

# SeaSonde10

## Classic Total Vector File Format

Oct 26, 2005

Note that this file format is being replaced by the newer LLUV style. See the File\_LonLatUV document. Currently SeaSonde10 will produce either or both types.

Total Vector files are text based and require a linefeed character (ASCII 10) as an end-of-line indicator.

File Name Format is normally "Tot\_XXXX\_YY\_MM\_DD\_HHMM.tv"

XXXX is the four character combine site name

YY-MM-DD is the two digit year month day of radial. Example '02-06-18' Jun 18,2002

HHMM is the hour and minute of the radial. '0000' is midnight. '1300' is 1pm

### **File Contents:**

**Line 1:** 'Total Vectors' constant

**Line 2: Parameter 1:** 'Format Version #' constant

**Line 2: Parameter 2:** *Format Version* should be 1,2,3,4,5,6,7

(SeaSonde4.4 uses 4)

(SeaSonde4.3 uses 2)

**Line 2: Parameter 3:** Optional Version type. This value is set to one when the u,v orientation is known to be relative to True North at each vector location.

If missing or zero, then the orientation should be considered True North at the Origin location and the Combining of u,v did not use GreatCircle adjustments.

**Line 3: Parameter 1:** 46 characters of long date string of total

**Line 3: Parameter 2:** Keyword "Org:" followed by of total origin position. Formatted as 00°00.000N,000°00.000E

**Repeat** with each line until end of file

**If** (*Format Version is 1*) then

**Line N: Parameter 1:** Eastward distance from origin in kilometers (3digit precision)

**Line N: Parameter 2:** Northern distance from origin in kilometers (3digit precision)

**Line N: Parameter 3:** Eastward current velocity in cm/s (3digit precision)

**Line N: Parameter 4:** Northern current velocity in cm/s (3digit precision)

**Else if** (*Format Version is 2*) then

**Line N: Parameter 1:** Eastward distance from origin in kilometers (6digit precision)

**Line N: Parameter 2:** Northern distance from origin in kilometers (6digit precision)

**Line N: Parameter 3:** Eastward current velocity in cm/s (6digit precision)

**Line N: Parameter 4:** Northern current velocity in cm/s (6digit precision)

**Line N: Parameter 5:** Number of radial vectors contributed from site 1

**Line N: Parameter 6:** Number of radial vectors contributed from site 2

**Line N: Parameter 7:** Number of radial vectors contributed from site 3

**Line N: Parameter 8:** Number of radial vectors contributed from site 4

**Line N: Parameter 9:** Number of radial vectors contributed from site 5

**Line N: Parameter10:** Number of radial vectors contributed from site 6

**Else if** (*Format Version is 3*) then

**Line N: Parameter 1:** Eastward distance from origin in kilometers (8digit precision)

**Line N: Parameter 2:** Northern distance from origin in kilometers (8digit precision)  
**Line N: Parameter 3:** Eastward current velocity in cm/s (6digit precision)  
**Line N: Parameter 4:** Northern current velocity in cm/s (6digit precision)  
**Line N: Parameter 5:** Eastward uncertainty velocity in cm/s (6digit precision)  
**Line N: Parameter 6:** Northern uncertainty velocity in cm/s (6digit precision)  
**Line N: Parameter 7:** *Vector Indicator Flag*

**Else if** (*Format Version is 4*) then

**Line N: Parameter 1:** Eastward distance from origin in kilometers (8digit precision)  
**Line N: Parameter 2:** Northern distance from origin in kilometers (8digit precision)  
**Line N: Parameter 3:** Eastward current velocity in cm/s (6digit precision)  
**Line N: Parameter 4:** Northern current velocity in cm/s (6digit precision)  
**Line N: Parameter 5:** Eastward uncertainty velocity in cm/s (6digit precision)  
**Line N: Parameter 6:** Northern uncertainty velocity in cm/s (6digit precision)  
**Line N: Parameter 7:** Vector Indicator Flag. Indicates status of the vector like near

coastline, ADCP location, interpolated value, and more. *See the Vector Indicator Flag document for the complete information on use of this flag.*

**Line N: Parameter 8:** Covariance

**Line N: Parameter 9:** Latitude of vector in fractional degrees (*6digit precision*)

**Line N: Parameter 10:** Longitude of vector in fractional degrees (*6digit precision*)

**Line N: Parameter 11:** Number of radial vectors contributed from site 1

**Line N: Parameter 12:** Number of radial vectors contributed from site 2

**Line N: Parameter 13:** Number of radial vectors contributed from site 3

**Line N: Parameter 14:** Number of radial vectors contributed from site 4

**Line N: Parameter 15:** Number of radial vectors contributed from site 5

**Line N: Parameter 16:** Number of radial vectors contributed from site 6

**End if**

**End Repeat**

**End File**

### **Line 2 Examples**

Format version # 1 ! Vectors: dx dy u v

Format version # 2 ! Vectors: dx dy u v n1 n2 n3 n4 n5 n6

Format version # 3 ! Vectors: dx dy u v eu ev gridflag

Format version # 4 1 ! Vectors: dx dy u v eu ev gridflag cov lat lon n1 n2 n3 n4 n5 n6

Format version # 5 1 ! Vectors: dx dy u v etmp espc gridflag rsvd lat lon dist bear rvel

Format version # 6 1 ! Vectors: dx dy u v bear rvel etmp espc rc

Format version # 7 1 ! Vectors: dx dy u v bear rvel etmp vmax vmin rc espc

Versions 5,6, & 7 are used only internally by radial and elliptical processing