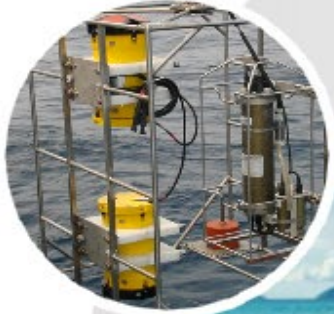
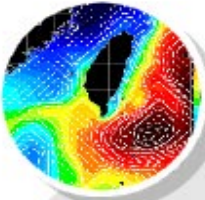


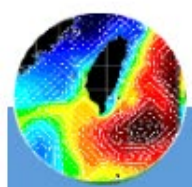
Acoustic Doppler Current Profiler

邵煥傑

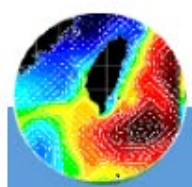
江秉崑

翁立南





副檔名	說明
.ENR	ADCP資料的原始(Raw)檔案(Binary格式)
.LTA	長時間週期的ADCP平均資料(Binary格式，已包含經緯度資料)
.STA	短時間週期的ADCP平均資料(Binary格式，已包含經緯度資料)
.ENS	ADCP data已經被VmDas利用RSSI和correlation篩選過或被User Exit調整過的資料，它也包含有經緯度的資料。
.ENX	ADCP單一個ping的資料，它也包含經緯度的資料，經過座標轉換以及error velocity、vertical velocity和false targets的篩選。
.N1R & .N2R	原始經緯度與pitch&roll的資料，是文字格式(text files)，其中包含ADCP的時間，它的格式為\$PADCP,eeee,yyyymmdd,hhmmss,-nnnnn.nn，其中eeee是ADCP ensemble的數目，yyyymmdd是年、月、日的時間，hhmmss.ss是小時、分、秒，-nnnnn.nn = (signed) PC clock offset from UTC in seconds; includes time zone difference)。
.VMO	蒐集資料時的設定檔(text file)。
.VMP	再處理(reprocess)資料時的設定檔(text file)。
.LOG	為ASCII檔案，裡面紀錄所有因為全球定位系統，ASCII Ensemble輸出或是ADCP信號傳送過程而產生的錯誤訊息。



Data

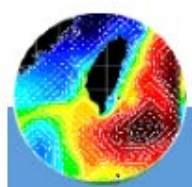
檔案總管 檢視

預覽

.LTA 長時間週期平均資料

.STA 短時間週期平均資料

- | | | | | | | | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| C2129113_0000
00.ENR | C2129113_0000
00.ENS | C2129113_0000
00.ENX | C2129113_0000
00 | C2129113_0000
00.LTA | C2129113_0000
00.N1R | C2129113_0000
00.N3R | C2129113_0000
00.NMS | C2129113_0000
00.STA | C2129113_0000
00.VMO | C2129114_0000
00.ENR |
| C2129114_0000
00 | C2129114_0000
00.N1R | C2129114_0000
00.N3R | C2129114_0000
00.NMS | C2129114_0000
00.VMO | C2129115_0000
00.ENR | C2129115_0000
00.ENS | C2129115_0000
00.ENX | C2129115_0000
00.N1R | C2129115_0000
00.N3R | C2129115_0000
00.NMS |
| C2129115_0000
00.VMO | C2129116_0000
00 | C2129116_0000
00.N1R | C2129116_0000
00.N3R | C2129116_0000
00.VMO | C2129117_0000
00.ENR | C2129117_0000
00.ENS | C2129117_0000
00.ENX | C2129117_0000
00 | C2129117_0000
00.LTA | C2129117_0000
00.N1R |
| C2129117_0000
00.N3R | C2129117_0000
00.NMS | C2129117_0000
00.STA | C2129117_0000
00.VMO | | | | | | | |



WinADCP

File → OPEN(選擇要開的檔案)

WinADCP - Wtsclient\DL\ADCP航次資料\OR3\1496\ADCP14961fs\C1496000_000_000000.LTA

File Edit Options Animate Export Utilities Window Monitor Help

WinADCP Information Whole Set --- Deployment Duration: 04:50:03.35

File Edit Op ADCP基本資訊 ties Window Monitor Help

WinADCP Information

```
\\tsclient\D\LADCP航次資料\OR3\1496\ADCP14961fs\C1496000_000_000000.LTA
File Size 72,450 bytes
BB/WH Ensemble Length 2415 bytes
System Frequency: 76.8 kHz
1st Bin -24.72 m, Bin Size 16.00 m
No. Bins 100, Pings/Ens 122, Time/Ping 00:01.50
First Ensemble 00000001 10/10/25 05:00:33.51
Last Ensemble 00000030 10/10/25 09:50:36.86
Average Ensemble Interval 00:10:00.12
```

Whole Set

VELOCITY

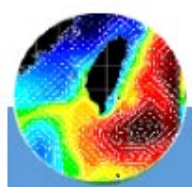
Avg = 20

Range (m)

Bin

Sub Set --- Deployment Duration: 04:50:03.35

Profile VELOCITY MAGNITUDE - BT



決定參考速度：Options → Chart Options → Processing

WinADCP - Wtsclient\DL\ADCP新次資料\OR3\1496\ADCP1496

File Edit Options Animate Export Utilities Window Monitor Help

WinA Chart Options

- Contour
- Profile
- Series
- Ancillary
- Processing

\\tsclient\DL\ADCP新次資料\OR3\1496\ADCP1496fs\C1496

File Size 72,450 bytes

BB/WH Ensemble Length 24

System Frequency: 76.8 kHz

1st Bin -24.72 m, Bin Size 10.00 m

No. Bins 100, Pings/Ens 122, Time/Ping 00:01.50

First Ensemble 00000001 10/10/25 05:00:33.51

Last Ensemble 00000030 10/10/25 09:50:36.86

Average Ensemble Interval 00:10:00.12

WINADCP Chart Options

Contour Profile Series Ancillary Processing

Velocity Reference

- None
- Bottom Track
- Navigation (VMDAS)
- GPS(GGA)
- GPS(MTC)
- Water

Velocity Scale

Water 1.000

Bottom 1.000

End of Profile

- BT De
- RSSI Bump Detection
- Cos(BeamAngle)
- Cut 1 Bin
- Cut 2 Bins

Sub Set --- Deployment Duration:

Profile

Magnitude-B	Direction-B

Scale (mm/s)

347

Duration: 04:50:0

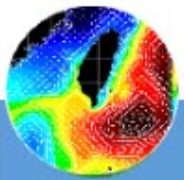
BT

1 hr

6 8 10

Default Load Save OK Cancel Apply

- 水深<400m，選擇Bottom Track
- 水深>400m，選擇Navigation



資料輸出 → Export → Series/Ancillary

WinADCP - Wtsclient\DL\ADCP航次資料\OR3\1496\ADCP14961fs\C1496000_000_000000.LTA

File Edit Options Animate

• 依所需選擇TXT or MAT

WinADCP Information

\\tsclient\D\LADCP航次資料\OR3\1496\ADCP14961fs\C1496000_000_000000.LTA
File Size 72,450 bytes
BB/VH Ensemble Length 2415 bytes
System Frequency: 76.8 kHz
1st Bin -24.72 m, Bin Size 16.00 m
No. Bins 100, Pings/Ensb 122, Time/Ping 00:01.50
First Ensemble 00000001 10/10/25 05:00:33.51
Last Ensemble 00000030 10/10/25 09:50:36.86
Average Ensemble Interval 00:10:00.12

VELOCITY
Avg = 284

Range (m)
-500
-1000
-1500

WINADCP Export Options

Contour Profile Series/Ancillary

File Type
 TXT
 MAT

Series Data Types

Velocity Correlation Echo Amplitude Percent Good

East (u) Bm1 Bm1 PG1
 North (v) Bm2 Bm2 PG2
 Vertical (w) Bm3 Bm3 PG3
 Error Bm4 Bm4 PG4
 Magnitude Avg Avg
 Direction

Ensemble
First 1
Last 30
Step 1

Anc Data Types

Pitch Bottom Track Water Mass WinRiver
 Pitch East (u) East (u) WinRiver
 Roll North (v) North (v) Navigation
 Heading Vert (w) Vert (w) East (u)
 Temperature Error Error North (v)
 Depth Mag Mag Dir
 Orientation Dir Dir Lat/Lon
 BIT BT Depth MicroCAT
 Battery

Bins
All None

1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11

Write File Quit Export

Sub Set --- Deployment Duration: 04:50-03.35

Profile VELOCITY MAGNITUDE - BT
Avg = 284 σ 137
0 hr

Magnitude-B Direction-B

1 hr

• 依所需選擇層數
• 可全選

500 mm/s
1250 mm/s
2000 mm/s

90 degrees
180 degrees
270 degrees

1 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

Ensemble Date, Time Lat, Lon

10/10/25, 05:00:33.51 22.6330 σ , 120.1520 σ

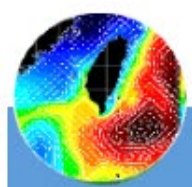
10/10/25, 09:50:36.86 22.5987 σ , 120.1133 σ

Sel: 1 to 30
Sub: 1 to 30

10
25
40
55
70
85
100

28 30
10/10/25
09:50:36.86

0
25
40
55
70
85
100



依需求勾選轉出的資訊，
基本建議選擇如下

WINADCP Export Options

Contour | Profile | Series/Ancillary

File Type
 TXT
 MAT

Bins
 All None
 1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11

Series Data Types

Velocity	Correlation	Echo Amplitude	Percent Good
<input checked="" type="checkbox"/> East (u)	<input type="checkbox"/> Bm1	<input type="checkbox"/> Bm1	<input type="checkbox"/> PG1
<input checked="" type="checkbox"/> North (v)	<input type="checkbox"/> Bm2	<input type="checkbox"/> Bm2	<input type="checkbox"/> PG2
<input type="checkbox"/> Vertical (w)	<input type="checkbox"/> Bm3	<input type="checkbox"/> Bm3	<input checked="" type="checkbox"/> PG3
<input type="checkbox"/> Error	<input checked="" type="checkbox"/> Avg	<input checked="" type="checkbox"/> Avg	<input checked="" type="checkbox"/> PG4
<input type="checkbox"/> Magnitude			
<input type="checkbox"/> Direction			

Anc Data Types

	Bottom Track	Water Mass
<input type="checkbox"/> Pitch	<input type="checkbox"/> East (u)	<input type="checkbox"/> East (u)
<input type="checkbox"/> Roll	<input type="checkbox"/> North (v)	<input type="checkbox"/> North (v)
<input type="checkbox"/> Heading	<input type="checkbox"/> Vert (w)	<input type="checkbox"/> Vert (w)
<input type="checkbox"/> Temperature	<input type="checkbox"/> Error	<input type="checkbox"/> Error
<input type="checkbox"/> Depth	<input type="checkbox"/> Mag	<input type="checkbox"/> Mag
<input type="checkbox"/> Orientation	<input type="checkbox"/> Dir	<input type="checkbox"/> Dir
<input type="checkbox"/> BIT	<input type="checkbox"/> BT Depth	
<input type="checkbox"/> Battery		

Ensemble
 First: 1
 Last: 30
 Step: 1

Navigation
 WinRiver
 East (u)
 North (v)
 Mag
 Dir
 Lat/Lon
 MicroCAT

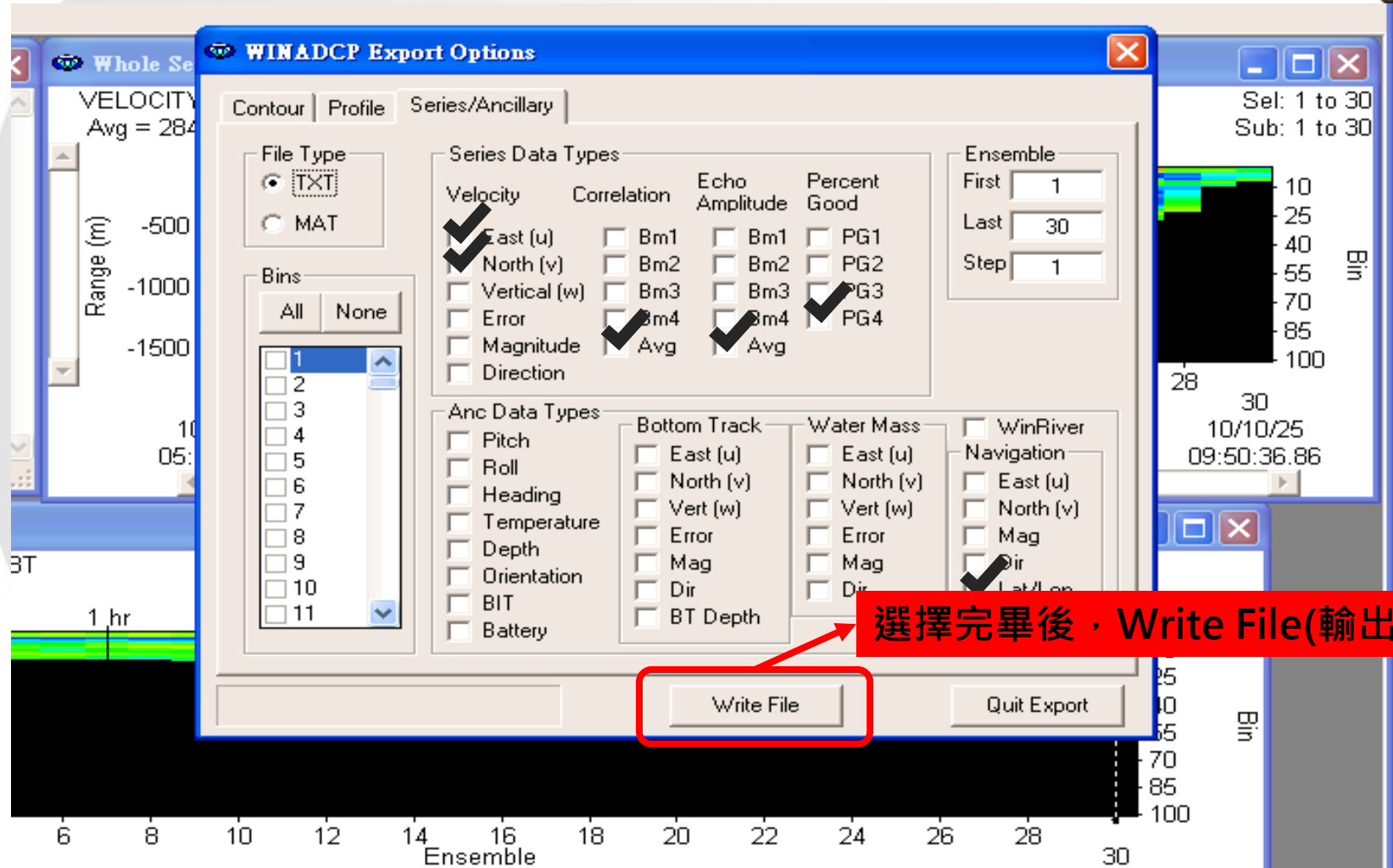
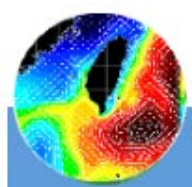
Write File | Quit Export

選擇輸出格式

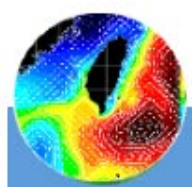
Sel: 1 to 30
Sub: 1 to 30

資料筆數必須一樣





選擇完畢後，Write File(輸出檔案)



**THANK YOU FOR
YOUR ATTENTION**