



# نتایج بررسی سانحه تصادم کشتی تانکر سانچی با کشتی فله بر کریستال

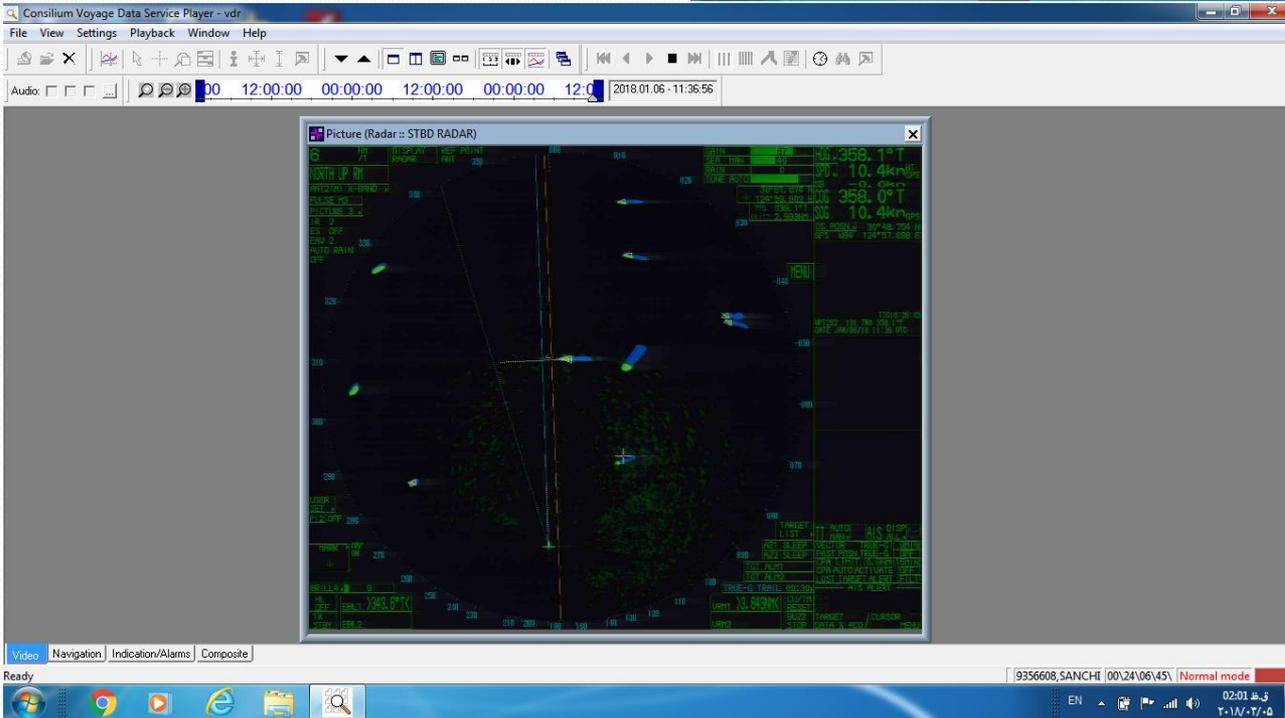
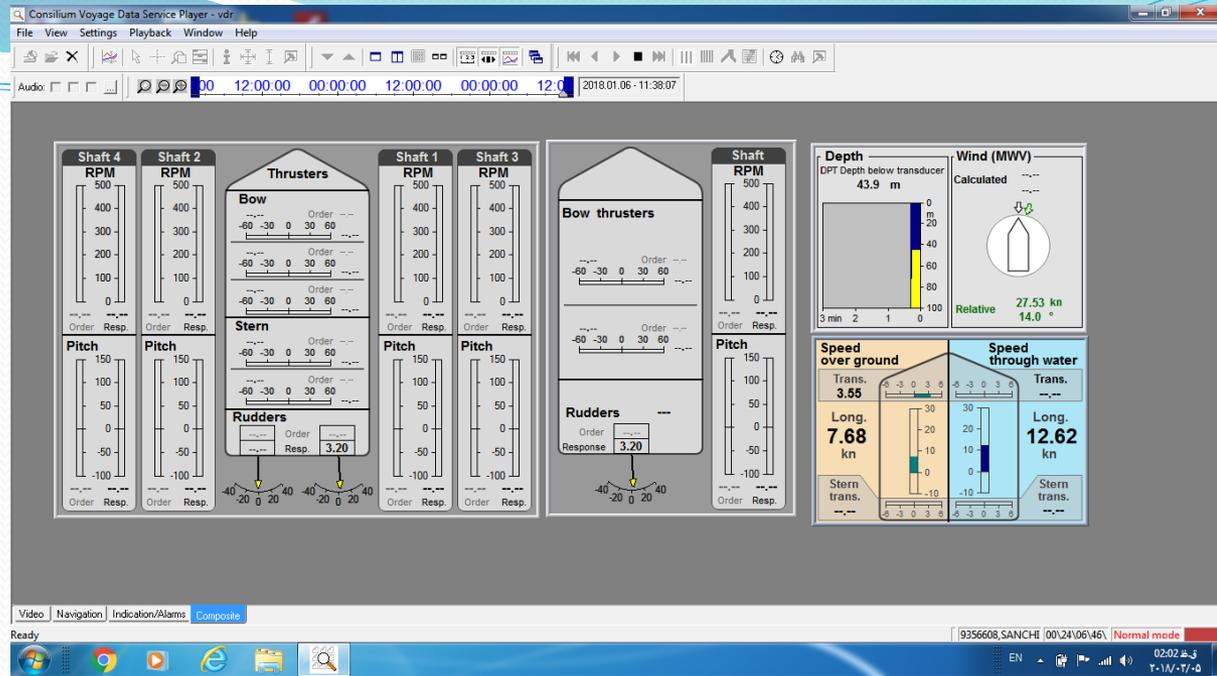
سازمان بنادر و دریانوردی - اردیبهشت ۱۳۹۷



# Information exchanged includes:

- (1) Ship certificates, crew certificates, company safety management system documents, PSC inspection reports, general arrangement plan and maneuverability information.
- (2) Analysis of the AIS dynamic data and voyage related data of SANCHI, SANCHI's VDR playback information and identity of watchkeepers on SANCHI's bridge at the time of the accident.
- (3) The distress alert of SANCHI's INMARSAT C and survey of SANCHI's shipwreck.
- (4) SANCHI's Last port departure report, bill of lading, stowage plan and cargo characteristics.
- (5) The progress of the technical recovery of CF CRYSTAL's VDR data.
- (6) VDR data from MAERSK SHAMS and TRF MONGSTAD. 5
- (7) Pictures and video data of Emergency response and SAR.
- (8) Interview of CF CRYSTAL's crew.

# اطلاعات جعبه سیاه تانکر سانچی



# اطلاعات جعبه سیاه کشتی کریستال

Live Player V4

File Tool Configuration Help

**FURUNO** Product Name : VR-3000S

System Time : 06/01/2018 14:02:57  
Local Time : \*\*/\*\*/\*\*\*\* \*\*:\*\*:\*\*

RAP LEDs:

POWER STATUS:

CONTROL: track 1 06/01/2018 14:01:00 — 04:05:00 — 06/01/2018 18:06:00

x 1.0

Conning Serial Analog/Digital Radar Alarm Event AIS Viewer Data

UTC Time	14:02:57	Heading True 100° 110° 120° 130° 140° 150° 126°
UTC Date	06 01 2018	
Datum	WGS84	
Latitude	-	R.O.T -100 100
Longitude	-	
COG	301.4°	STW 0Knt 4Knt
Telegraph Demand Position	-	
Order	-	
Answer	-	Sub Telegraph 90 45 0 45 90 90 45 0 45 90
Telegraph Control Location	-	
Order	-	
Answer	-	SOG - [knt] Rel Wind True Wind
Order	-	
Answer	-	Depth Om m
Order	-	

Range: 6.0000 nm / 1.0000 nm

5.000  
4.000  
3.000  
2.000  
1.000  
1.000  
2.000  
3.000  
4.000  
5.000

Connected : Extracted Data (F:\Sanchi\Crystal\20180124123422) [playing audio is authorized]

EN 02:12 قظ ۲۰۱۸/۰۲/۰۵

# 15.12.2017

## CF-Crystal

- **Departure from Kalama Port, US**
- **Cargo: Sorghum, 63,997.817 tons**
- **Destination: Dongguan, China**
- **ETA: 10.01.2018**
- **No deficiency in PSC report**
- **All seafarers hold valid certificate of competency and medical fitness.**
- **Built in 2011**

# کشتی فله بر کریستال حاوی محموله دانه های سویا



# 16.12.2017

## M/T Sanchi

- Departure from Assaluyeh Port, Iran
- **Cargo:** Natural gas condensate (highly flammable, toxic, and of lesser pollution ability, due to aromatic nature), 111,510 tons
- **Destination:** Daesan Port, South Korea
- **ETA:** 08.01.2018
- No deficiency in PSC report.
- **All seafarers hold valid certificate of competency and medical fitness.**
- **Built in 2008**

# کشتی تانکر سانچی حاوی محموله میعانات گازی





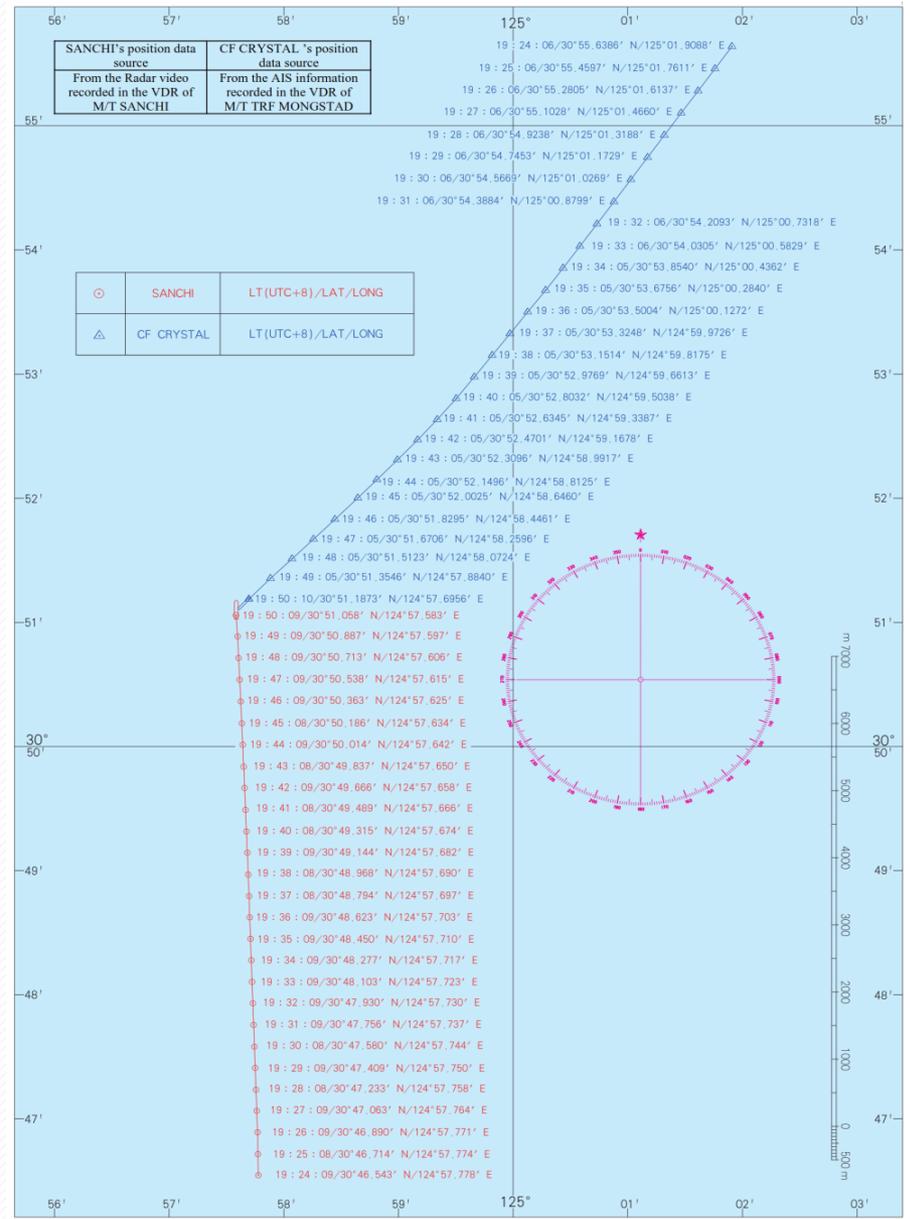
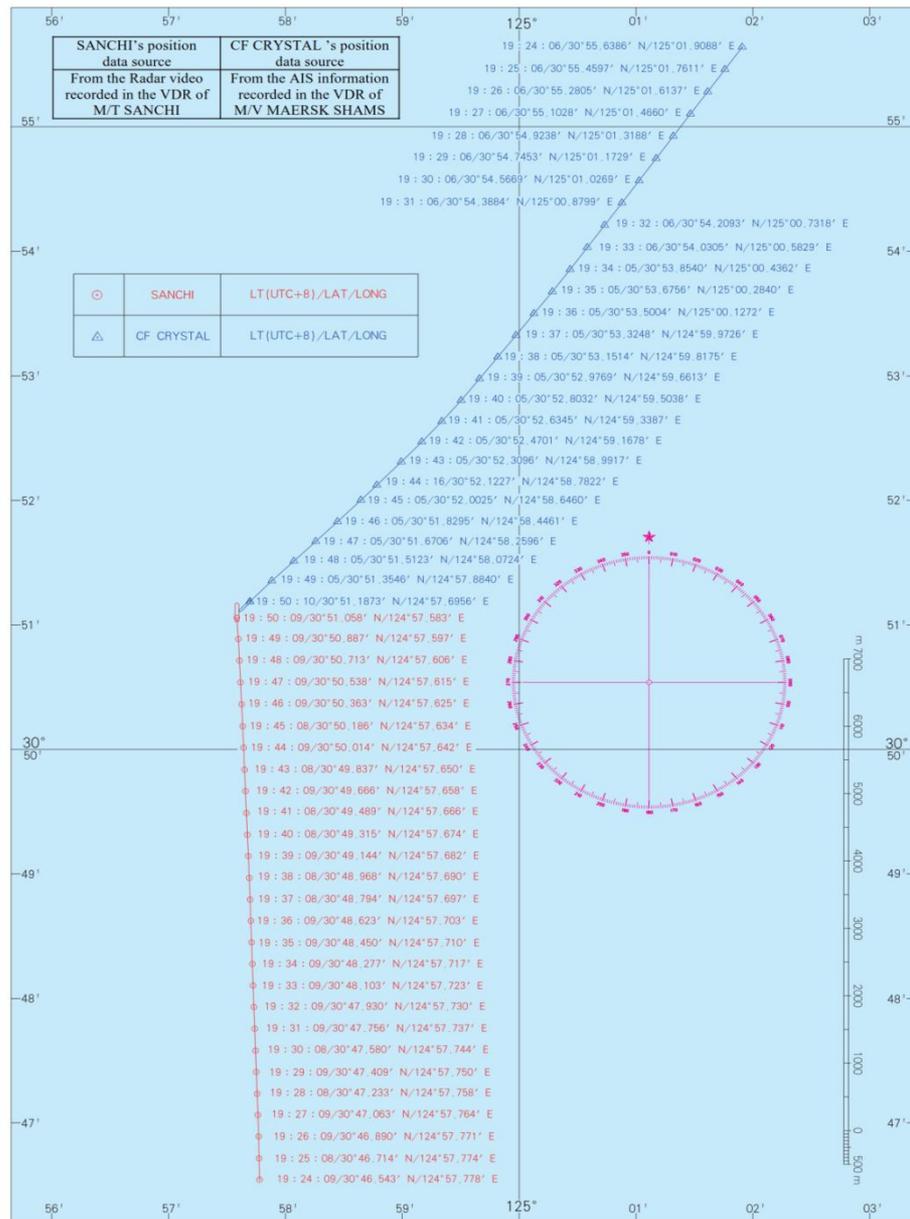
# خسارات وارده به کشتی فلز بر کریستال



# خسارات وارده به کشتی تانکر سانچی



# تحليل مسير بر خورد کشتی فله بر کریستال با تانکر سانچی



**06.01.2018**

**1845**

- **Sanchi Shift Change (2nd Officer to 3rd Officer).**
- **Korea local time: 1945**

**06.01.2018**

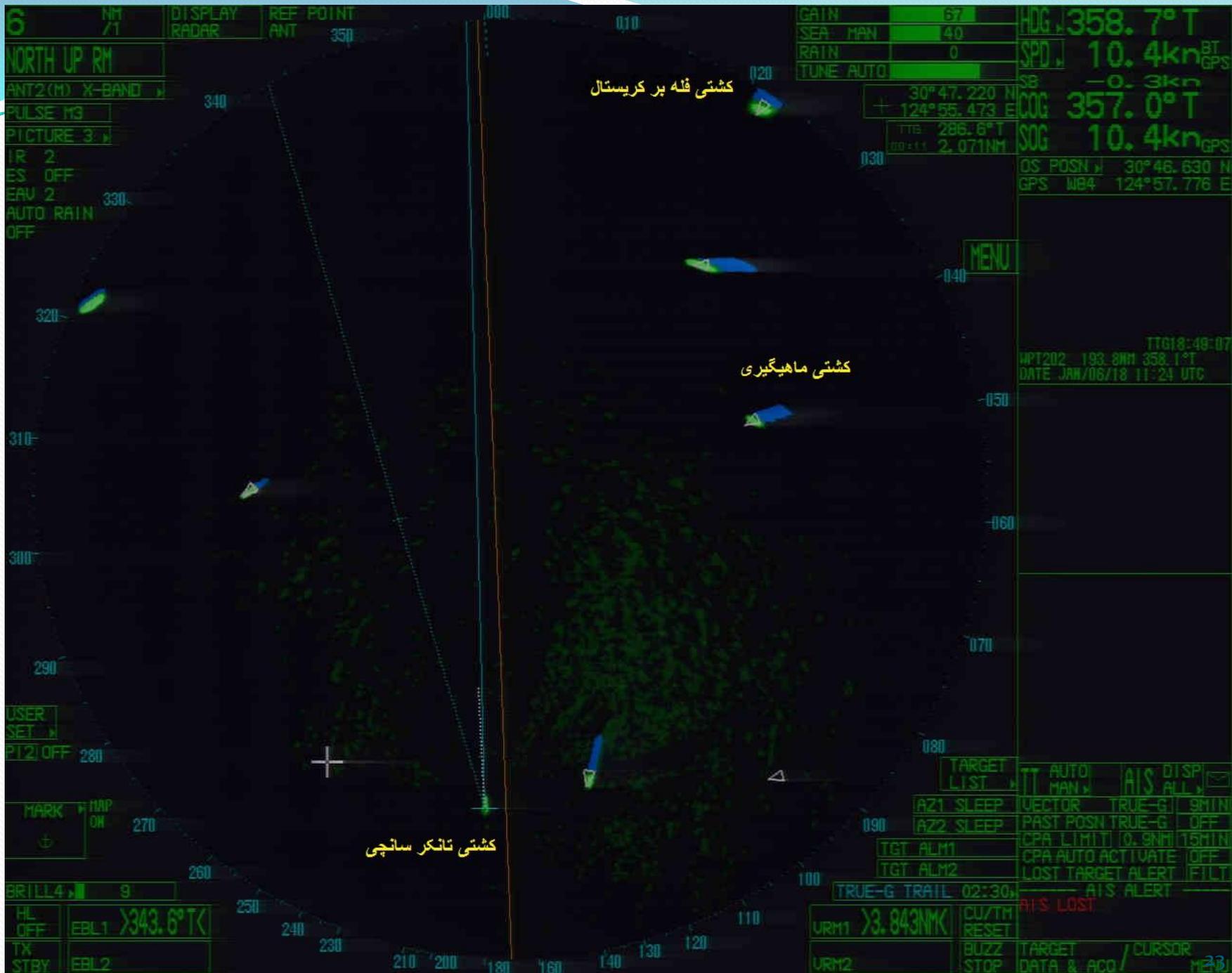
**1900**

- **Sanchi 2nd Officer handed shift over to 3rd Officer and left the bridge.**
- **Sanchi Extra 2nd officer still stay in chart room.**

# 06.01.2018

## 1924

- **Several vessels and boats crossing from starboard bow on Sanchi radar . CF Crystal first appears on radar screen (distance $\approx$ 9.8 nm Speed=13.2 Co=214).**
- **Sanchi Speed: 10.4 knots**
- **Range scale RADAR in use 6 NM off center relative motion.**



**06.01.2018**

**1930**

- **Sanchi 3/O talked about target A and B, lighting signals then assessed**
- **All of them passing astern**

6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM

ANT2(M) X-BAND  
PULSE M3  
PICTURE 3  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF

USER SET

PT2 OFF 280

MARK MAP ON 270

BRILL4 9

HL OFF EBL1 >343.6°TK  
TX STBY EBL2

GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30° 48.260 N  
+ 124° 55.437 E  
TTG: 286.6°T  
00+11 2.071NM

HOG 358.0°T  
SPD 10.4kn<sup>BT</sup><sub>GPS</sub>  
SB 0.0kn  
COG 358.0°T  
SOG 10.4kn<sup>GPS</sup>  
OS POSN W 30° 47.669 N  
GPS W84 124° 57.740 E

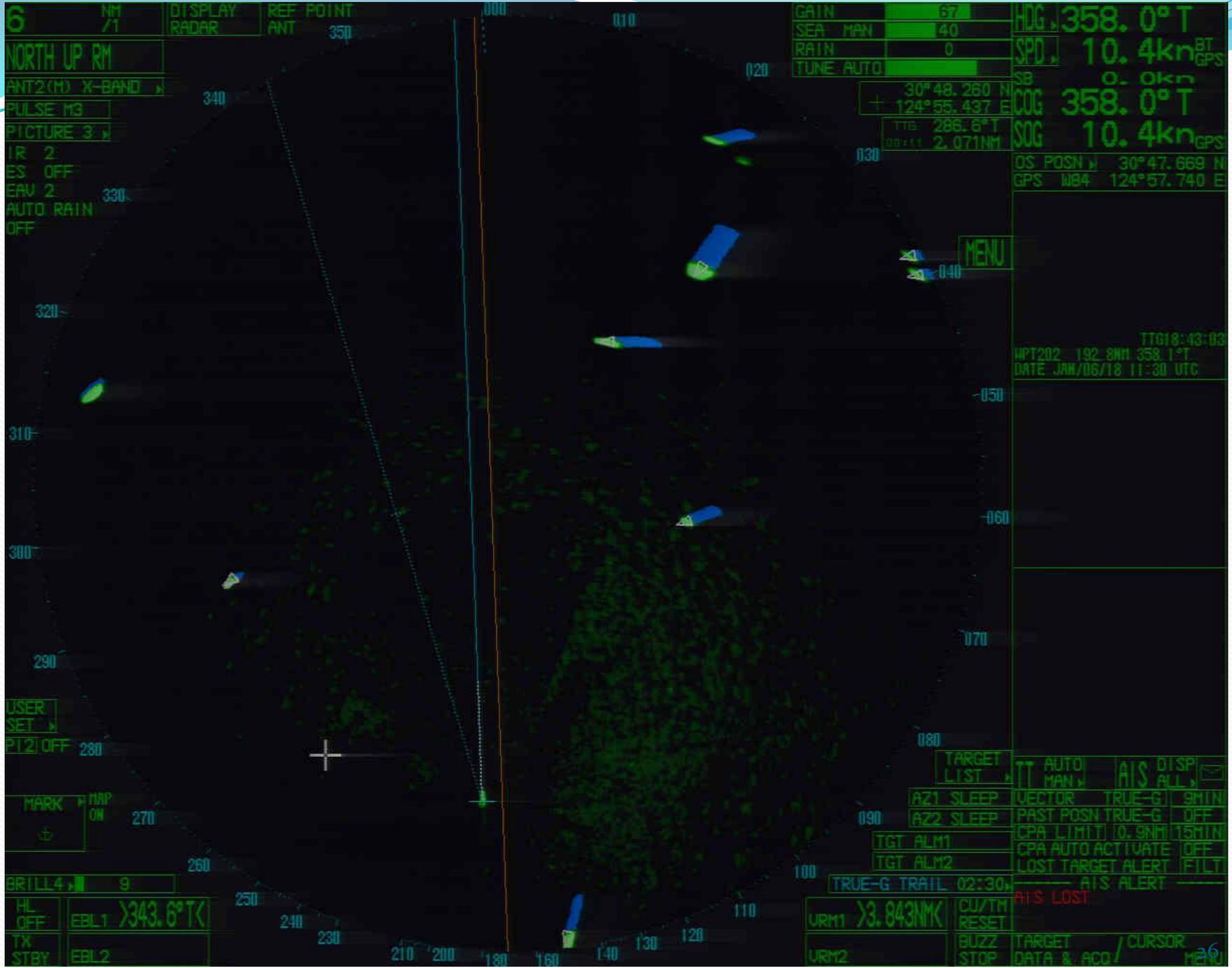
MENU

TTG18:43:03  
WPT202 192 8NM 358.1°T  
DATE JAN/06/18 11:30 UTC

TARGET LIST

TT AUTO MAN W AIS DISP ALL  
AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G OFF  
TGT ALM1 CPA LIMIT 10.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
TRUE-G TRAIL 02:30 AIS ALERT  
AIS LOST  
CUR/TM RESET  
BUZZ STOP TARGET DATA & ACD / CURSOR MENU

URM1 >3.843NM  
URM2



# 06.01.2018

## 1931

- **CF Crystal watchman (CoC Holder) seen Sanchi about 7 NM on her portside (Interview)**
- **Said: I checked again and found that the CPA did not change, then I did not pay any more attention to that vessel**

6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM  
ANT2(M) X-BAND  
PULSE M3  
PICTURE 3  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF

USER SET  
PT2 OFF  
MARK MAP ON  
BRILL4 9  
HL OFF EBL1 >343.6°TK  
TX STBY EBL2

GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

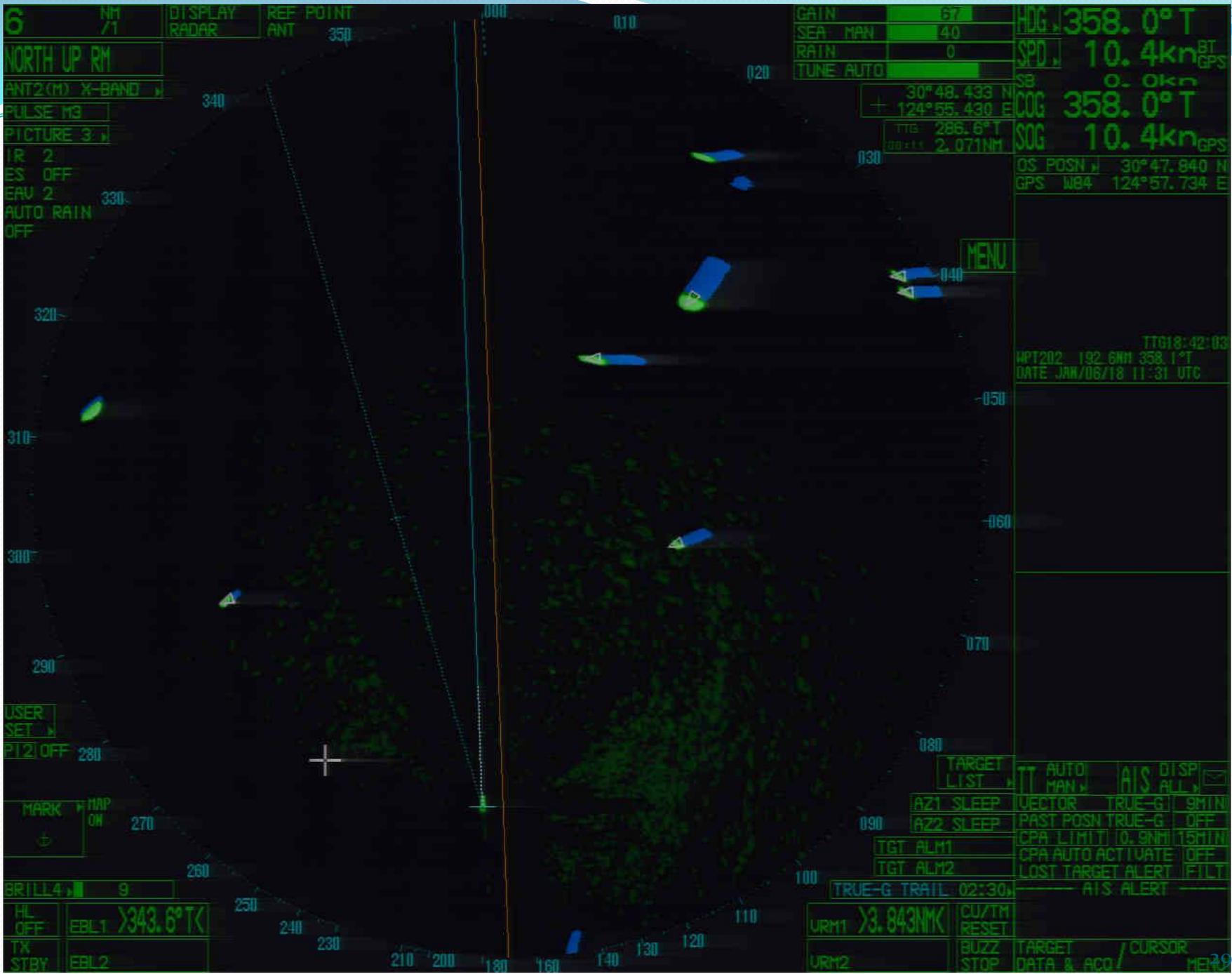
30° 48.433 N  
124° 55.430 E  
TTG 286.6°T  
DB+11 2.071NM

HOG 358.0°T  
SPD 10.4kn BT GPS  
SB 0.0kn  
COG 358.0°T  
SOG 10.4kn GPS  
OS POSN 30° 47.840 N  
GPS W84 124° 57.734 E

MENU

TTG18:42:03  
WPT202 192.6NM 358.1°T  
DATE JAN/06/18 11:31 UTC

TARGET LIST  
TT AUTO AIS DISP  
AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G OFF  
TGT ALM1 CPA LIMIT 10.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
TRUE-G TRAIL 02:30 LOST TARGET ALERT  
URM1 >3.843NM CU/TM RESET  
URM2 BUZZ STOP TARGET DATA & ACQ / CURSOR



# 06.01.2018

## 1932

- Sanchi duty officer again start assessing the situation , Said:
- From Sanchi BCR (Bow Crossing Range) (of target A and B )are minus.
- 3/0 talked about 3 targets .
- The bearing/range of CF Crystal was 022°/6.8nm from VDR radar data.
- Crystal Chief officer found 2 AIS targets CPA on radar 0.9 and 0.4, [first interview on 25 Jan 2018]
- he confirmed that 0.9 NM was MT Sanchi passing my bow[ 2nd interview on 2 Mar 2018].

6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM

ANT2(M) X-BAND M  
PULSE M3  
PICTURE 3 M  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF

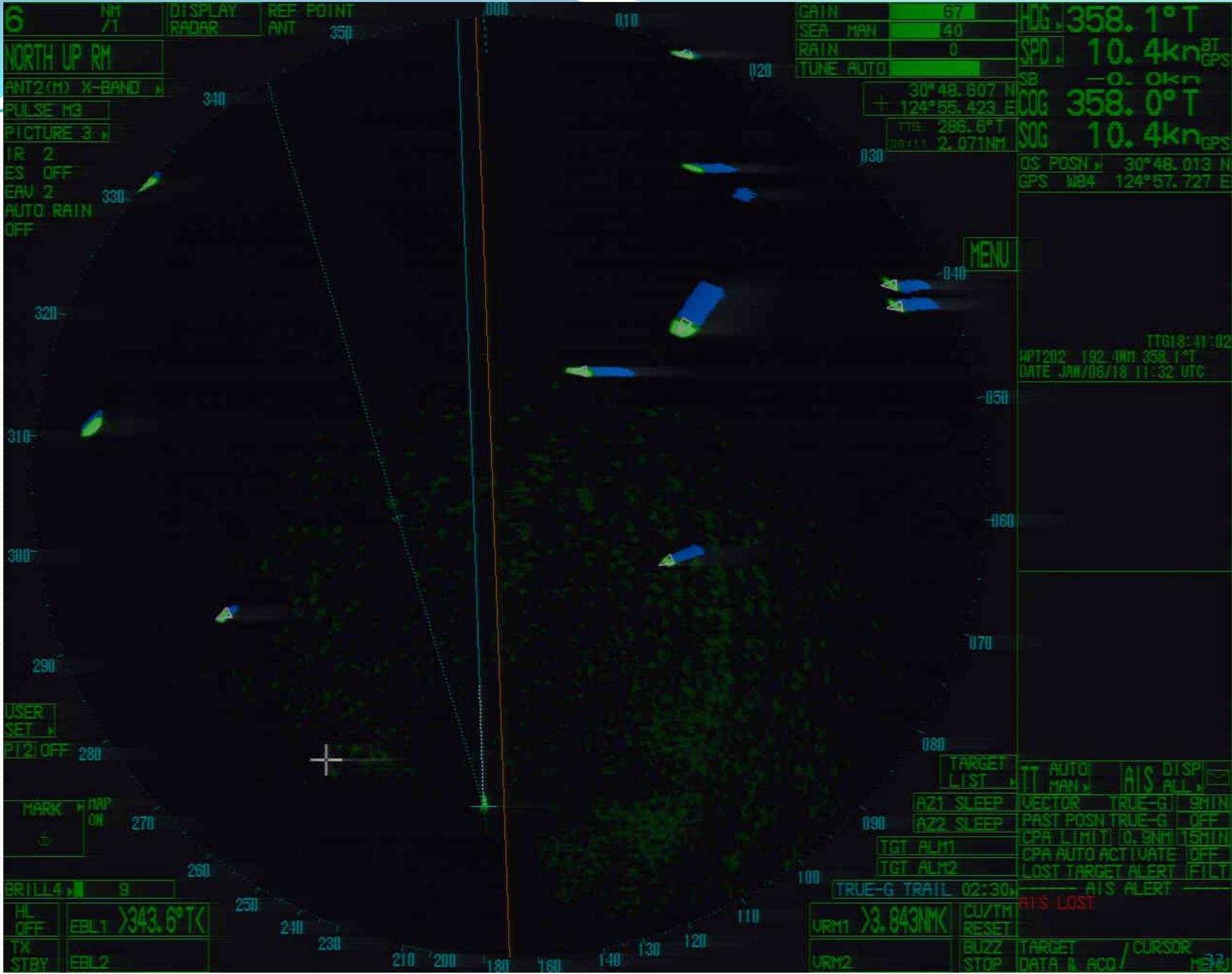
USER SET M

PI2 OFF 280

MARK MAP ON 270

BRILL4 9

HL OFF EBL1 >343.6°TK  
TX STBY EBL2



GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30° 48.607 N  
+ 124° 55.423 E  
TTG: 286.6°T  
00+11 2.071NM

HOG 358.1°T  
SPD 10.4kn<sup>BT</sup><sub>GPS</sub>  
SB -0.0kn  
COG 358.0°T  
SOG 10.4kn<sub>GPS</sub>  
OS POSN 30° 48.013 N  
GPS W84 124° 57.727 E

MENU

TTG18:41:02  
WPT202 192 NM 358.1°T  
DATE JAN/06/18 11:32 UTC

TARGET LIST

TT AUTO MAN AIS DISP ALL  
AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G OFF  
TGT ALM1 CPA LIMIT 0.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
TRUE-G TRAIL 02:30 LOST TARGET ALERT FILT  
AIS ALERT  
AIS LOST  
CUR/TM RESET  
BUZZ STOP TARGET DATA & ACD / CURSOR M321

URM1 >3.843NM  
URM2

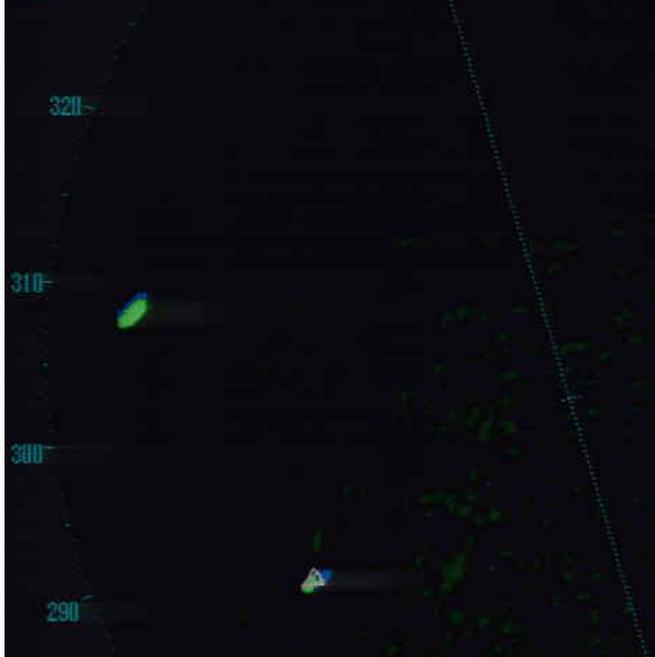
**06.01.2018**

**1934**

- **Crystal C/O said that he started to adjust the course from 217 to 225 with the intention to go back our planned passage .My vessel was deviated to port of the planned passage at that time ( 2nd interview).**

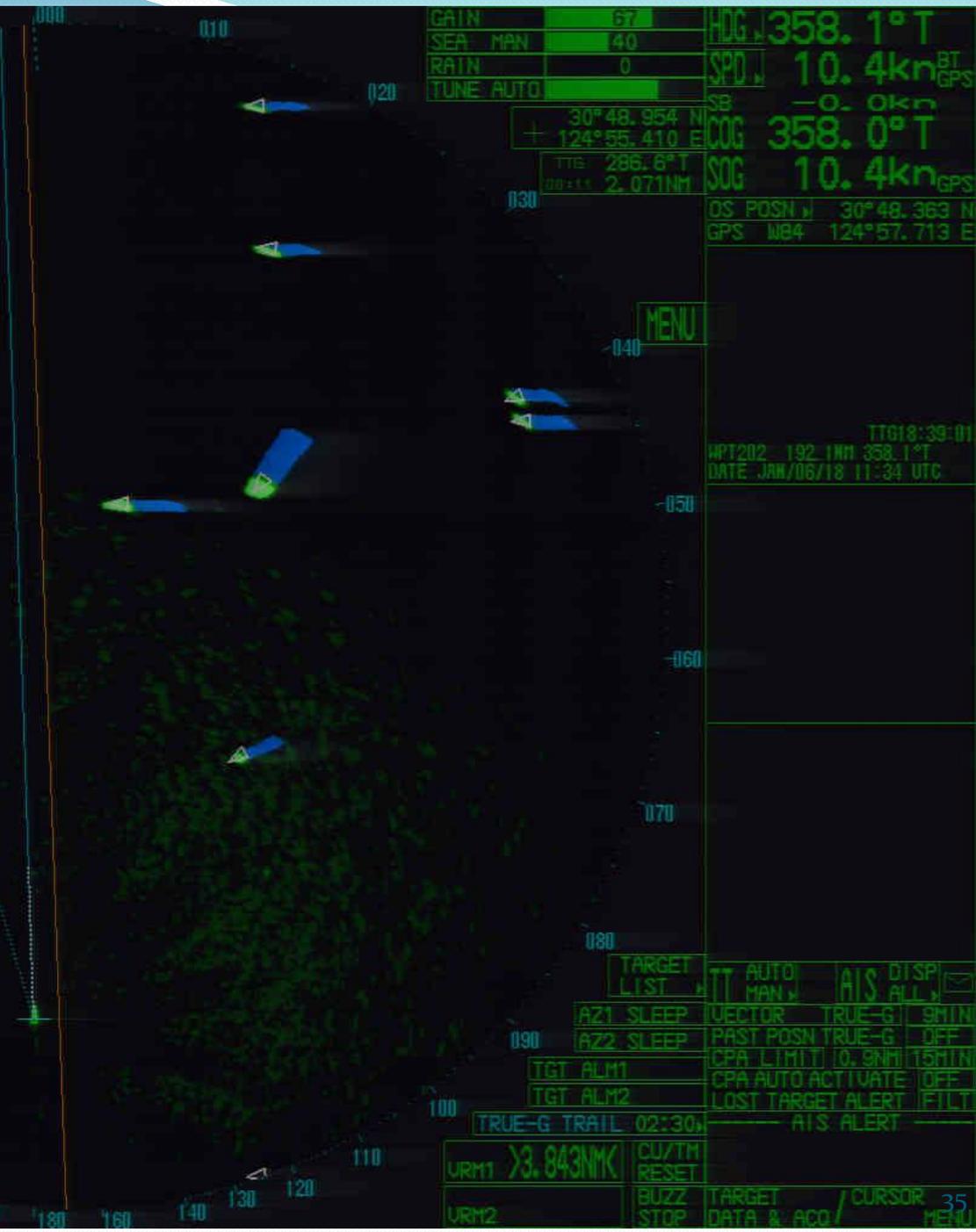
6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM  
ANT2(M) X-BAND  
PULSE M3  
PICTURE 3  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF



USER SET  
PI2 OFF 280  
MARK MAP ON 270

BRILL4 9  
HL OFF EBL1 >343.6°TK  
TX STRY EBL2



GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30°48.954 N  
124°55.410 E  
TTG 286.6°T  
00+11 2.071NM

HOG 358.1°T  
SPD 10.4kn<sup>BT</sup><sub>GPS</sub>  
SB -0.0kn  
COG 358.0°T  
SOG 10.4kn<sub>GPS</sub>  
OS POSN 30°48.363 N  
GPS WB4 124°57.713 E

MENU

TTG18:39:01  
WPT202 192 1NM 358.1°T  
DATE JAN/06/18 11:34 UTC

TARGET LIST

TT AUTO MAN AIS DISP ALL  
AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G DEF  
TGT ALM1 CPA LIMIT 0.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
LOST TARGET ALERT FILT  
AIS ALERT

TRUE-G TRAIL 02:30

URM1 >3.843NM  
CU/TM RESET

URM2 BUZZ STOP

TARGET DATA & ACQ / CURSOR MENU 35

**06.01.2018**

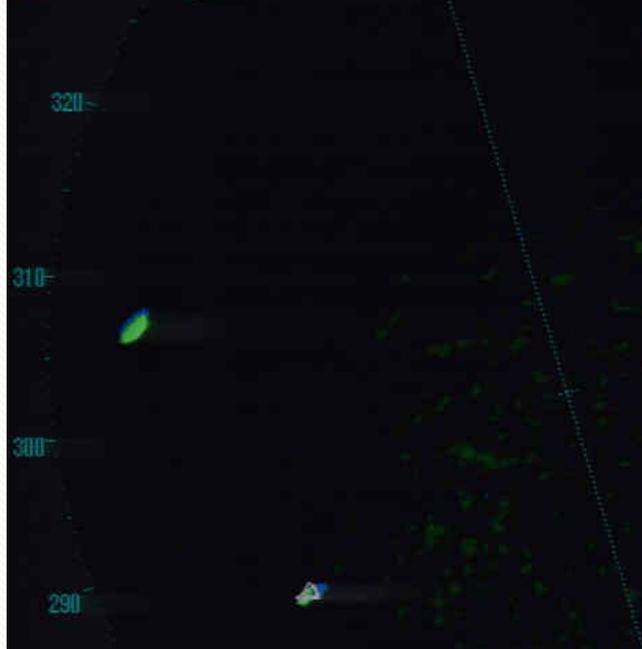
**1935**

- **MT Sanchi Lookout said a vessel at bearing 013 on radar screen and showing red & green.**
- **Crystal Co: COG: 218**

6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM

ANT2(M) X-BAND  
PULSE M3  
PICTURE 3  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF

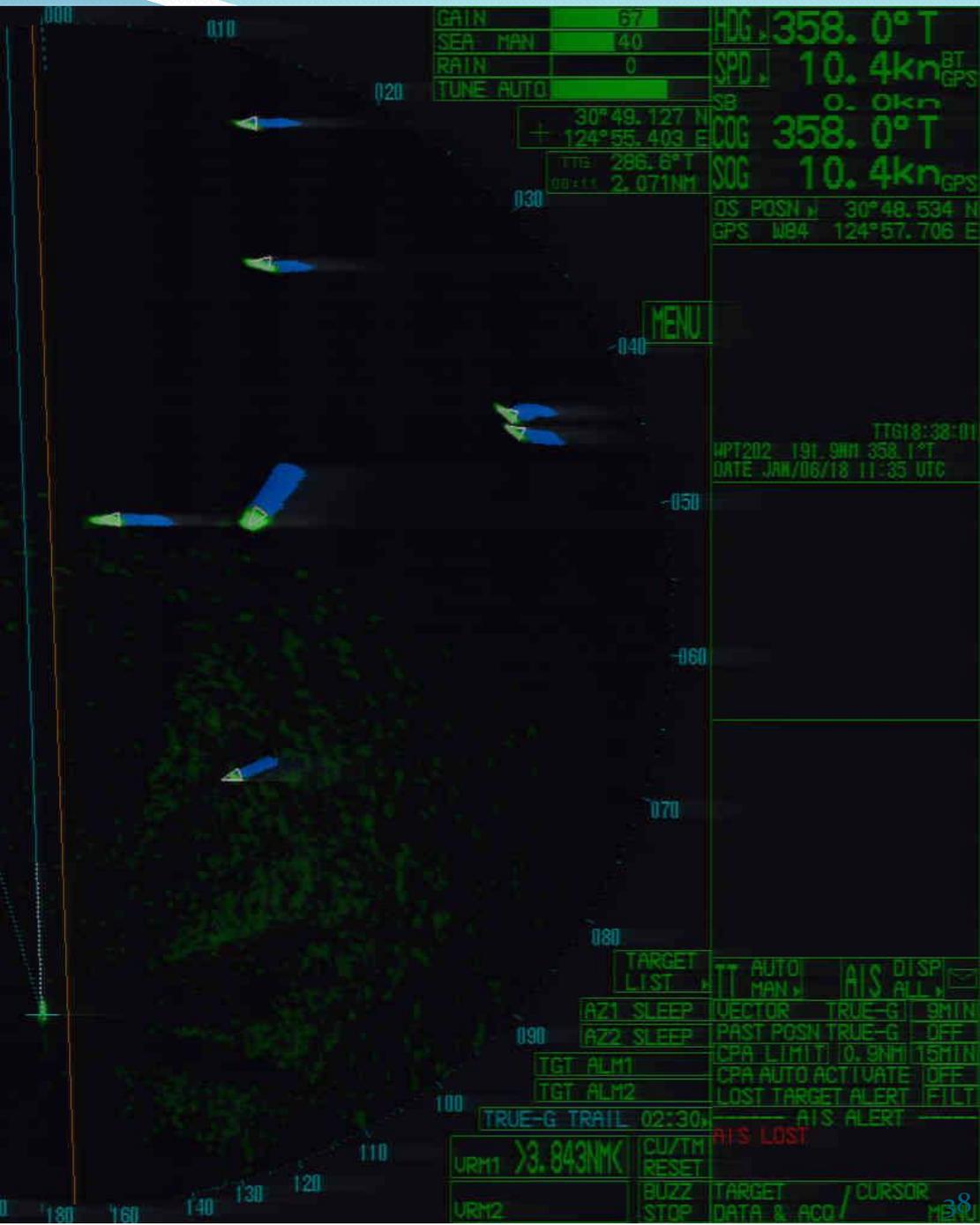


USER SET  
PI2 OFF 280

MARK MAP ON  
ON 270

BRIGHT 9

HL OFF EBL1 >343.6°TK  
TX STBY EBL2



GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30° 49.127 N  
+ 124° 55.403 E  
TTG: 286.6°T  
00+11 2.071NM

HDG 358.0°T  
SPD 10.4kn<sup>BT</sup><sub>GPS</sub>  
SB 0.0kn  
COG 358.0°T  
SOG 10.4kn<sub>GPS</sub>  
OS POSN 30° 48.534 N  
GPS W84 124° 57.706 E

MENU

TTG18:38:01  
WPT202 191.9NM 358.1°T  
DATE JAN/06/18 11:35 UTC

TARGET LIST

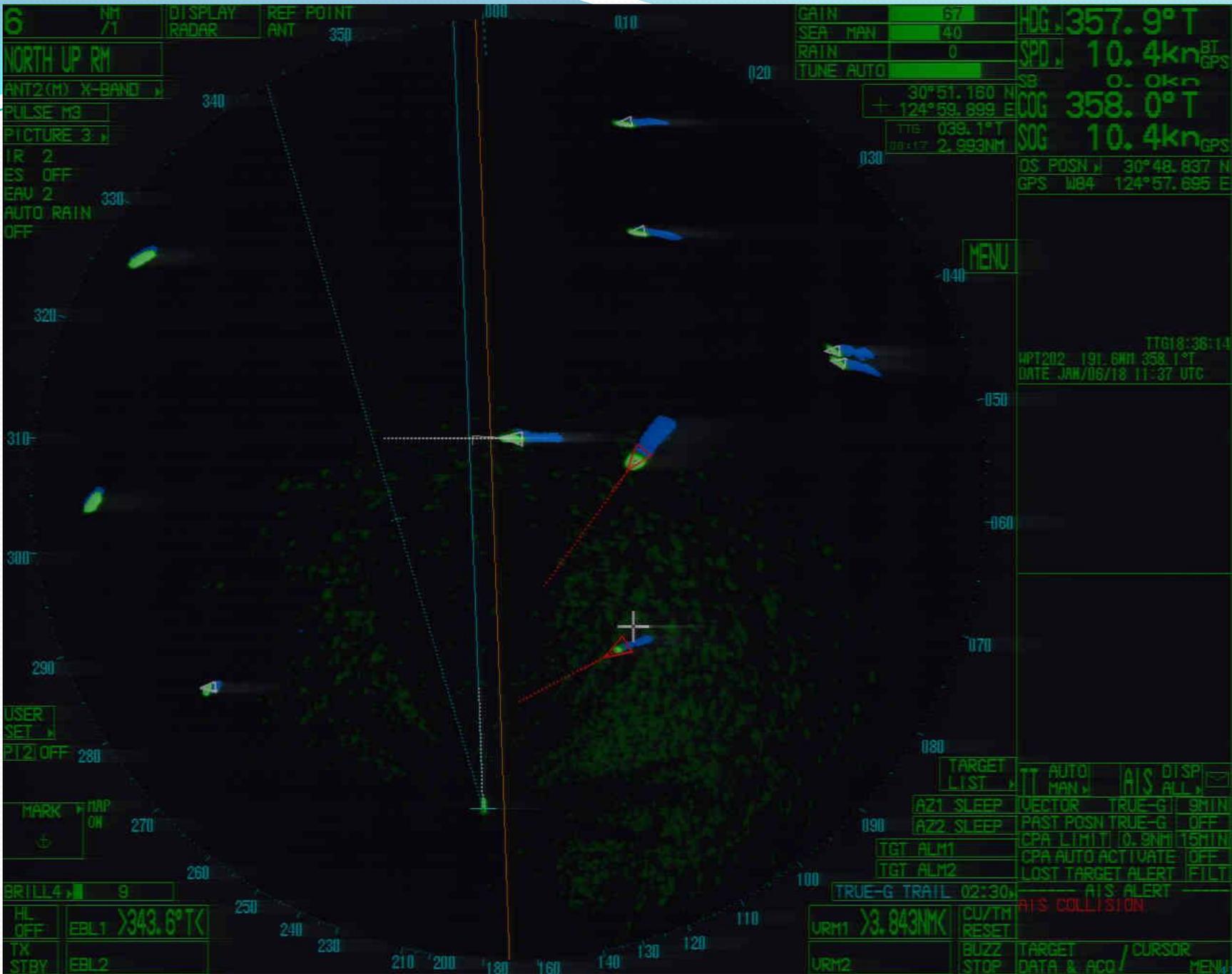
TT AUTO MAN  
AIS DISP ALL  
AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G OFF  
TGT ALM1 CPA LIMIT 10.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
TRUE-G TRAIL 02:30  
AIS ALERT  
AIS LOST  
TARGET DATA & ACQ / CURSOR M3

URM1 >3.843NM  
URM2

# 06.01.2018

## 1936

- **Fishing vessel call Sanchi and asking to pass port to port**
- **The triangle symbols of both targets turned red and the message "AIS COLLISION" appeared in the right lower corner of radar display.**
- **Sound alarm turned off.**



# 06.01.2018

## 1939

- **Sanchi 3/O said: Oh, he's talking to another one. You know, never answer these calls. Because if you don't answer, it is not ok to action. But if you answer, he seems ... he confirms with you about his action. So he takes action, whatever he said in the radio and you don't understand. But if you don't answer, he shall be forced to take action to make himself clear, understand?**



6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM  
ANT2 (M) X-BAND W  
PULSE M3  
PICTURE 3 W  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF

USER SET W  
PI 2) OFF 280  
MARK W MAP ON 270  
BRILL 4 W 9  
HL OFF EBL1 >343.6°TK  
TX STBY EBL2

GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

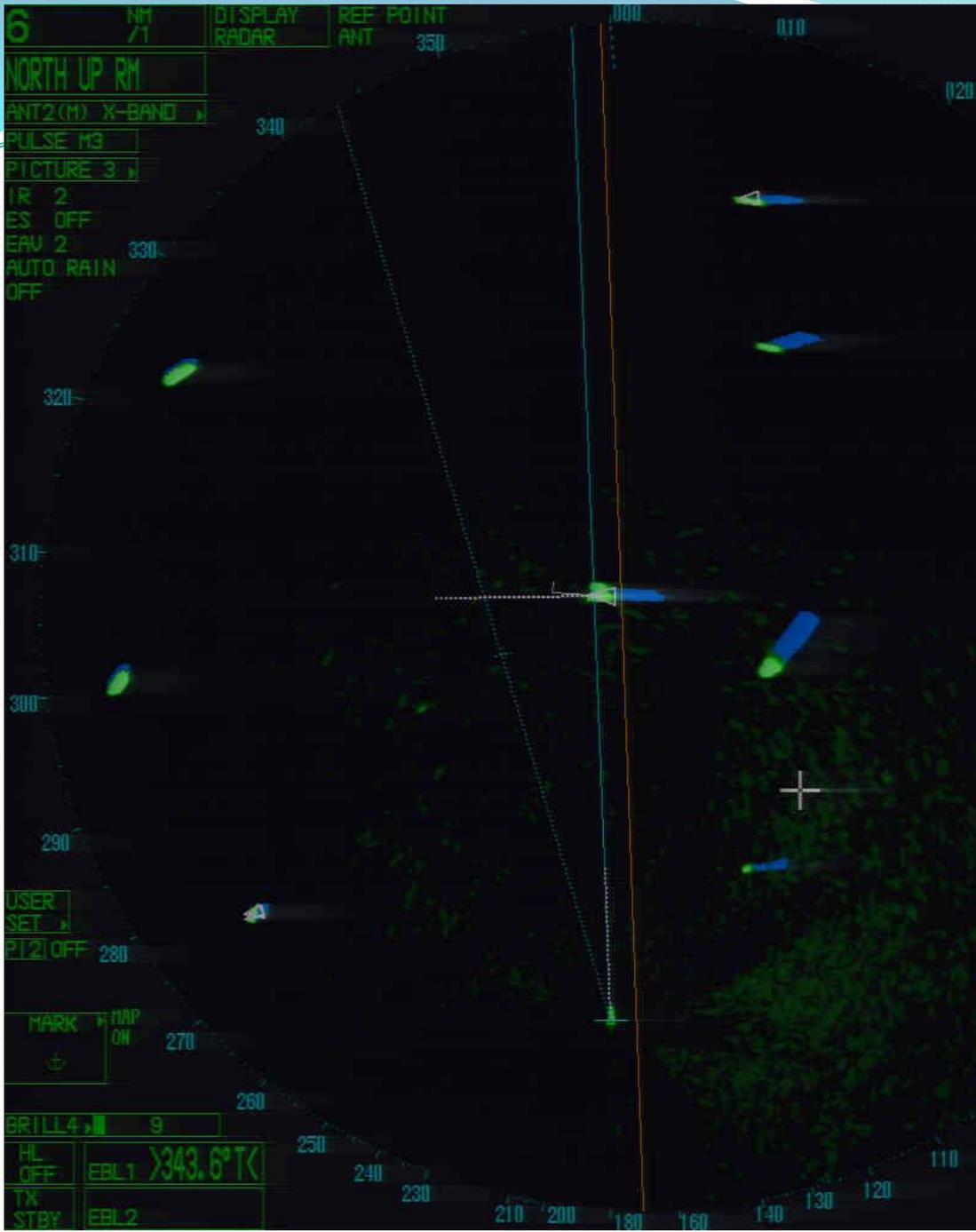
HDG 357.8°T  
SPD 10.4kn<sup>BT</sup><sub>GPS</sub>  
SB 0.0kn  
COG 358.0°T  
SOG 10.4kn<sub>GPS</sub>  
OS POSN W 30°49.275 N  
GPS WB4 124°57.677 E

30°51.595 N  
+ 124°59.881 E  
TTE 039.1°T  
00+17 2.993NM

MENU

TTG18:33:41  
WPT202 191.2NM 358.1°T  
DATE JAN/06/18 11:39 UTC

TARGET LIST  
TT AUTO MAN W AIS DISP ALL  
AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G OFF  
TGT ALM1 CPA LIMIT 10.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
LOST TARGET ALERT FILT  
TRUE-G TRAIL 02:30  
AIS ALERT  
AIS COLLISION  
URM1 >3.843NM CU/TM RESET  
URM2 BUZZ STOP TARGET DATA & ACD / CURSOR ME44



**06.01.2018**

**1940**

- **Sanchi Duty officer ordered to signal to small vessel (ALDIS Lamp signals) with five short flashes to attract attention.**

# 06.01.2018

## 1941

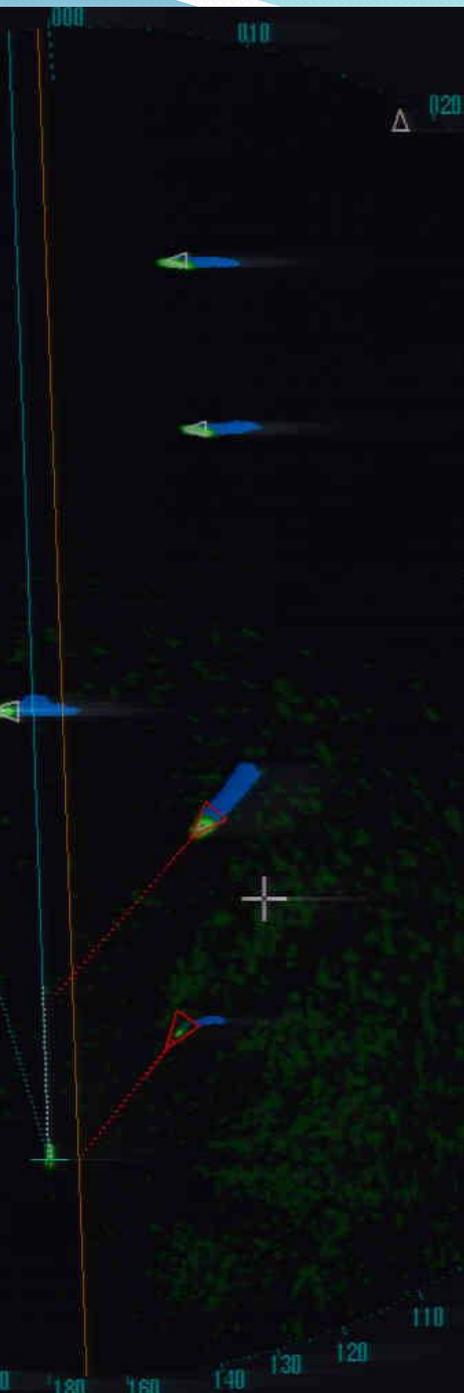
- **Sanchi Signals to fishing vessel (5 short flashes by ALDIS Lamp).**
- **- Fishing vessel turns to port side**
- **Crystal Continue with course adjusting**
-

6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM  
ANT2(M) X-BAND  
PULSE M3  
PICTURE 3  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF

340  
330  
320  
310  
300  
290  
280  
270  
260  
250  
240  
230  
210  
200  
180  
160  
140  
130  
120  
110

USER SET  
PI2 OFF  
MARK ON  
BRILL4 9  
HL OFF EBL1 >343.6°TK  
TX STRY EBL2



GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30°51.899 N  
124°59.866 E  
TTG: 039.1°T  
00+17 2.993NM

020  
030

HOG 358.0°T  
SPD 10.5kn<sup>BT</sup><sub>GPS</sub>  
SB 0.0kn  
COG 358.0°T  
SOG 10.5kn<sub>GPS</sub>  
OS POSN 30°49.579 N  
GPS WB4 124°57.663 E

MENU

TTG18:31:55  
WPT202 190.9NM 358.1°T  
DATE JAN/06/18 11:41 UTC

-040  
-050  
-060  
070  
080  
090  
100

TARGET LIST  
TT AUTO MAN  
AIS DISP ALL  
VECTOR TRUE-G 9MIN  
PAST POSN TRUE-G OFF  
CPA LIMIT 0.9NM 15MIN  
CPA AUTO ACTIVATE OFF  
LOST TARGET ALERT FILT  
AIS ALERT

TRUE-G TRAIL 02:30  
URM1 >3.843NM  
URM2

CU/TM RESET  
BUZZ STOP  
TARGET DATA & ACQ / CURSOR MENU 48

# 06.01.2018

## 1942

- End of Crystal adjusting course to 225°
- SANCHI was about 3.1 nm
- Question: Did you notice the CPA with SANCHI change after you changed course
- C/O: After I changed course, I noticed the CPA with SANCHI was 0.4nm.
- Question: how you did determine the CPA with SANCHI, by radar echo or AIS?
- C/O: I did not see radar, only by AIS signal on my port radar.
  
- Sanchi 3/O: Yes, if I take any action, I make everything worse. You know, they shall take action. They are the smaller vessels.

6 NH /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM  
ANT2 (M) X-BAND  
PULSE M3  
PICTURE 3  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF

USER SET  
P12 OFF  
MARK MAP ON  
BRILL4 9  
HL OFF EBL1 >343.6°TK  
TX STBY EBL2

GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30°52.073 N  
124°59.858 E  
TTG 039.1°T  
00:17 2.993NM

030

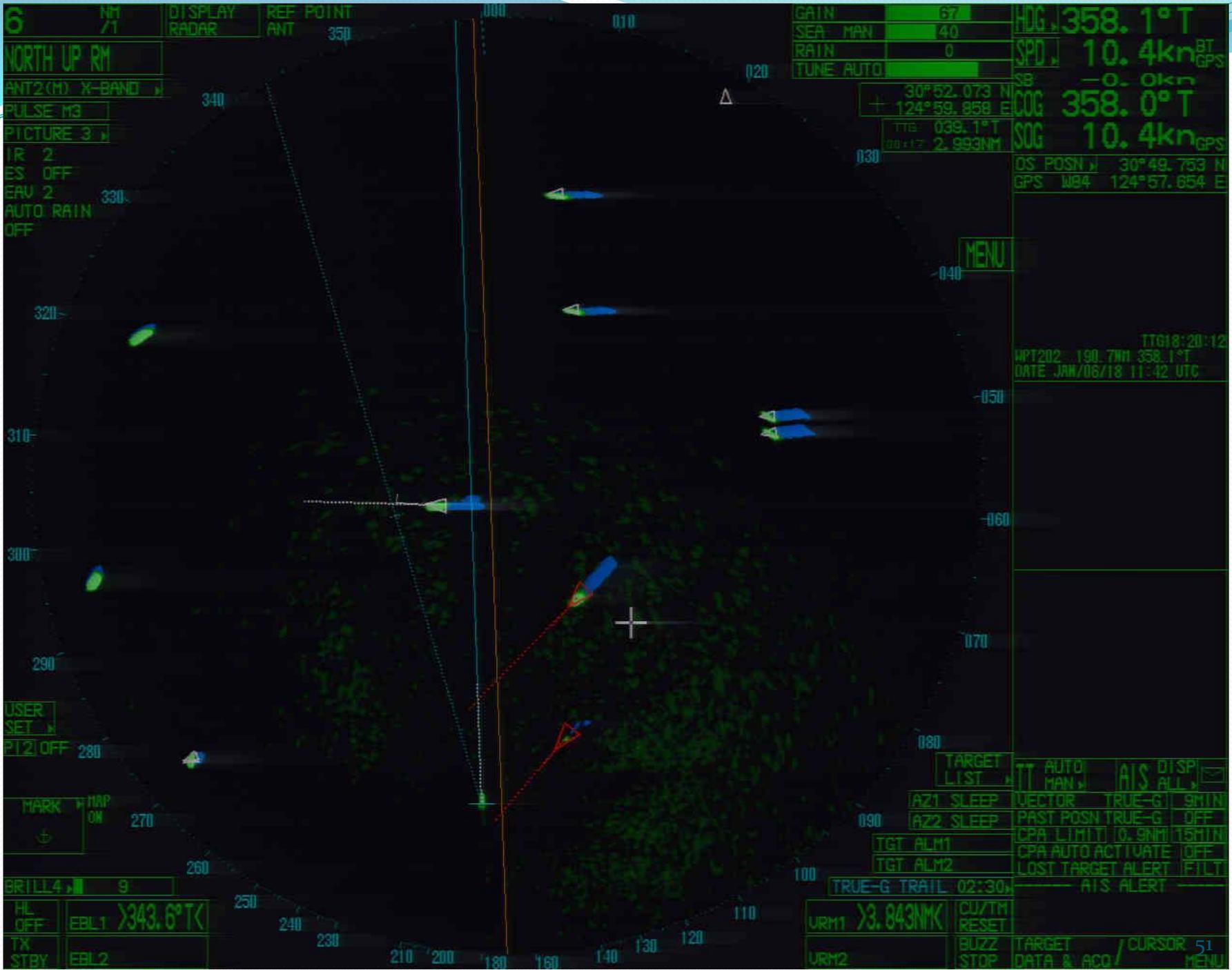
HDG 358.1°T  
SPD 10.4kn BT GPS  
SS -0.0kn  
COG 358.0°T  
SOG 10.4kn GPS  
OS POSN 30°49.753 N  
GPS W84 124°57.654 E

MENU

TTG18:20:12  
WPT202 190.7NM 358.1°T  
DATE JAN/06/18 11:42 UTC

TARGET LIST  
TT AUTO MAN  
AIS DISP ALL  
AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G OFF  
TGT ALM1 CPA LIMIT 0.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
LOST TARGET ALERT FILT  
TRUE-G TRAIL 02:30M AIS ALERT

URM1 >3.843NM< CU/TH RESET  
URM2 BUZZ STOP TARGET DATA & ACO / CURSOR 51 MENU



# 06.01.2018

## 1944

- Question from Crystal 3<sup>rd</sup> officer :After you checked your radar,did you realize there's a risk of collsion.
- Crystal 3/O:I thought it was a fishing vessel.There was no radar echo only AIS symbol.[

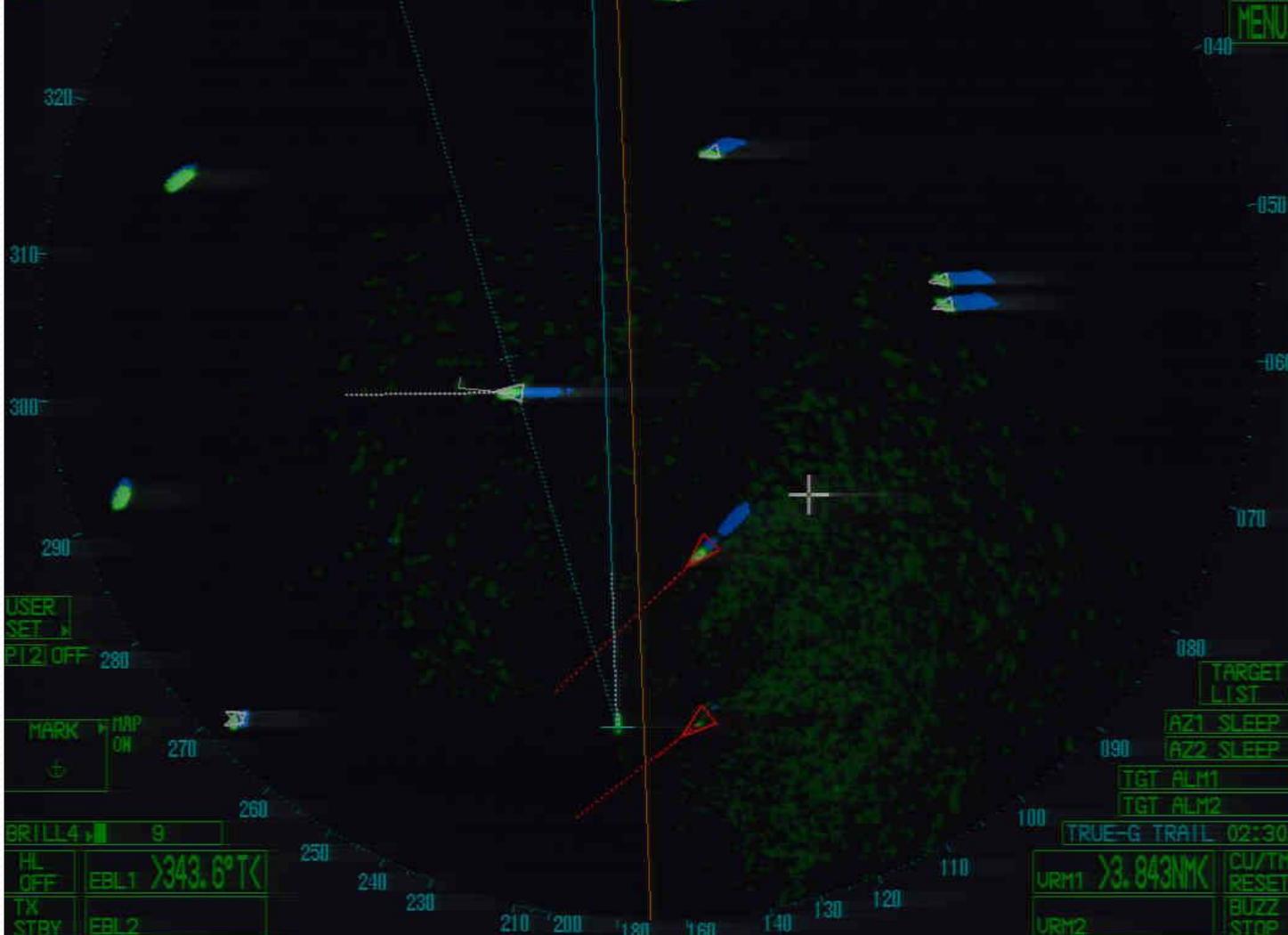
# 06.01.2018

## 1945

- Sanchi duty officer start assessing the situation of CF Crystal. CF CRYSTAL was about 2 nm away bearing  $025^{\circ}$ .
- Sanchi 3/O: Ok, give a signal to this one. We had this one on our starboard side, we should take action. But what actually can I say, in this situation? My starboard side is full. It was five?
- Crystal:
- 1- course steady on  $226^{\circ}$
- 2- Watch keeping Shift Change (Chief Officer to 3rd Officer).

6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM  
ANT2(M) X-BAND  
PULSE M3  
PICTURE 3  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF



GAIN 57  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30°52.552 N  
+ 124°59.836 E  
TTG: 039.1°T  
00+17 2.993NM

HOG 358.1°T  
SPD 10.5kn<sup>BT</sup><sub>GPS</sub>  
SB -0.0kn  
COG 358.0°T  
SOG 10.5kn<sub>GPS</sub>  
OS POSN 30°50.232 N  
GPS WB4 124°57.632 E

MENU

TTG18:17:27  
WPT202 190.2NM 358.1°T  
DATE JAN/06/18 11:45 UTC

USER SET  
PI2 OFF 280

MARK MAP ON 270

BRILL4 9

HL OFF EBL1 >343.6°T  
TX STBY EBL2

TARGET LIST

TT AUTO MAN AIS DISP

AZ1 SLEEP  
AZ2 SLEEP

VECTOR TRUE-G SHIN  
PAST POSN TRUE-G OFF

TGT ALM1  
TGT ALM2

CPA LIMIT 0.9NM SHIN  
CPA AUTO ACTIVATE OFF  
LOST TARGET ALERT FILT

TRUE-G TRAIL 02:30

AIS ALERT  
AIS COLLISION

URM1 >3.843NMK  
URM2

CU/TH RESET  
BUZZ STOP

TARGET DATA & ACD / CURSOR MEM

# 06.01.2018

## 1946

- **Crystal Chief Officer left the bridge.**
- **3rd officer on watch.**
- **Question:When Crystal chief officer hand over the watch,did he mention the situation?**
- **3/O answered:No,he only said “ the traffic was clear”. [interview on 25 Jan 2018]**
- **Question:How much time passed after you took over your watch when the collision happened?**
- **Crystal 3/O: At 1943LT on 6 Jan I came out of my cabin and went up to bridge .At about 1945LT.I took over my watch .Chief mate did not tell me the situation of the other vessel.When the accident happened,I didn't check the time.**

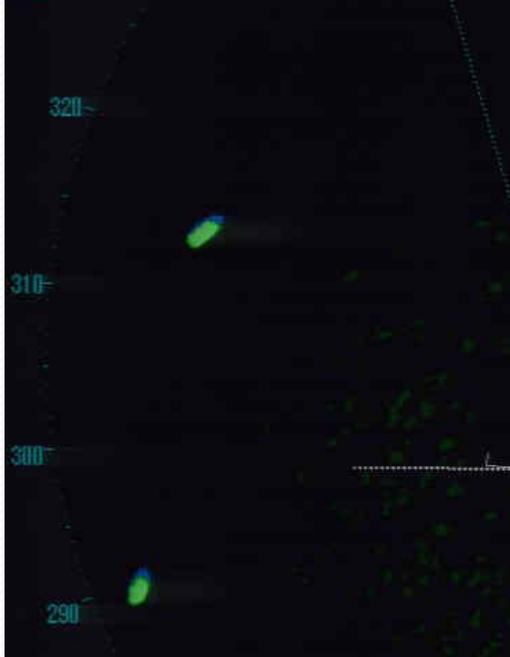
# 06.01.2018

## 1946

- Sanchi Lookout identifies CPA zero with CF Crystal (distance about 1.6 NM).
- - Fishing vessel cleared from Sanchi astern.
- - Signals to CF Crystal (5 short flashes by ALDIS Lamp) to attract attention.
  
- AB:Charlie is passed, right? A little to starboard?
- 3/O:Starboard? Why?
- AB:What's the CPA? CPA is ... zero, zero.

6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM  
ANT2(M) X-BAND  
PULSE M3  
PICTURE 3  
TR 2  
ES OFF  
EAV 2 330  
AUTO RAIN OFF



USER SET  
PI2 OFF 280  
MARK MAP ON 270

BRILL4 9  
HL OFF EBL1 >343.6°TK  
TX STBY EBL2



GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30°52.814 N  
+ 124°59.821 E  
TTG 039.1°T  
00 x 17 2.993NM

020  
030



040  
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060  
070  
080  
090  
100  
110  
120  
130  
140  
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160  
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220  
230  
240  
250  
260  
270  
280  
290  
300  
310  
320  
330  
340

HDG 358.1°T  
SPD 10.5kn<sup>BT</sup> GPS  
SB -0.2kn  
COG 357.0°T  
SOG 10.5kn<sup>GPS</sup>  
OS POSN 30°50.494 N  
GPS W84 124°57.617 E

TTG18:15:58  
WPT202 190.0NM 358.1°T  
DATE JAN/06/18 11:46 UTC

TARGET LIST  
TT AUTO MAN  
AIS DISP ALL

AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G OFF  
TGT ALM1 CPA LIMIT 10.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
LOST TARGET ALERT FILT  
TRUE-G TRAIL 02:30  
AIS ALERT  
CUR/TM RESET  
BUZZ STOP  
TARGET DATA & ACC / CURSOR 61 MENU

# 06.01.2018

## 1947

- - Sanchi 3/O: It's a small vessel, right?
- - AB: No, It's a big vessel.
- - 3/O: So why is she intending to take action like this?
- 
- Crystal Duty officer and look out haven't seen Sanchi.

# 06.01.2018

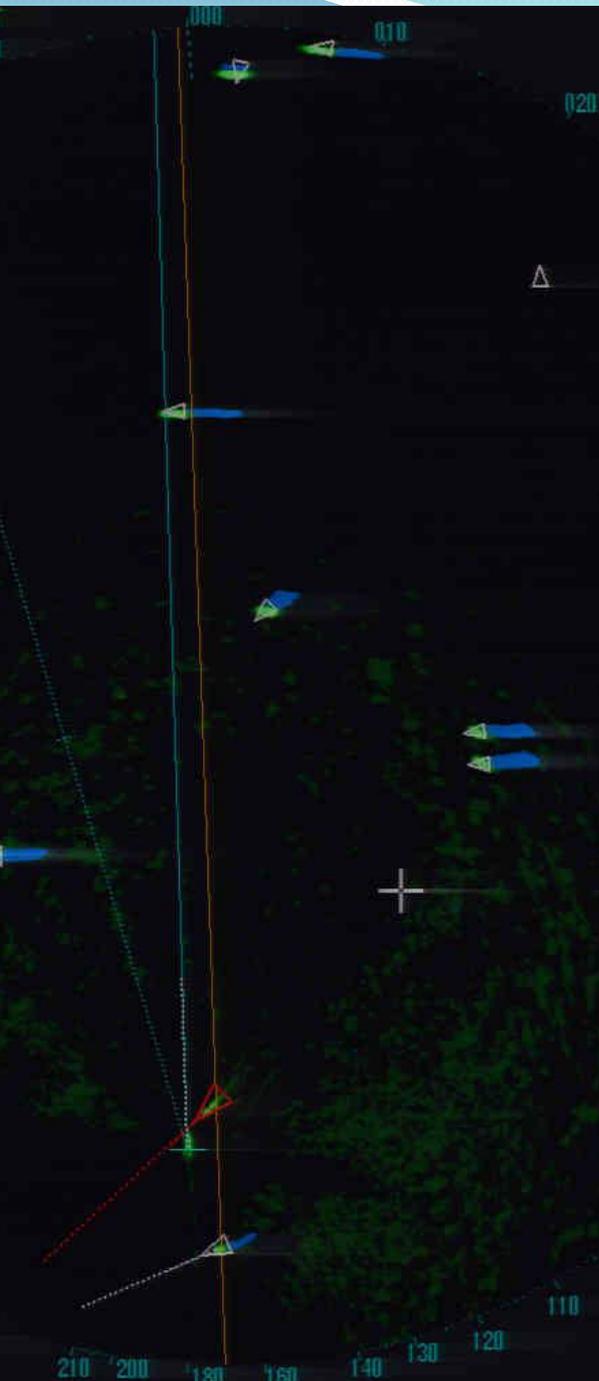
## 1948

- **Sanchi OOW: calls Captain**
- **3/O: hello captain ,we have a target at Starboard Side. The CPA is zero .the distance is very short ..... distance is short.**
- **Captain ,it is very big ship.**
- **Crystal Duty officer and look out haven't seen Sanchi.**

6 NM /1 DISPLAY RADAR REF POINT ANT 350

NORTH UP RM  
ANT2(M) X-BAND  
PULSE M3  
PICTURE 3  
IR 2  
ES OFF  
EAV 2  
AUTO RAIN OFF

340  
330  
320  
310  
300  
290  
280  
270  
260  
250  
240  
230  
220  
210  
200  
190  
180  
170  
160  
150  
140  
130  
120  
110



GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30° 53.251 N  
+ 124° 59.800 E  
TTG 039.1° T  
DB+17 2.993NM

HDG 358.3° T  
SPD 10.5kn<sup>BT</sup><sub>GPS</sub>  
SB -0.0kn  
COG 358.0° T  
SOG 10.5kn<sub>GPS</sub>  
OS POSN 30° 50.928 N  
GPS W84 124° 57.595 E

MENU

TTG18:13:24  
WPT02 189.5NM 358.1° T  
DATE JAN/06/18 11:49 UTC

USER SET  
PT2 OFF 280  
MARK MAP ON 270  
BRILL4 9  
HL OFF EBL1 >343.6° T  
TX STBY EBL2

080 TARGET LIST  
TT AUTO MAN AIS DISP  
AZ1 SLEEP VECTOR TRUE-G 9MIN  
AZ2 SLEEP PAST POSN TRUE-G OFF  
TGT ALM1 CPA LIMIT 10.9NM 15MIN  
TGT ALM2 CPA AUTO ACTIVATE OFF  
TRUE-G TRAIL 02:30 LOST TARGET ALERT  
URM1 >3.843NM CU/TH RESET  
URM2 BUZZ STOP TARGET DATA & ACQ / CURSOR

# 06.01.2018

## 1949

- Sanchi 3/O: Oh, why is she not doing anything? Oh man, he's judging
- 3/O: Go to port side, full port side. Oh, man! Full starboard side, full starboard
- side. Full, full, please.
- Captain comes to bridge at 11:49:28
- 3/O:captain she did not take any action.
- Cap: Hard to starboard, hard to starboard
- 
- Crystal Duty officer and look notice a ship but still not aware that she was Sanchi.
- - Turn to Starboard ordered by 3rd
-

**06.01.2018**

**1950**

- **Sanchi Captain: we are being hit.**
- **Captain: Hard to port. Hard to port**
- **Crystal : Hard to Starboard**

6 NM /1 DISPLAY REF POINT  
RADAR ANT 350

NORTH UP RM

ANT2(M) X-BAND

PULSE 113

PICTURE 3

IR 2

ES OFF

EAV 2

AUTO RAIN OFF

320

310

300

290

280

270

260

250

240

230

220

210

200

190

180

170

160

150

140

130

120

110

100

90

USER SET

P12 OFF

MARK MAP ON

BRILL 4 9

HL OFF

TX STBY

EBL1 >343.6°T<

EBL2

340

330

320

310

300

290

270

260

250

240

230

340

330

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GAIN 67  
SEA MAN 40  
RAIN 0  
TUNE AUTO

30°53.430 N  
124°59.745 E

TTC 039.1°T  
00 +25 2.993NM

HOG 356.9°T  
SPD 6.1kn<sup>BT</sup><sub>GPS</sub>  
SB -2.1kn  
COG 338.0°T  
SOG 6.5kn<sub>GPS</sub>  
OS POSN 30°51.108 N  
GPS WB4 124°57.541 E

MENU

TTC22:16:31  
WPT202 189.3NM 358.1°T  
DATE JAN/06/18 11:50 UTC

TARGET LIST

TT AUTO MAN  
AIS DISP ALL  
A21 SLEEP VECTOR TRUE-G 9MIN  
A22 SLEEP PAST POSN TRUE-G OFF  
CPA LIMIT 0.9NM 15MIN  
CPA AUTO ACTIVATE OFF  
LOST TARGET ALERT FILT  
AIS ALERT

TRUE-G TRAIL 02:30

URM1 >3.843NM< CU/TM RESET

URM2 BUZZ STOP TARGET DATA & ACQ / CURSOR MENU

71

06.01.2018

1950

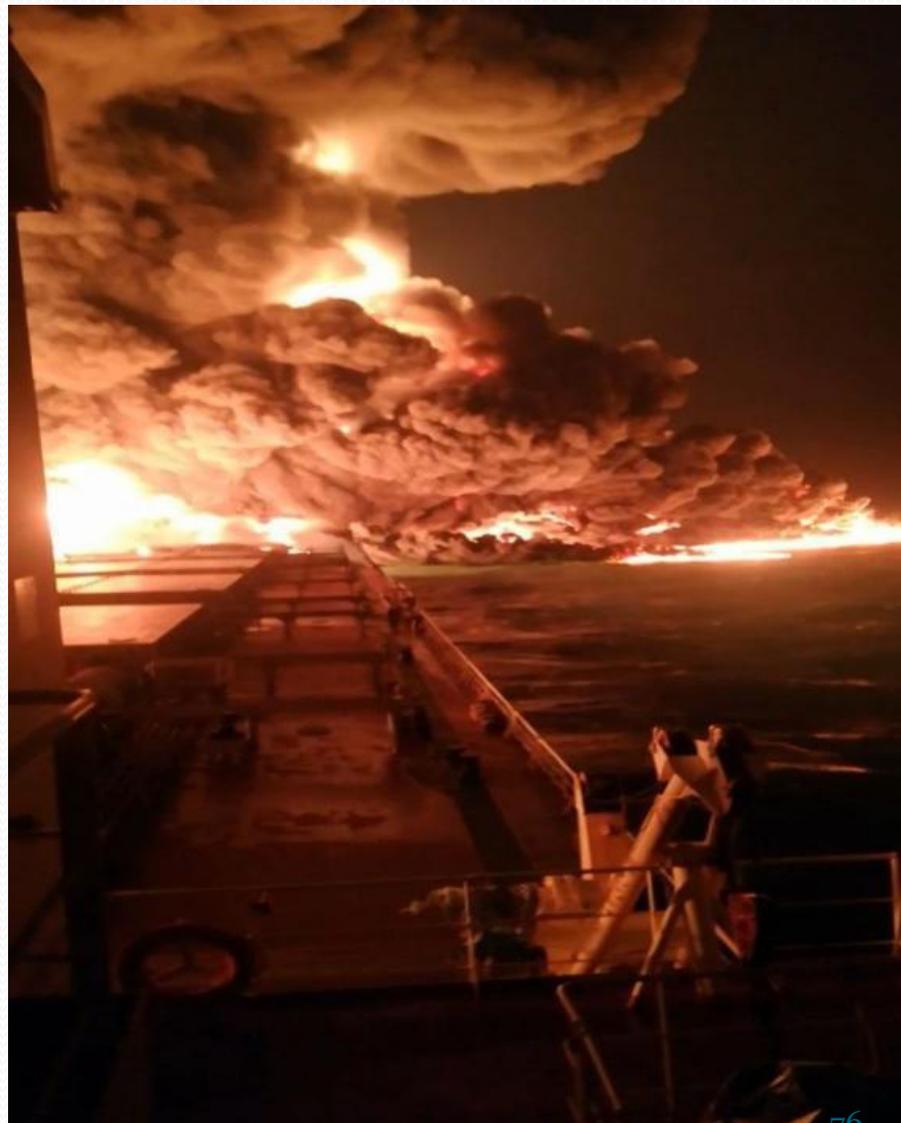
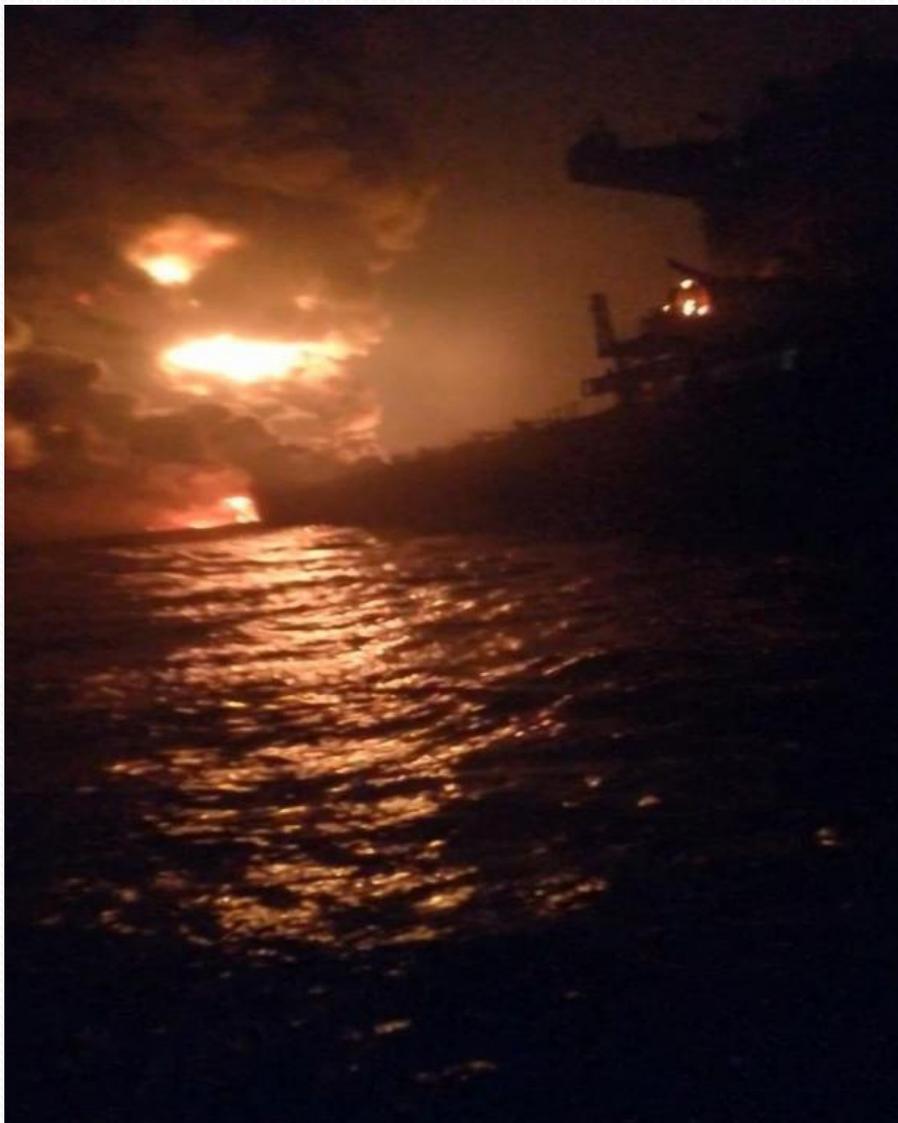
- **Collision (LT19:50:03)**
- **Captain instruct to activate GMDSS**

**06.01.2018**

**1951**

- **Fire on board Sanchi. Captain instructs fire pumps starting.**
- **Fire on Bow Crystal**
- **Captain to the bridge and order for full stern.**

# انفجار و حریق تانکر سانچی بلافاصله در زمان تصادم



**06.01.2018**

**1952**

- **Explosion and fire engulfing bridge & accommodation, followed by suffocation sounds.**

**06.01.2018**

**1953**

- **Big fire on Sanchi and GMDSS signaling stopped. Main Engine and E-Generators Stopped.**
- **Crystal all the crew moved toward the astern free fall lifeboat. Abandon ship.**

Now Initializing...

# خسارات وارده به کشتی فلّه بر کریستال



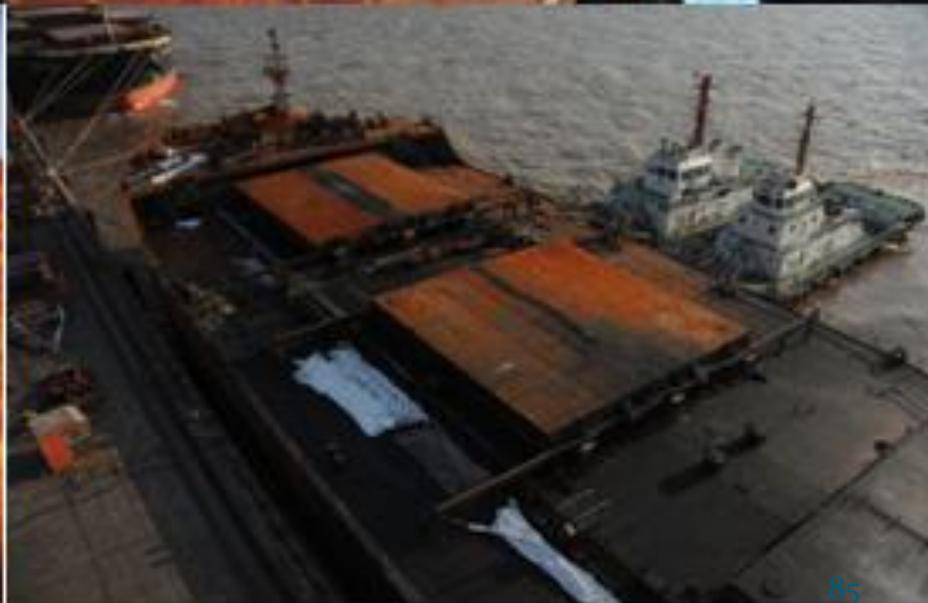
# سوختگی کامل سمت چپ کشتی فله بر کریستال



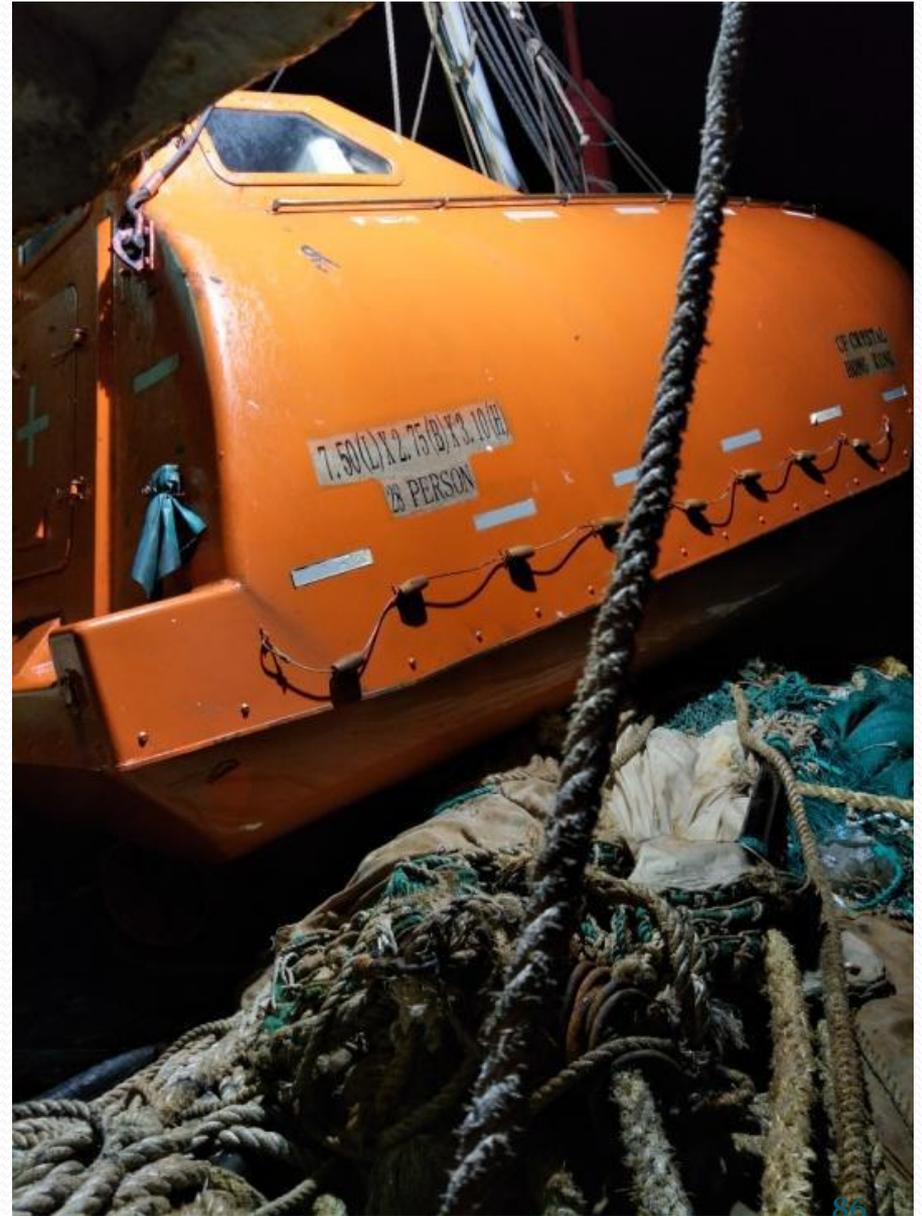
# سوختگی قایق نجات سمت چپ کشتی فله بر کریستال



# سوختگی تا انبار سوم و خسارت دماغه کشتی فله بر کریستال



# قایق نجات سقوط آزاد کشتی فله بر کریستال



# نجات خدمه کشتی فله بر کریستال توسط کشتی ماهیگیری



# برگشتن سه نفر به کشتی کریستال در حال حرکت به عقب



# اطفاء حریق کشتی فله بر کریستال توسط گروه نجات



# توسعه دود و گازهای سمی ناشی از حریق محموله سانچی



# امداد دریایی و هوایی برای حریق تانکر سانچی



# انفجارات مکرر در تانکر سانچی



# عکس هوایی از عملیات اطفاء حریق تانکر سانچی



1420时现场  
上海海事局

# عکس هوایی از حریق تانکر سانچی

1015时现场  
上海海事局 空巡大队



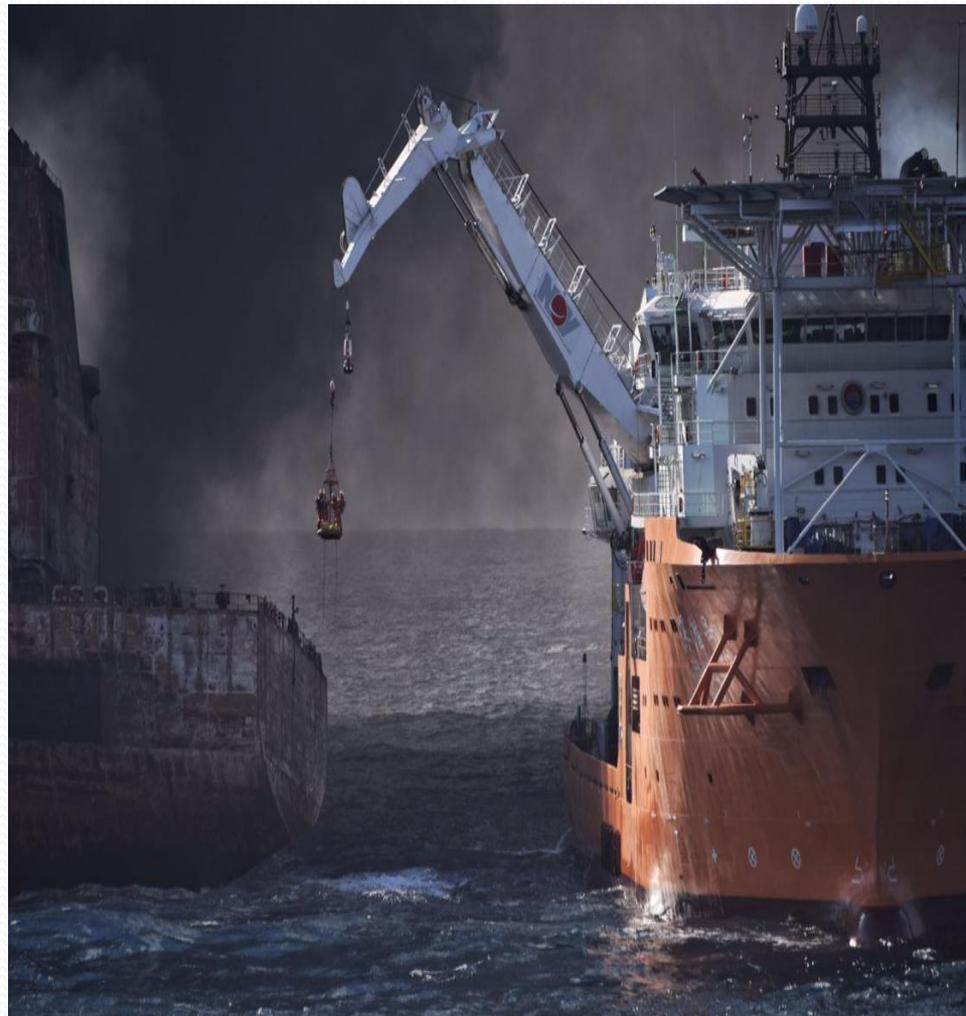
# سرایت آتش به تمامی انبارها و توسعه حریق سانچی



# سرایت آتش به تمامی انبارها و توسعه حریق سانچی



# حضور چهار نفر امدادگر بر روی کشتی تانکر سانچی



# عدم امکان حضور تکاوران امداد گر بر روی سانچی



# 4. ANALYSIS and CONCLUSION

- **4.1 Both vessels didn't comply with the requirements of Rule 5 of the COLREGS to maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions, and failed to make a full appraisal of the situation and of the risk of collision.**
- **4.2 Both vessels didn't comply with the requirements of Rule 7 of the COLREGS to use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists.**
- **4.3 Different statements are given regarding the causal factors of the accident as follows:**

# Chaina & Hong Kong

- **This accident happened in open waters with good visibility (about 10 nm) . Both SANCHI and CF CRYSTAL were power-driven vessels underway. According to COLREGS, the two vessels were in a crossing situation, in which SANCHI was the give-way vessel and CF CRYSTAL was the stand-on vessel.**
- **As a give-way vessel in a cross situation of Rule 15, SANCHI did not take actions as required. This is the main contributing factor to the collision.**

# Chaina & Hong Kong

- (1) During avoiding collision with small vessels, the 3/O attitude was negative. He expected the small vessel to take action even SANCHI is give way vessel.
- (2) Before the accident, the AB on duty repeatedly reminded the 3/O to take action, but the latter was too confident and did not take action.
- (3) The 3/O stayed in the chart room for too long leaving only the AB as the sole lookout in the bridge.
- (4) 3/O talked with the AB about things that had nothing to do with navigation.
- (5) There were 20 to 25 degrees differences of COG and 2 to 3 knots differences of SOG between the SANCHI's AIS information received by other vessels and the readout of SANCHI's VDR.

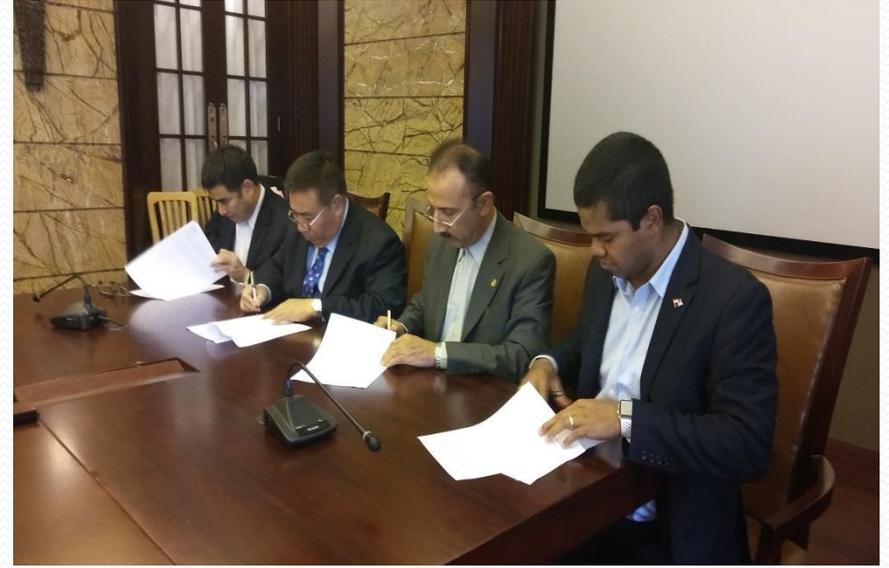
# IRAN / PANAMA / BANGLADESH

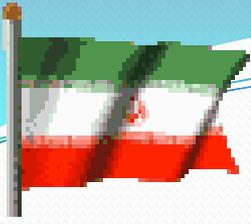
- **4.3.3.1 Main causal factor**
- **1. Alteration of CF Crystal course to starboard starting 15 minutes prior to the collision developed the situation which would otherwise had been clear in to a collision.**

# IRAN / PANAMA / BANGLADESH

- 4.3.3.2 Contributory Factors
- 1. CF Crystal's watchkeeping personnel had not noticed the Sanchi's presence up to the time of collision.
- 2. Both of the vessels had not noticed the change in navigational status of the other.
- 3. AIS had been used on board CF Crystal as the sole means of collision avoidance.
- 4. CF Crystal had not noticed the flashing signals given by the Sanchi.
- 5. No proper hand over/take over between the CF Crystal's watchkeeping officers.
- 6. Improper use of the AIS as a navigational aid in not identifying the surrounding vessels.

# امضای سند نهایی نتیجه بررسی سانحه توسط بازرسان چهار کشور





***THANK YOU ....***

**با تشکر از توجه شما .....**

**سازمان بنادر و دریانوردی  
معاونت امور دریایی**

**اردیبهشت ۱۳۹۷**