interface. It features two 'Details' windows for CSV files and a 'Loaded Profiles' window. The 'Details' windows show metadata for 'H12019_2010_270.csv' and 'H12019_2010_270_DQA.csv', including fields for Project, Survey, Data Set Identifier, Simrad Files Path, Year, NOAA Unit, Day of Year, Time HH:MM, and Lat/Lon. The 'Loaded Profiles' window contains instructions and an 'Edit Profile' button. Below the instructions is a table of loaded profiles with columns: Filename, Depth, NPts, Ship, Year, Day, Time, Latitude, Longitude, Instrument, Project, Survey, and D. Two rows are selected, and a context menu is open over them, with 'DQA Compare Two Casts' highlighted.

Metadata for H12019_2010_270.csv:

- Project: OPR-J417-NRT1-10
- Survey: H12019
- Data Set Identifier: [Empty]
- Simrad Files Path: [Empty]
- Year: 2010
- NOAA Unit: N1 NRT-1 GULF
- Day of Year: 270
- Time HH:MM: 12:23
- Lat: [Empty]
- Lon: [Empty]

Metadata for H12019_2010_270_DQA.csv:

- Project: OPR-J417-NRT1-10
- Survey: H12019
- Data Set Identifier: [Empty]
- Simrad Files Path: [Empty]
- NOAA: [Empty]

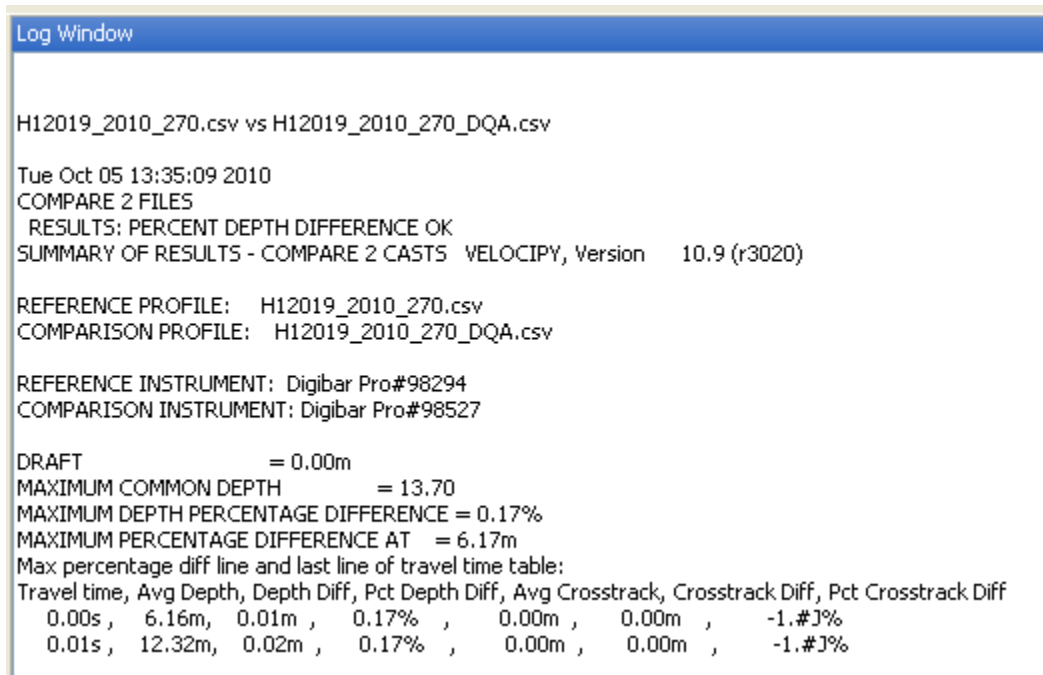
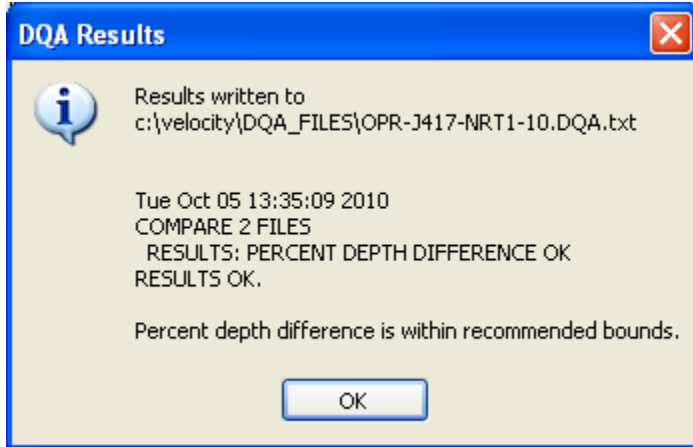
Loaded Profiles Table:

Filename	Depth	NPts	Ship	Year	Day	Time	Latitude	Longitude	Instrument	Project	Survey	D
H12019_2010_270.csv	14.00	46	N1 ...	2010	270	12:23	27 36 5...	082 40 1...	Digibar Pr...	OPR-J...	H12019	
H12019_2010_270_DQA.csv	13.70	48	N1 ...	2010	270	12:26	27 36 5...	082 40 1...	Digibar Pr...	OPR-J...	H12019	

Context Menu Options:

- Create Correctors File(s)
- Export Selected Profiles
- Remove Selected Profiles
- Setup Monitoring
- Setup Pydro Surface
- Surface DQA
- Copy As
- Dive Report
- Append Deepest Selected To Rest Of Selected
- DQA Compare Two Casts**
- Depth Plot Comparison

The results will appear in a separate window, and additional information will appear in the Log Window.



f) Cast Export

You can Export profiles from the File tab. A *File Export Settings* window will pop up, and you can point to your Caris/ SVP folder.

After you click OK, the Log Window should read *'exported sound speed profile successfully'*.

The screenshot shows the Velocipy v10.9 (r3020) software interface. The 'File' menu is open, highlighting 'Export Selected Profiles'. The 'File Export Settings' window is visible, showing fields for Survey (H12019), Simrad Files Path, NOAA Unit (N1 NRT-1 GULF), Time (12:23), and Day of Year (270). Below this is the 'H12019_2010_270_DQA.csv Details' window, which has tabs for 'Metadata', 'SV', 'Temp', and 'table'. The 'Metadata' tab is active, showing fields for Project (OPR-J417-NRT1-10), Survey (H12019), Data Set Identifier, Simrad Files Path, and NOAA. At the bottom is the 'Loaded Profiles' window, which contains instructions on how to edit a profile and a table of loaded profiles.

Filename	Depth	NPts	Ship	Year	Day	Time	Latitude	Longitude	Instrum
H12019_2010_270.csv	14.00	46	N1 ...	2010	270	12:23	27 36 5...	082 40 1...	Digibar F
H12019_2010_270_DQA.csv	13.70	48	N1 ...	2010	270	12:26	27 36 5...	082 40 1...	Digibar F

File Export Settings

Select Files to Save

Previously Selected Target Paths

Simrad SSP and ASVP Files
 DEFAULT Data Set ID: 0
Extend To Depth: 12000
{velocity}\EXPORTS\
Browse

HydroStar SVA File
 c:\velocity\EXPORTS\
Browse

Caris HIPS SVP file
 X:\OPR-J417-NRT1-09\H12019\CARIS\SVP
Browse

Append to a Caris HIPS SVP file
 J417-NRT1-09\H12019\CARIS\SVP\H12019.svp
Browse

"Velocwin" Flagged data Q File
 c:\velocity\EXPORTS\
Browse

OK
Cancel

Log Window

H12019_2010_270.csv vs H12019_2010_270_DQA.csv

Tue Oct 05 13:35:09 2010

COMPARE 2 FILES

RESULTS: PERCENT DEPTH DIFFERENCE OK

SUMMARY OF RESULTS - COMPARE 2 CASTS VELOCIPY, Version 10.9 (r3020)

REFERENCE PROFILE: H12019_2010_270.csv

COMPARISON PROFILE: H12019_2010_270_DQA.csv

REFERENCE INSTRUMENT: Digibar Pro#98294

COMPARISON INSTRUMENT: Digibar Pro#98527

DRAFT = 0.00m

MAXIMUM COMMON DEPTH = 13.70

MAXIMUM DEPTH PERCENTAGE DIFFERENCE = 0.17%

MAXIMUM PERCENTAGE DIFFERENCE AT = 6.17m

Max percentage diff line and last line of travel time table:

Travel time	Avg Depth	Depth Diff	Pct Depth Diff	Avg Crosstrack	Crosstrack Diff	Pct Crosstrack Diff
0.00s	6.16m	0.01m	0.17%	0.00m	0.00m	-1.#J%
0.01s	12.32m	0.02m	0.17%	0.00m	0.00m	-1.#J%

Exported sound speed profiles successfully

That's it!