

NATIONAL TRANSPORTATION SAFETY BOARD
Office of Research and Engineering
Vehicle Recorder Division
Washington, D.C. 20594



GROUP CHAIRMAN'S FACTUAL REPORT OF INVESTIGATION

DCA06MF013

By
Dennis Grossi

WARNING

The reader of this report is cautioned that the transcription of a bridge voice recorder audio recording is not a precise science but is the best product possible from a Safety Board group investigative effort. The transcript or parts thereof, if taken out of context, could be misleading. The transcript should be viewed as an accident investigation tool to be used in conjunction with other evidence gathered during the investigation. Conclusions or interpretations should not be made using the transcript as the sole source of information.

NATIONAL TRANSPORTATION SAFETY BOARD

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Washington, D.C. 20594

April 10, 2007

Voyage Data Recorder Audio

**Group Chairman's Factual Report
By Dennis Grossi**

A. EVENT

Location: Bayonne NJ
Date: April 15, 2006
Time: 4:21 local time
Vessel: Container Ship – New Delhi Express (IMO #9301770)
NTSB Number: DCA06MF13

B. GROUP A group was convened on August 7, 2006

Chairman: Dennis Grossi
National Transportation Safety Board

Member: Captain Robert F. Flannery Jr, President Metro Pilots

Member: Captain Dennis M Wheeler, President New York Sandy Hook Pilots Assoc

Member. Captain Rob Jones, Office of Marine Safety, NTSB

C. SUMMARY

On April 15, 2006, the container ship New Delhi Express ran aground just west of the Bayonne Bridge while maneuvering west bound through the Bergen Point West Reach. There were no injuries, but the hull was breached and the vessel took on water resulting in a starboard list. Because of the list, the vessel grounded shortly after the initial impact. The vessel remained grounded for around 2 hours until it floated free on the rising tide. Cost of the hull damage was 1.5 million.

The vessel was fitted with a Samsung Simplified Voyage Data Recorder (VDR), in compliance with IMO requirements. The NTSB investigator in charge (IIC) assigned to this accident received, along with the U.S. Coast Guard, a copy of the 12-hours of VDR data downloaded from the hardened voyage recorder (HVR) memory. The original recording remained with the ship.

This VDR system can records inputs from 3 audio channels and the VHF radio channel, parametric data and still images of the radar video output. The parametric data channels are recorded as IEC 1162¹ NEMA sentence fields ², while the radar video input consists of the three-color (Red, Green and Blue) output from the bridge radar.

The audio recording is continuous while the data channels are sampled once per second. The recorded radar video still images were up-dated every 15-seconds.

D. DETAILS OF INVESTIGATION

The three channels of bridge audio and the VHF radio channel were recorded continuously in 200-second industry standard digital audio files. Each file name contained a time stamp reference that synchronized to the parametric and radar image time references. A transcript of the audio data was created from 04:04:49 to 04:21:55 (local time).

Condition of VDR

Because the VDR was successfully downloaded through the bridge interface unit, the on-scene investigator did not examine the physical condition of the VDR.

Audio Recording Description

Bridge area microphones are strategically located through out the bridge to capture crew conversation and other sounds at each duty station. However, because of the size of the bridge and ability of the crew to move to positions other than designated duty stations, some bridge communications were either not recorded or were unintelligible. However, the quality of the recording was considered good (see audio rating scale below)

Timing and Correlation

Timing on the transcript was established by converting the audio file time reference, which was recorded as universal coordinated time (UTC) to local time by subtracting 4 hours. Because the parametric data, radar images and audio data contain a common time reference, no additional correlation of the VDR data sets was necessary.

Display of Radar Images

The radar images, which are recorded at 15-second intervals, are displayed with the corresponding transcribed audio information. Two radar images are displayed per page. Therefore, each page of the transcript covers a 30-second period. Local time along with other parametric data are displayed in the radar image.

¹ IEC 1162 Maritime Navigation and Radio Communication Equipment and Systems – Digital Interfaces

² United States, National Marine Electronics Association (NMEA) standard for interfacing marine electronic navigational devices.

Dennis Grossi
National Resource Specialist for Flight Data Recorders
Vehicle Recorder Division

Bridge Audio Quality Rating Scale

The levels of recording quality are characterized by the following traits of the bridge audio recorder information:

- | | |
|--------------------------|--|
| Excellent Quality | Virtually all of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate only one or two words that were not intelligible. Any loss in the transcript is usually attributed to simultaneous cockpit/radio transmissions that obscure each other. |
| Good Quality | Most of the crew conversations could be accurately and easily understood. The transcript that was developed may indicate several words or phrases that were not intelligible. Any loss in the transcript can be attributed to minor technical deficiencies or momentary dropouts in the recording system, a large number of simultaneous bridge/radio transmissions that obscure each other, or conversation occurring out of microphone range. |
| Fair Quality | The majority of the crew conversations were intelligible. The transcript that was developed may indicate passages where conversations were unintelligible or fragmented. This type of recording is usually caused by noise that obscures portions of the voice signals or by a minor electrical or mechanical failure of the VDR system that distorts or obscures the audio information. |
| Poor Quality | Extraordinary means had to be used to make some of the crew conversations intelligible. The transcript that was developed may indicate fragmented phrases and conversations and may indicate extensive passages where conversations were missing or unintelligible. This type of recording is usually caused by a combination of a high bridge noise level with a low voice signal (poor signal-to-noise ratio) or by a mechanical or electrical failure of the VDR system that severely distorts or obscures the audio information. |
| Unusable | Crew conversations may be discerned, but neither ordinary nor extraordinary means made it possible to develop a meaningful transcript of the conversations. This type of recording is usually caused by an almost total mechanical or electrical failure of the VDR system. |

Transcript of a Samsung Voyage Data Recorder, installed on an vessel New Delhi Express, which ran aground near the Bayonne Bridge, Bayonne NJ, on April15, 2006 .

LEGEND

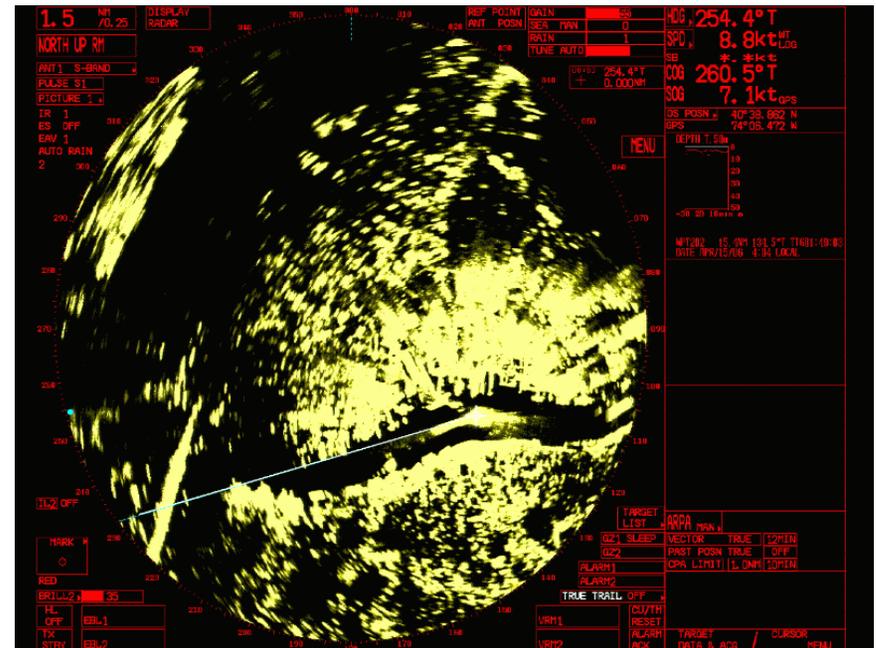
BAM	Bridge area microphone voice or sound source
VHF	VHF Radio
CAPT	Voice identified as the captain
CREW?	Unidentified crewmember
2/O	Voice identified as the second officer
DP	Voice identified as the docking pilot
SH	Voice unidentified as Sandy Hook pilot
HELM	Voice unidentified as helmsman
TUG-M	Transmission from Tug Miriam
TUG-K	Transmission from Tug Kimberly
TUG-G	Transmission from Tug Girls
TUG-D	Transmission from Tug Dispatch
Intcom?	Intercom communication from unidentified crewmember
*	Unintelligible word
#	Expletive
@	Non-pertinent word
()	Questionable insertion
[]	Editorial insertion

Note 1: Times are expressed in eastern daylight time (EDT).

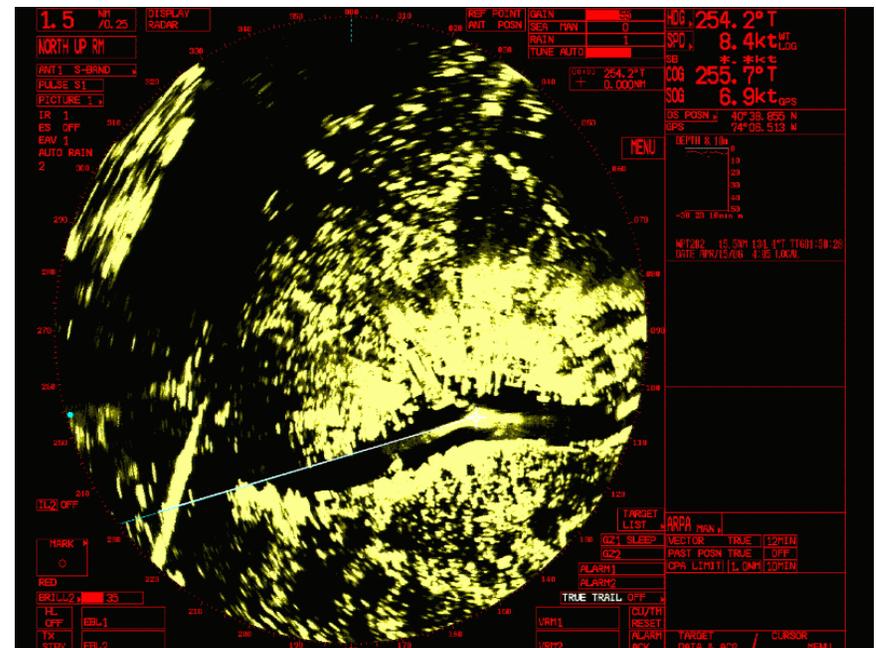
Note 2: Generally, only radio transmissions to and from the accident vessel were transcribed.

Note 3: Words shown with excess vowels, letters, or drawn out syllables are a phonetic representation of the words as spoken.

Note 4: A non-pertinent word, where noted, refers to a word not directly related to the operation, control or condition of the aircraft.



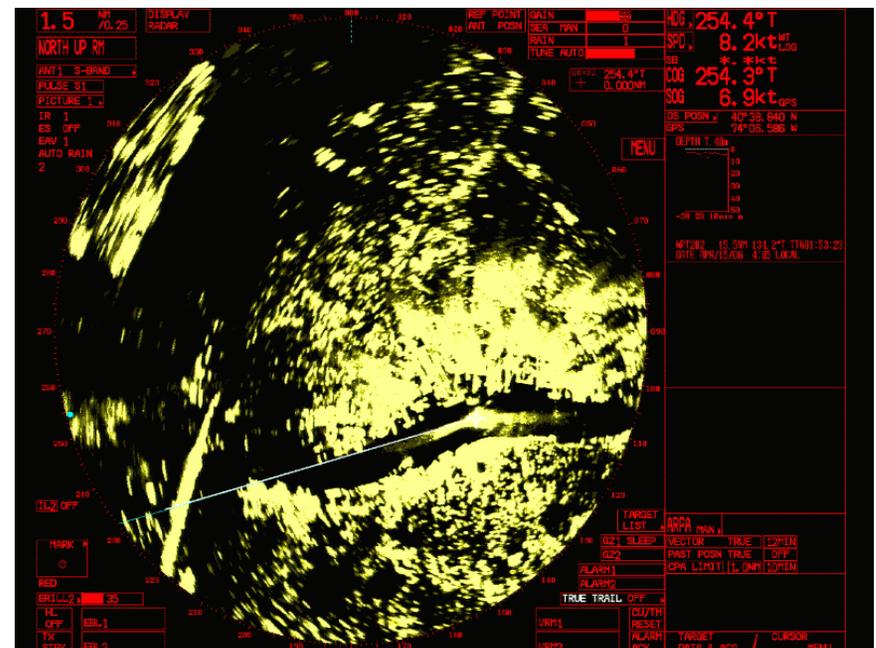
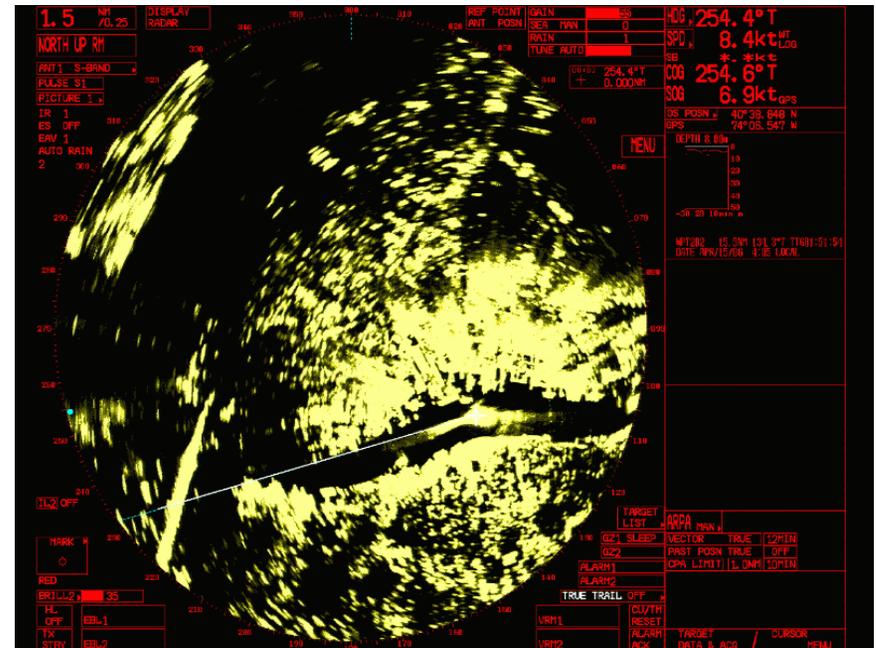
Helm 04:05:13 Steady sir, my heading is two five four



VHF 04:05:27 Three hundred feet visibility at Shooters Island.

DP 04:05:55 Port twenty

Helm Port 20

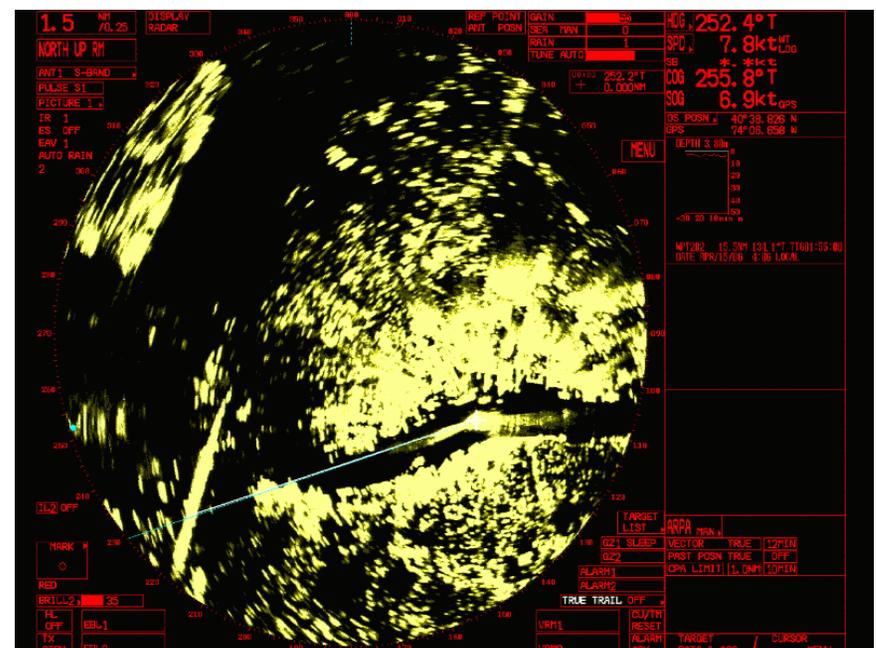
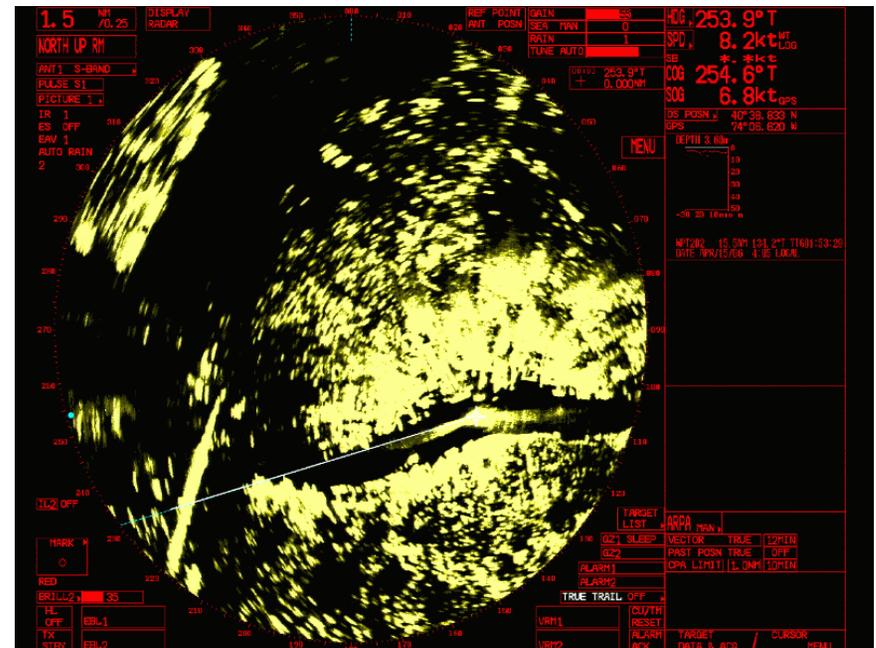


VHF 04:06:02 ...yeah I can't see the Bayonne Bridge.

DP 04:06:12 What about us can, we see the Bayonne Bridge?

VHF 04:06:19 ...clear but not really clear but it is not bad visibility this side of the Bayonne Bridge, but I can't see it from this side, here at Standard Tank

DP Thanks

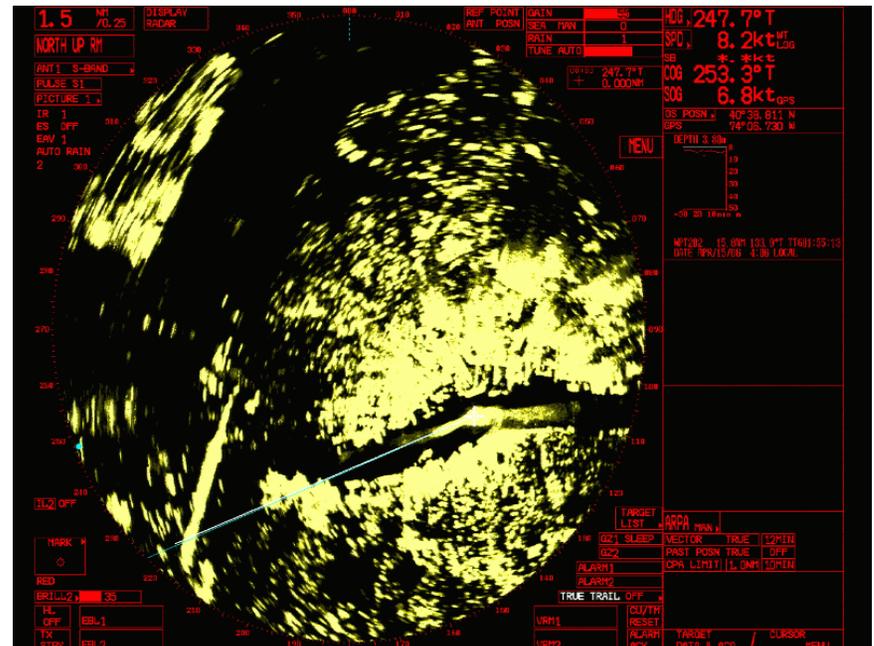
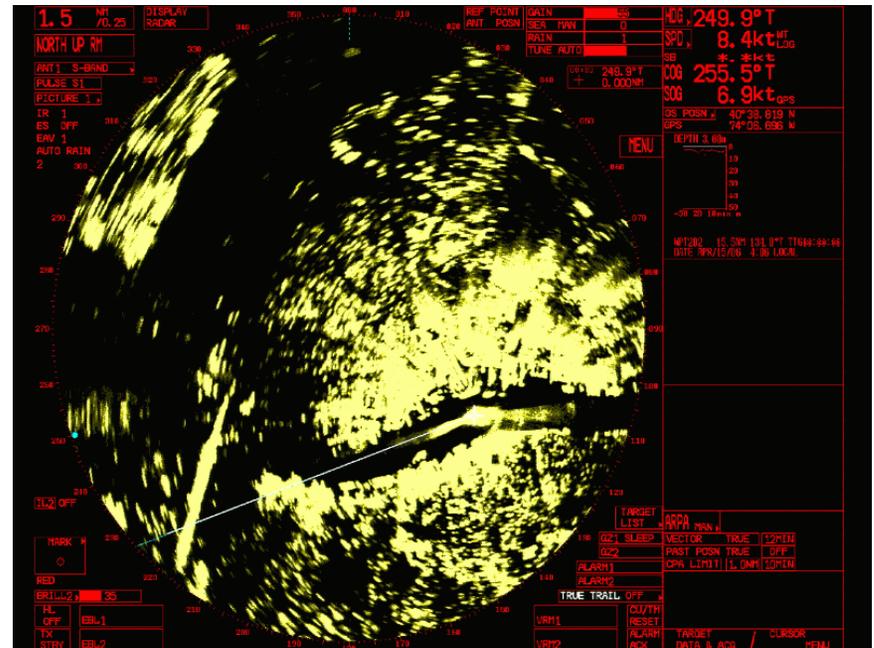


DP 04:06:26 Midship now

Helm Midship – Midship

DP 04:06:45 Seventeen

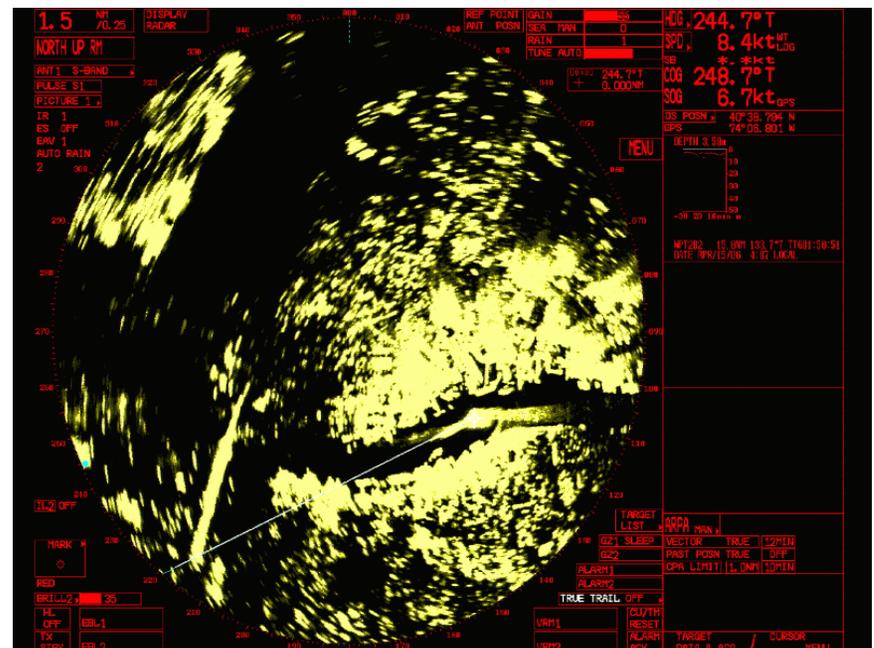
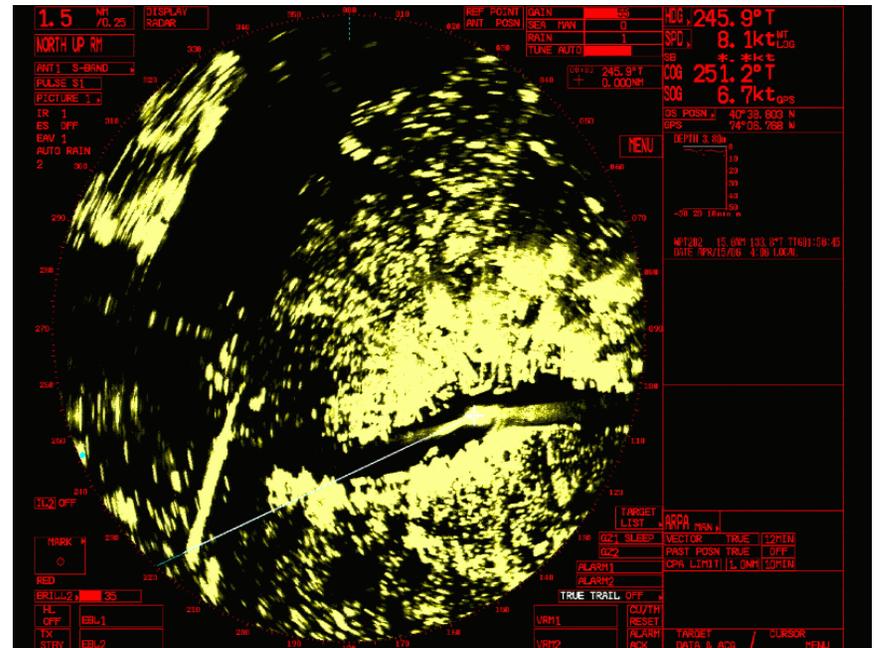
DP 04:06:52 Yeah I am inbound at coastal visibility is getting a little dicey do you have a third boat if I need one?



DP 04:07:04 Steady

Helm Steady...Steady my heading is two four five

VHF-D 04:07:27 There will be a boat at the yard



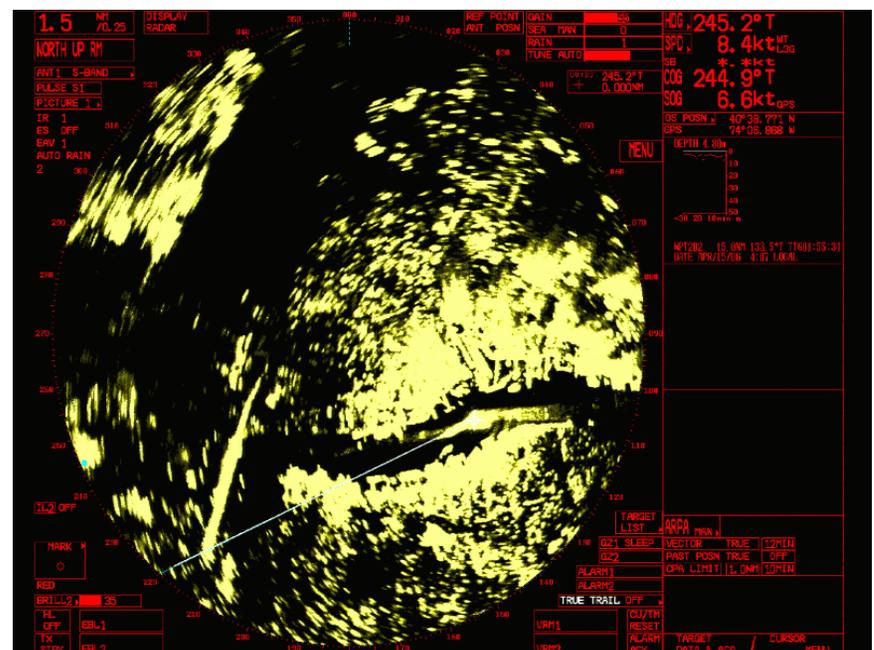
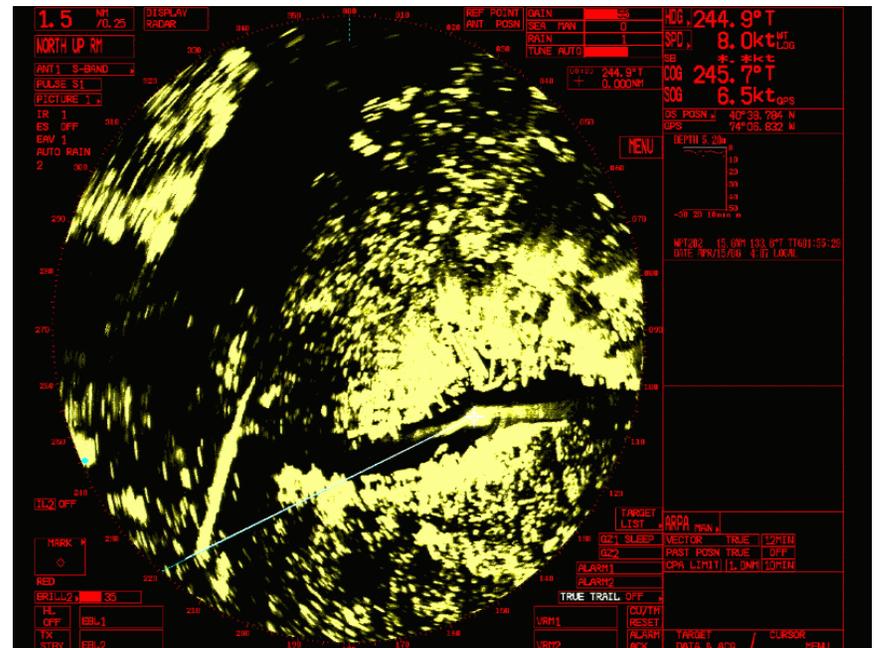
DP 04:07:30 Yeah ok I am here at Gordons, excuse me, at Coastal so he can drift out this way.

VHF-D Alright Capt I will send the third boat out, seventeen Girls.

VHF-G 04:07:52 Girls Seventeen

VHF-D 04:07:55 on the Girls Yah want ah Crank it up they are at Coastal You got ah...

DP 04:07:59 Starboard twenty



Helm Starboard twenty

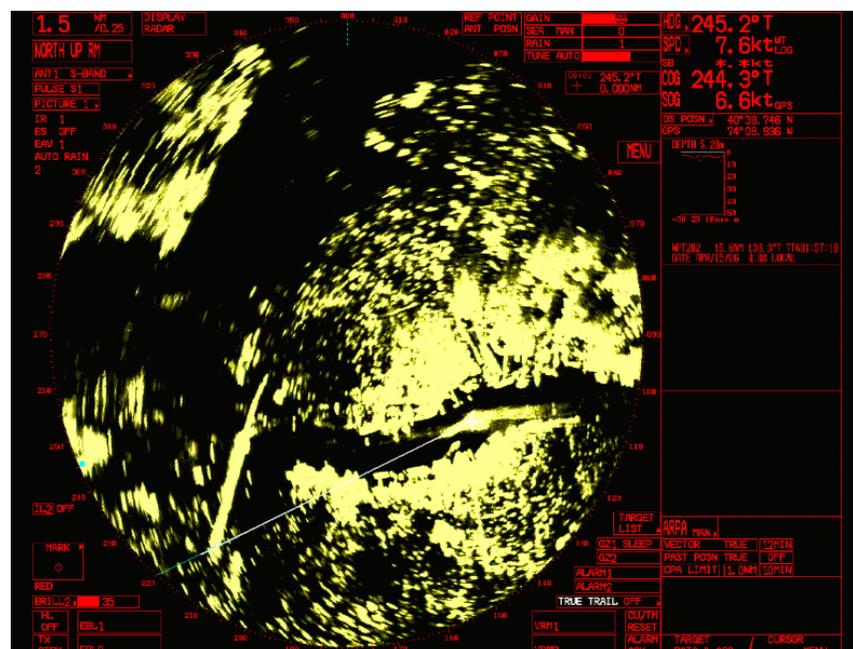
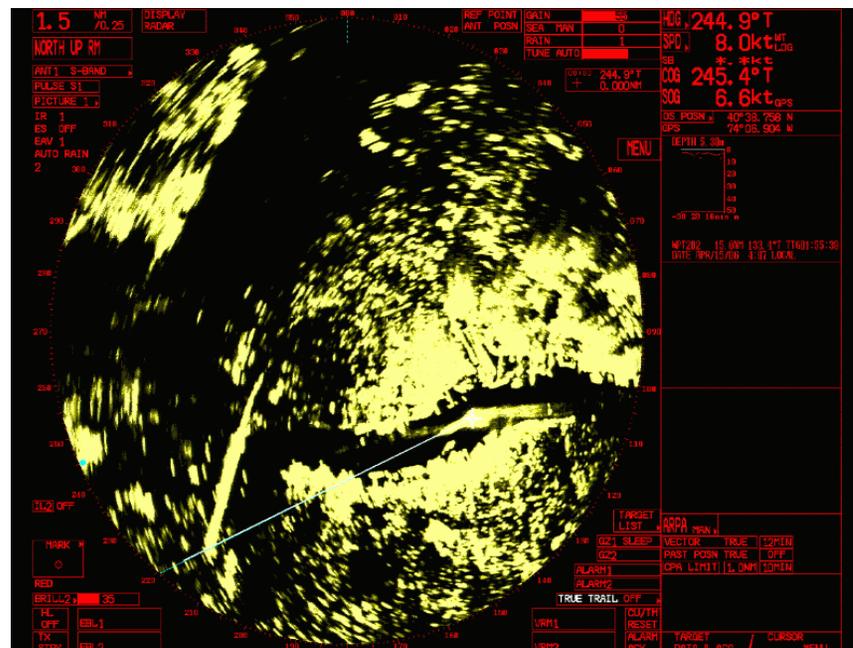
VHF-D 04:08:06 ..the New Delhi Express they are off Coastal Bayonne, Miriam Kimberly and John Bates.

DP 04:08:18 Yeah we might as well grab, em. right

SH 04:08:20 Yeah especially if it is going to be zero around Bergen Point.

VHF-G 04:08:24 New Delhi Express Costal Bayonne, I will be working with the Kimberly and what's the other boat?

VHF-D Miriam

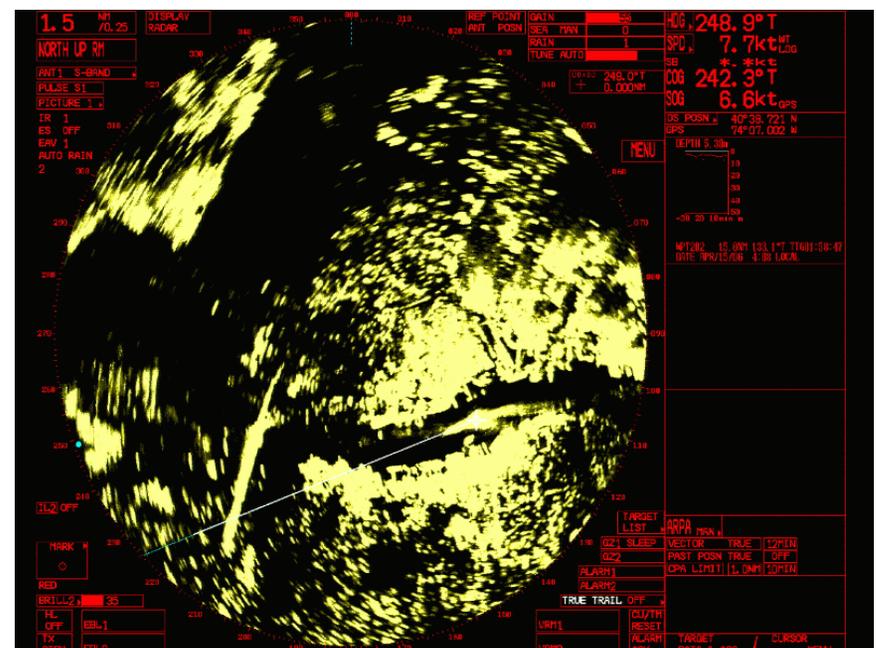
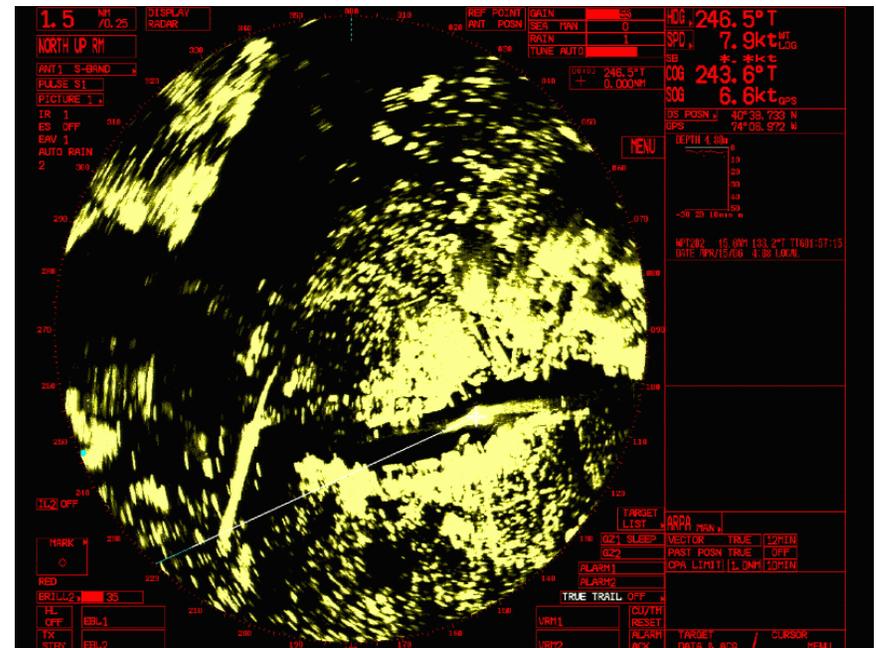


VHF-G 04:08:37 Ok Miriam Thank you.

DP 04:08:39 Put a line up on the port bow when you see me, I'm just about up to the dragon lady's old yard you know going by the aggregate dock.

DP Midships

Helms 04:08:56 Midships



DP 04:08:57 Miriam, Kimberly and Girls let's go to six-seven

VHF-M 04:09:04 Miriam Kimberly and Girls go to six-seven

Helms Midship

VHF-K Sixty seven

DP Steady

Helms 04:09:14 Steady

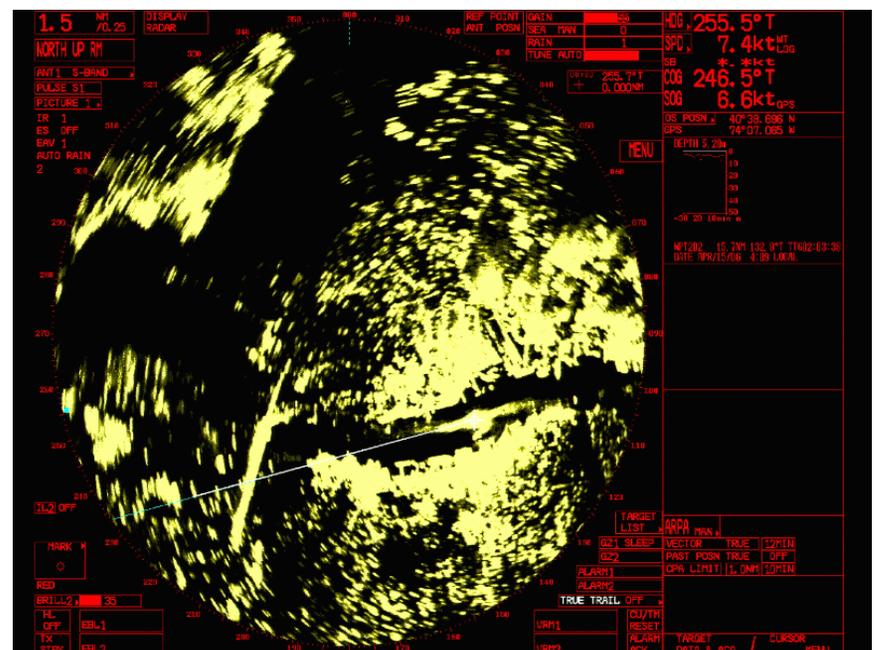
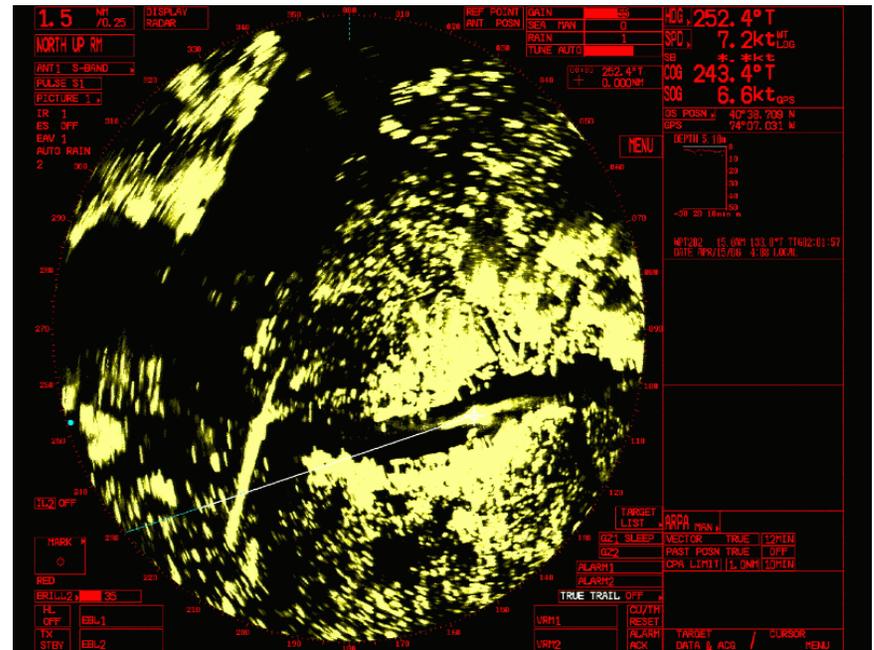
DP 04:09:16 We might see buoy to buoy

SH Yeah

DP 04:09:24 We'll get around the corner and take it one step at a time right.

SH That's it

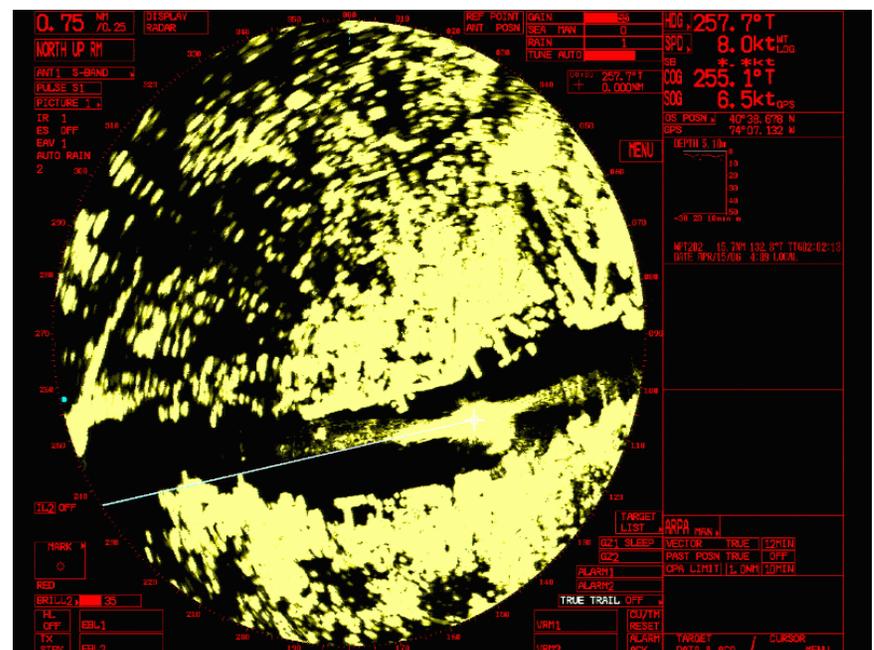
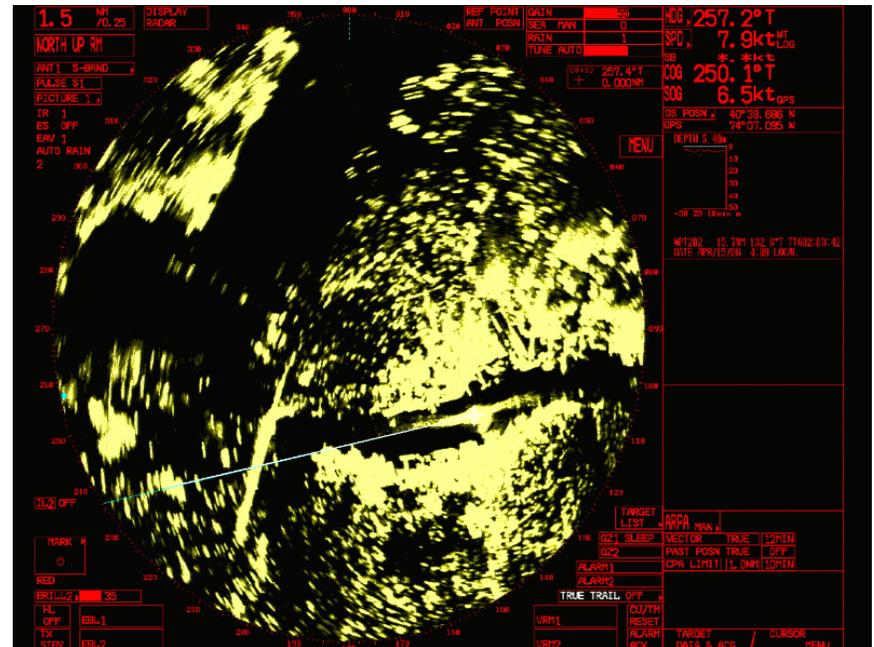
DP What are you going to do?



Helms 04:09:44 Steady, my heading is two-fifty-seven

DP 04:09:51 What have you got this radar on you got it on, you got it on the head up or on course we are steering?

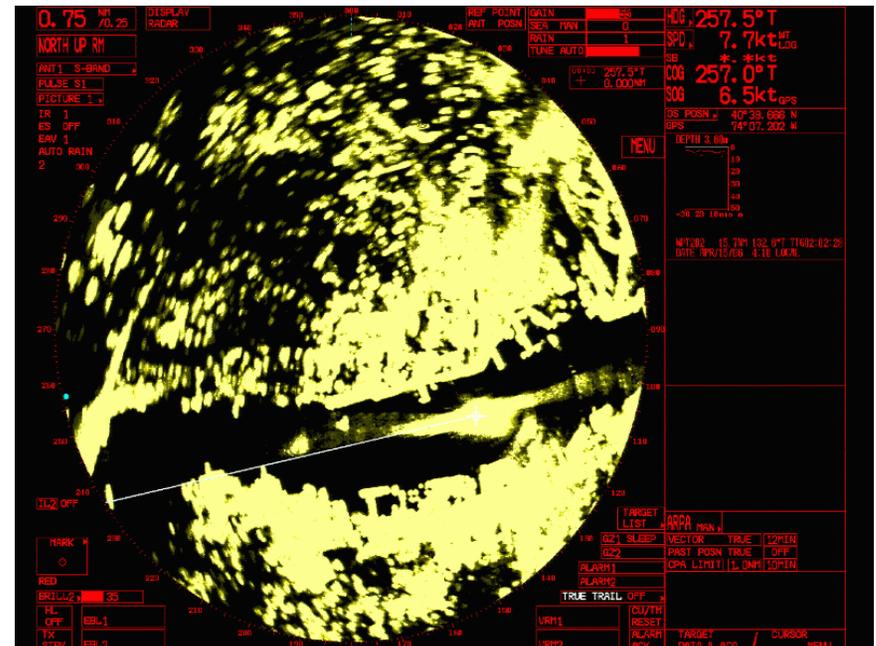
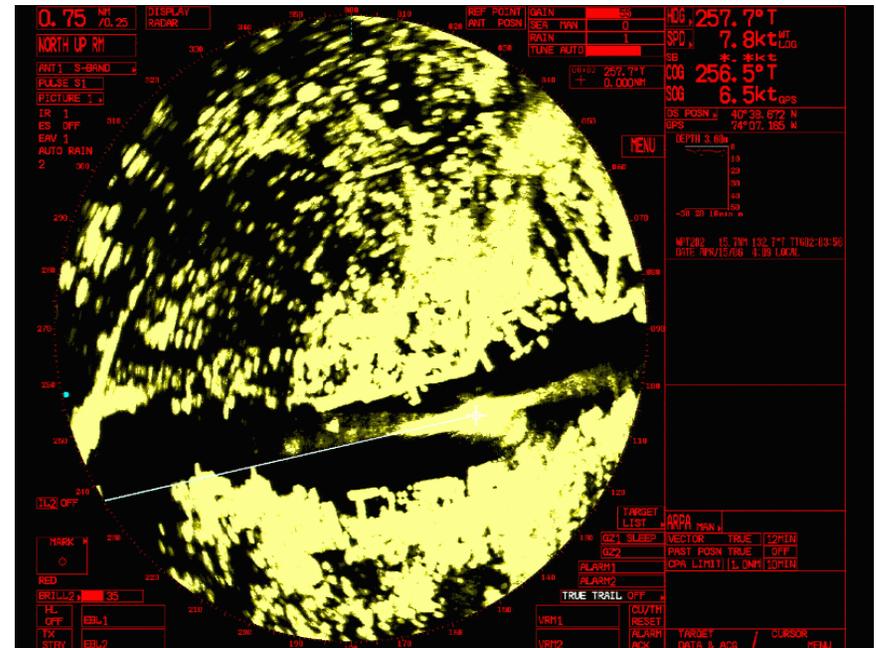
SH Yeah

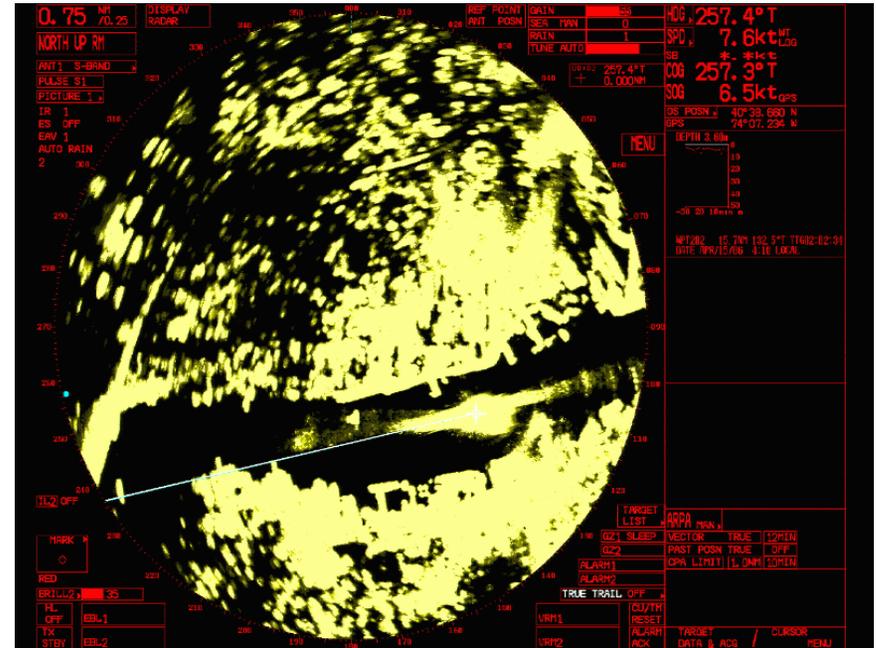


DP 04:10:05 Kimberly, are you on the air?

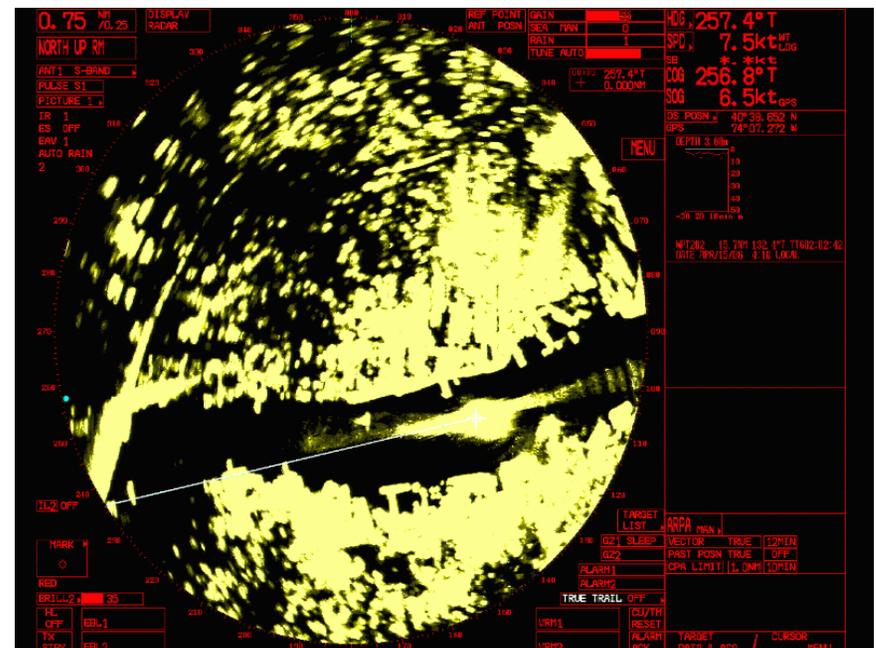
VHF-K Kimberly sixty-seven

DP 04:10:09 You are going to have the quarter for the turn, Girls you will be on the port bow with a rope.





No Information Recorded 04:10:28 through 04:10:58

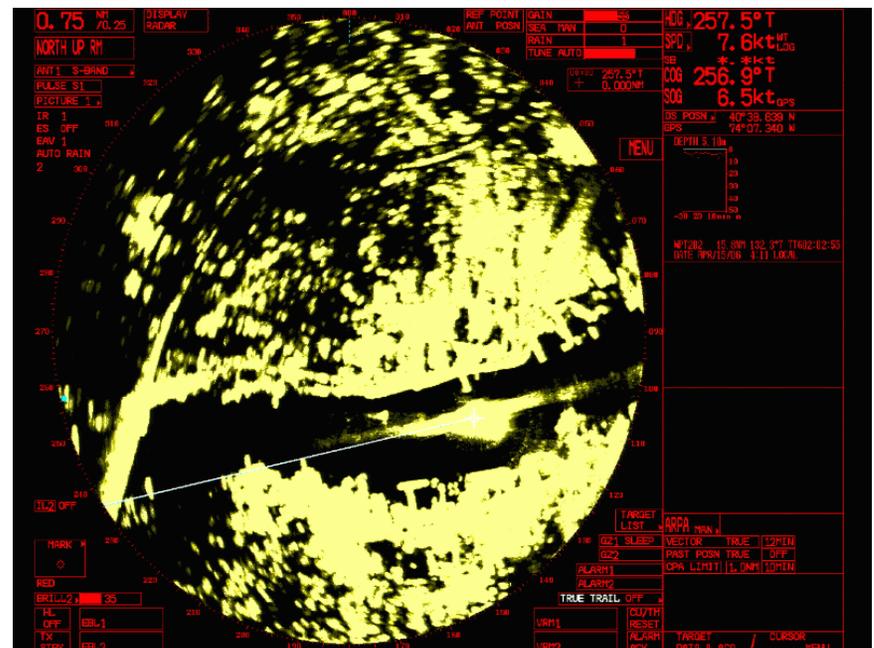
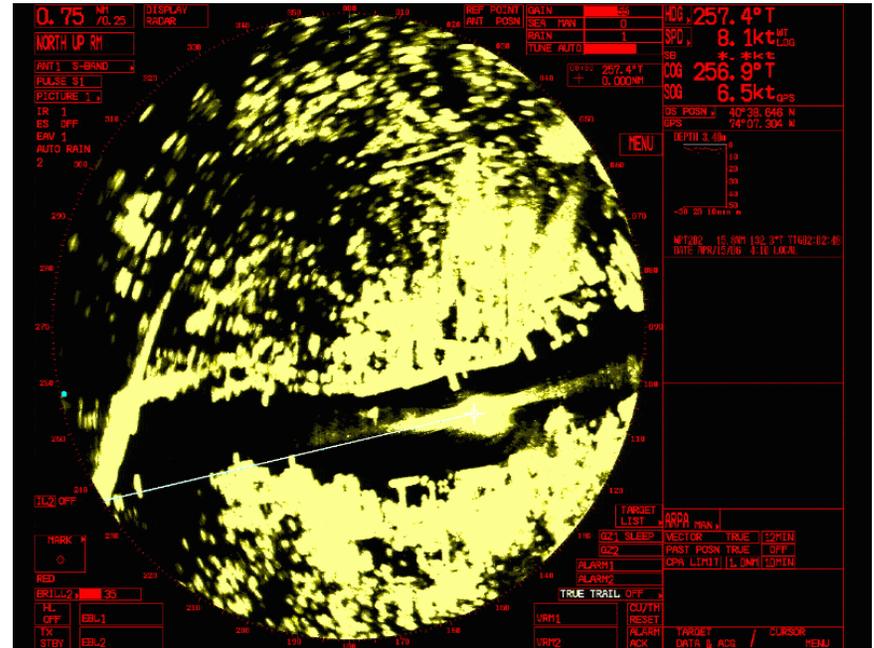


DP 04:11:02 Starboard ten

Helms Starboard ten...Starboard ten

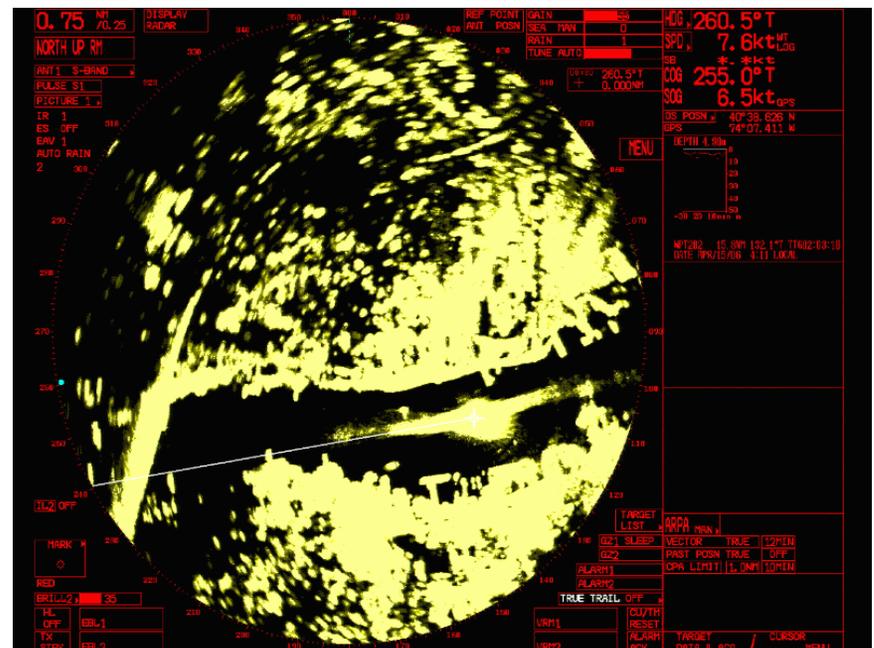
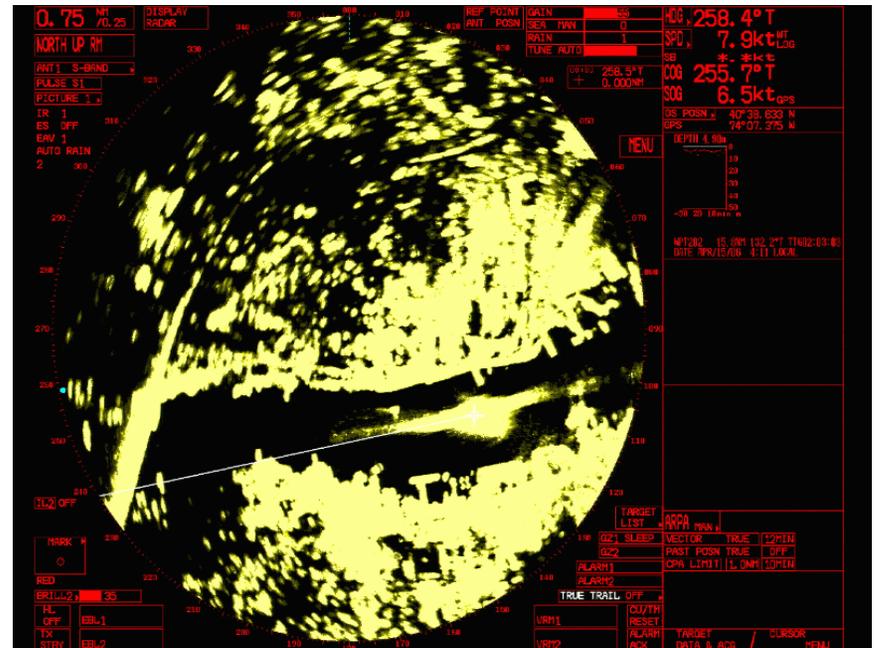
DP 04:11:11 Starboard twenty

Helms Starboard twenty...Starboard twenty



DP 04:11:34 Should be just about the last of the ebb at Bergen Point.

SH 04:11:43 That's right, yeah it is damn close to slack water.



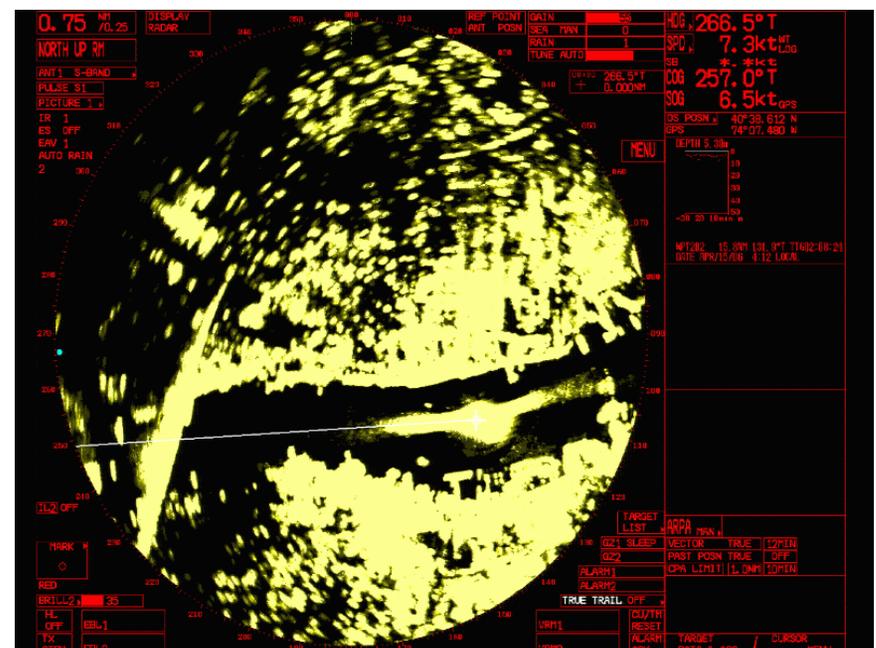
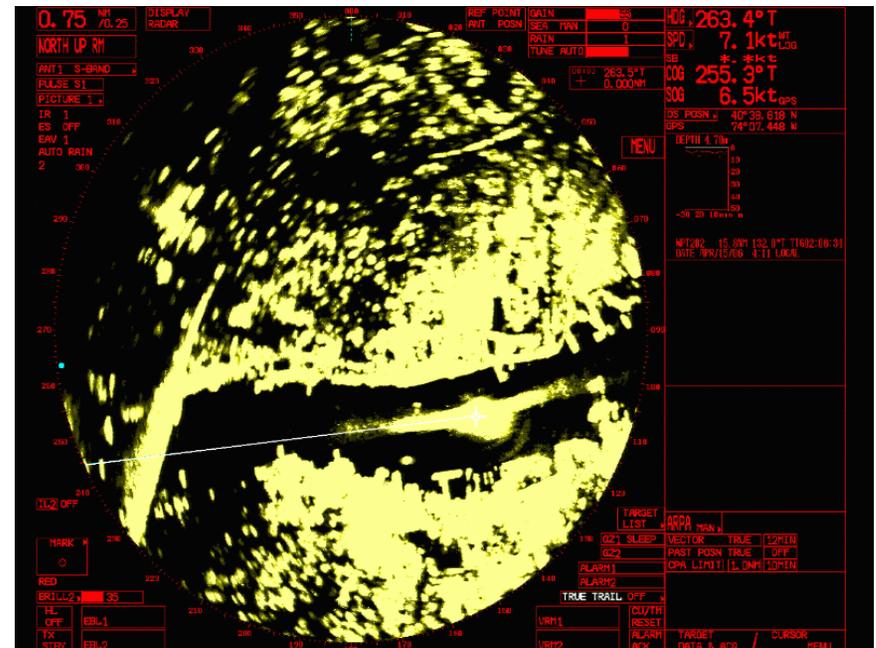
DP 04:12:01 Midship

Helms Midship...Midship

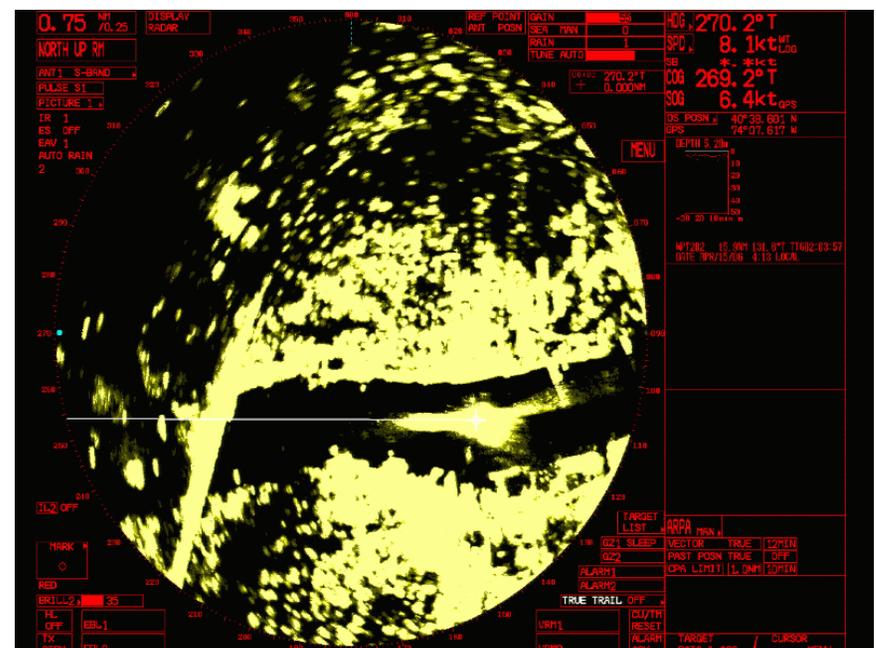
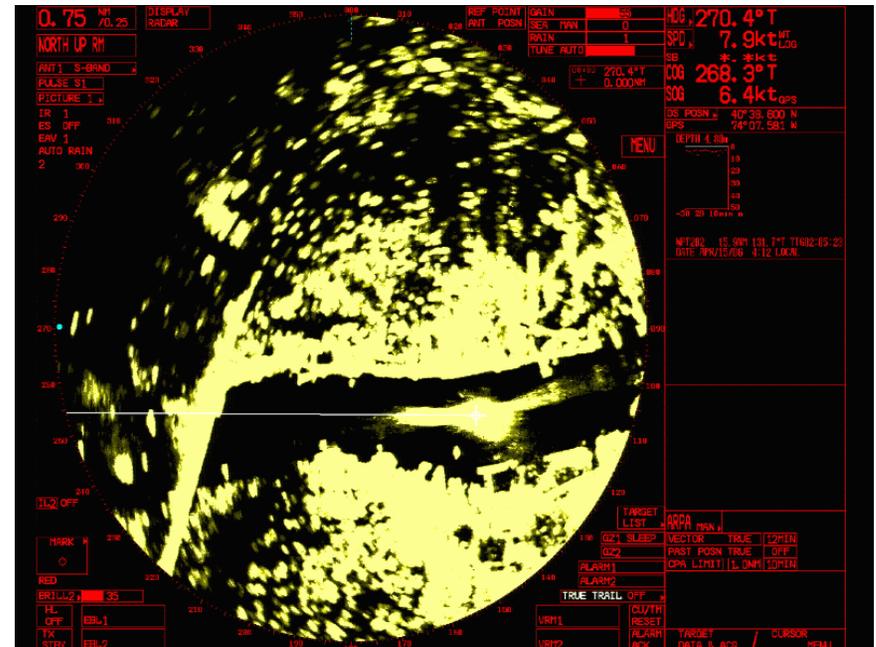
SH 04:12:12 Soon as that flood starts it will sock right in

DP 04:12:27 Steady.

Helms Steady

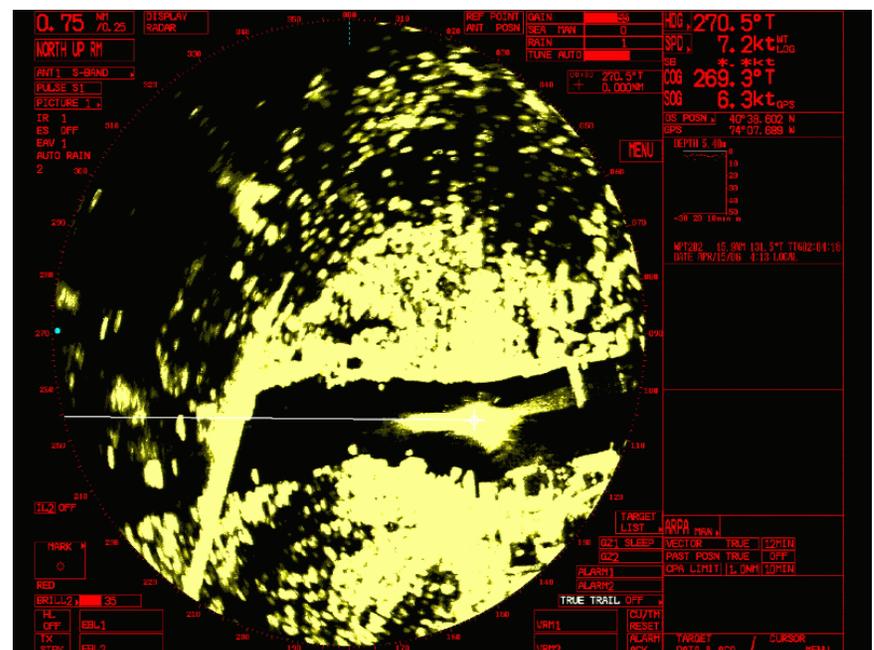
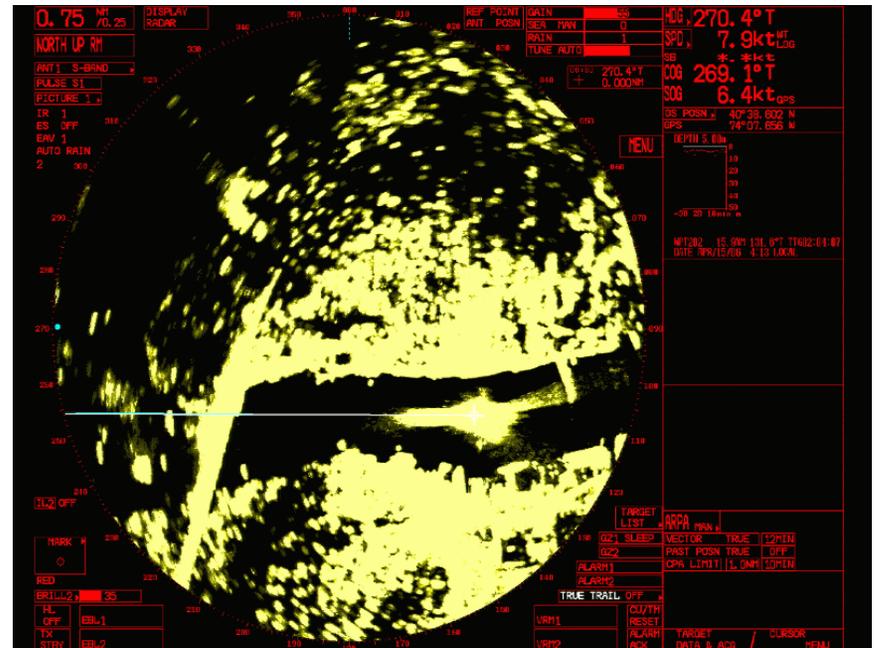


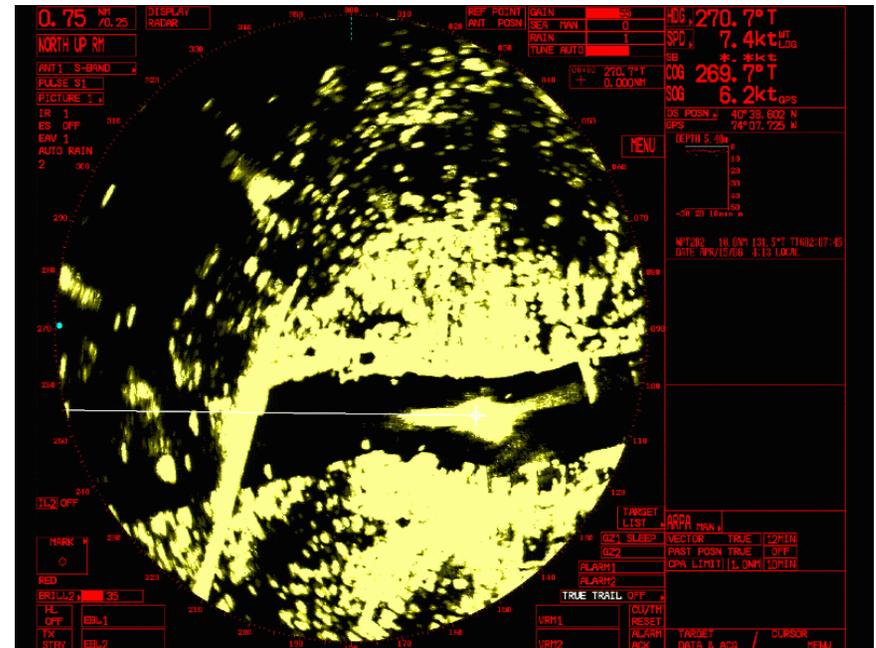
- DP 04:13:14 Stop engine
- 2/O Stop
- BAM 04:13:17 (sound of telegraph response – continuous tone)
- DP 04:13:19 Just for a minute we will get her down to about four-knots.
- DP 04:13:24 See anything at all Steve?
- SH Nope



SH 04:13:38 You will have to come left on the Bayonne side...?

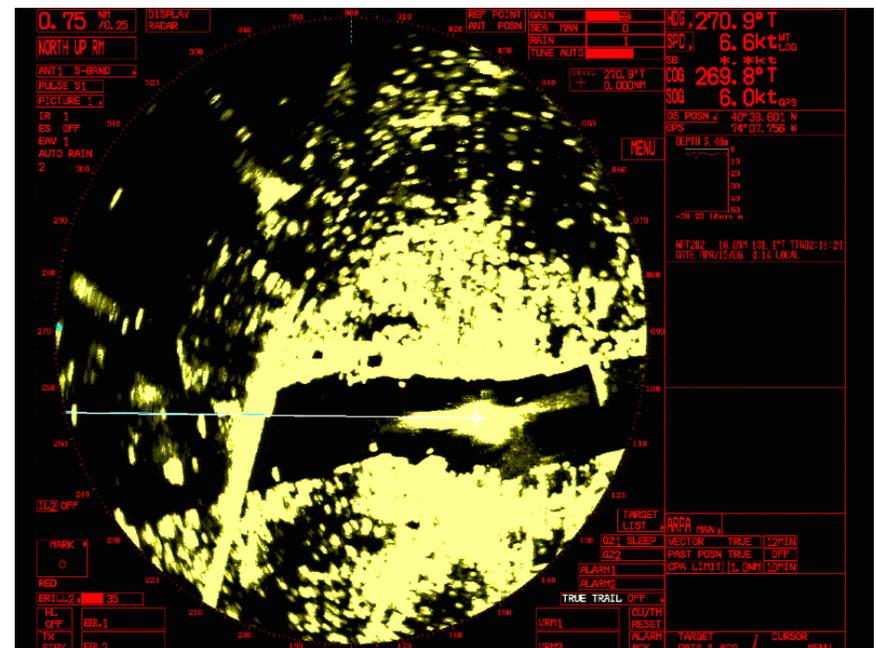
DP Yeah



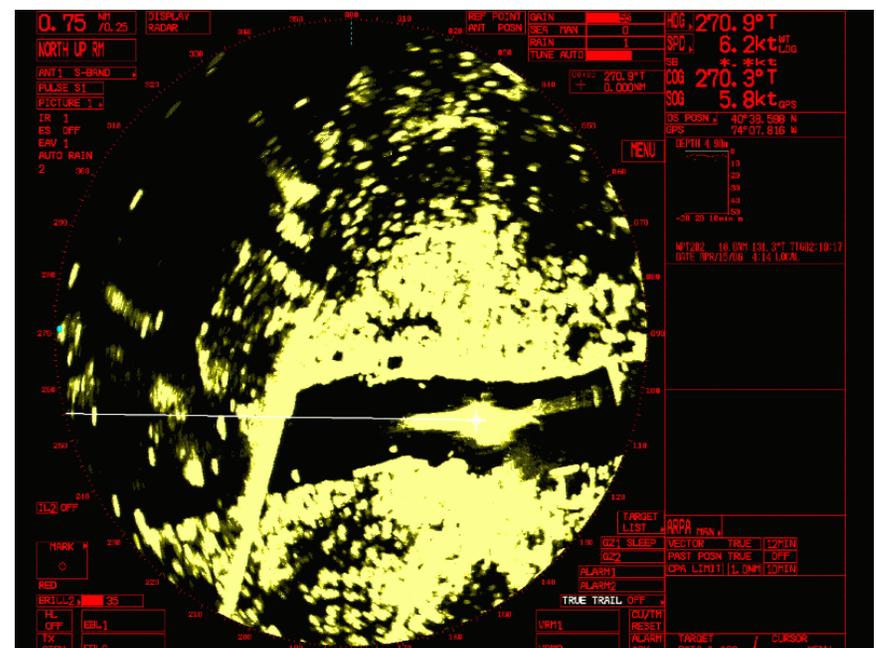
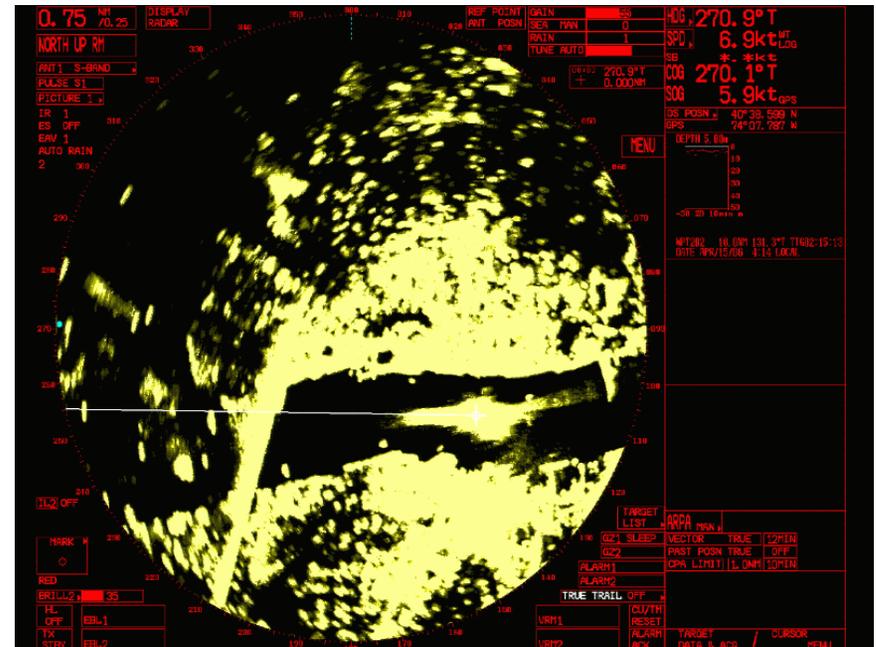


DP 04:14:24 What's your heading now ?

Helms Two Seven One



- DP 04:14:31 What's the number of the buoy?
- SH What's that?
- DP 04:14:36 That's a good course right now huh...
- SH 04:14:38 You're fine can't be in the middle anyway
- DP 04:14:50 Port twenty
- Helms Port twenty
- DP 04:14:52 Dead slow ahead
- 2/O Dead slow ahead
- Helms Port twenty



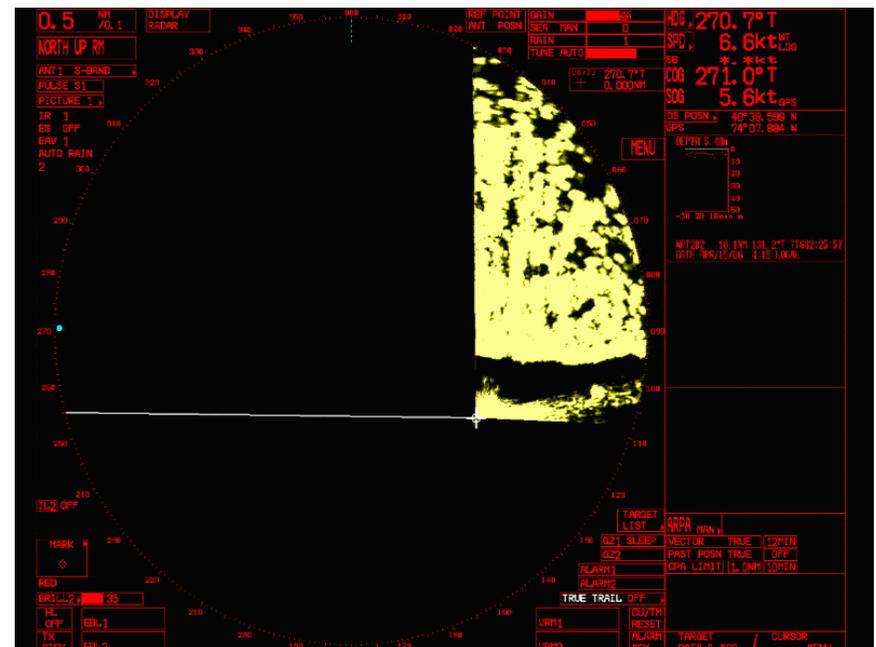
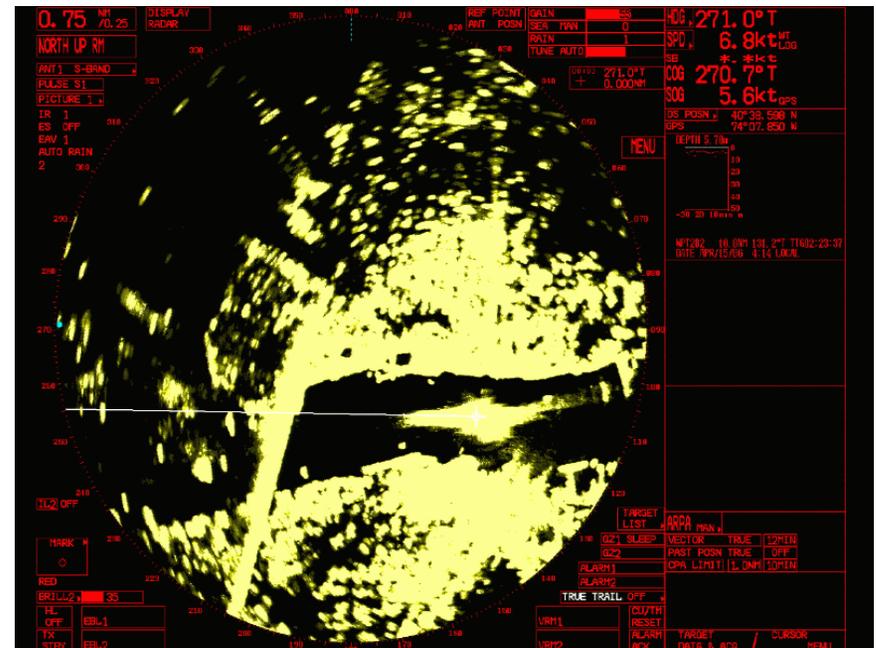
CAPT 04:15:01 Are you going to head to ...?

DP Yeah

DP 04:15:05 What is this here?

SH 04:15:09 *Unintelligible*...should we go to the next one?

DP 04:15:11 go down one....?



DP 04:15:27 What's your heading?

Helms Two Seven Zero

Helms Now two-seven-nine...aha two-six-nine

VHF-G 04:15:38 John do you want a line on the port bow?

DP 04:15:40 Yeah that's what I said Don

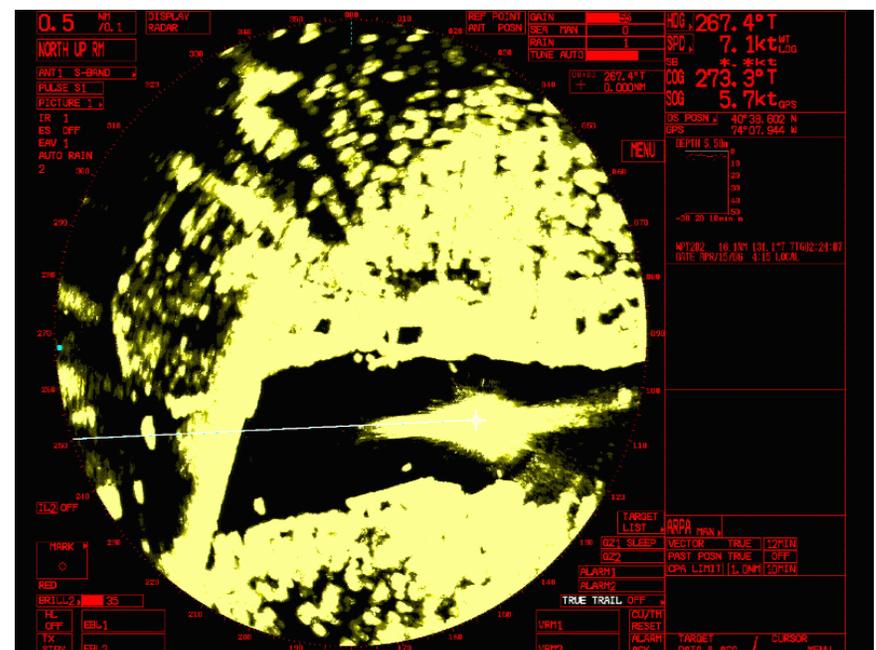
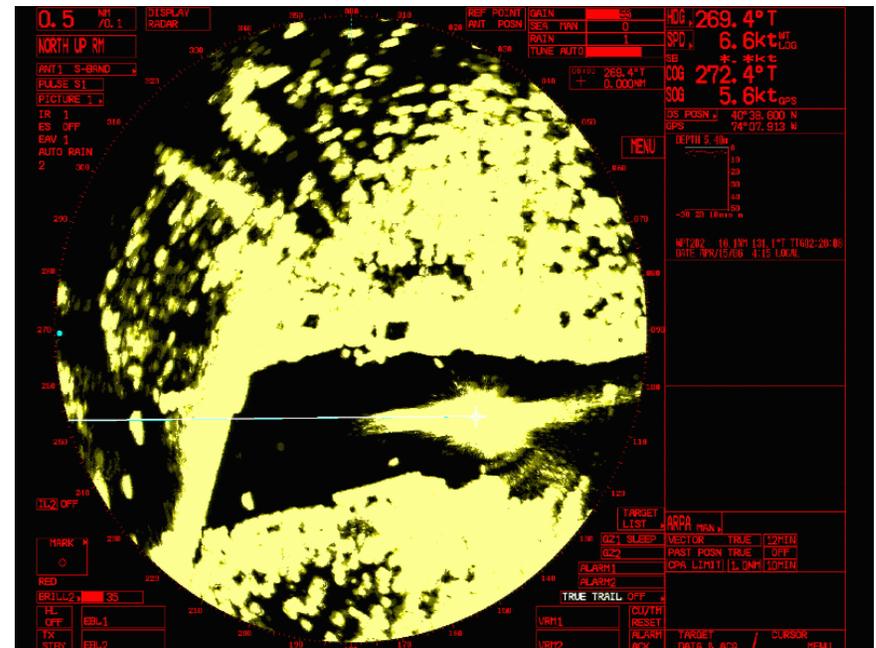
SH 04:15:47 You losing it?

DP Nah

SH 04:15:51 they start to do that, lose their charge....

DP 04:15:54 How's that look?

Helms 04:15:56 Now Two Six Five



DP 04:16:29 What's your heading?

Helm Two Six Zero

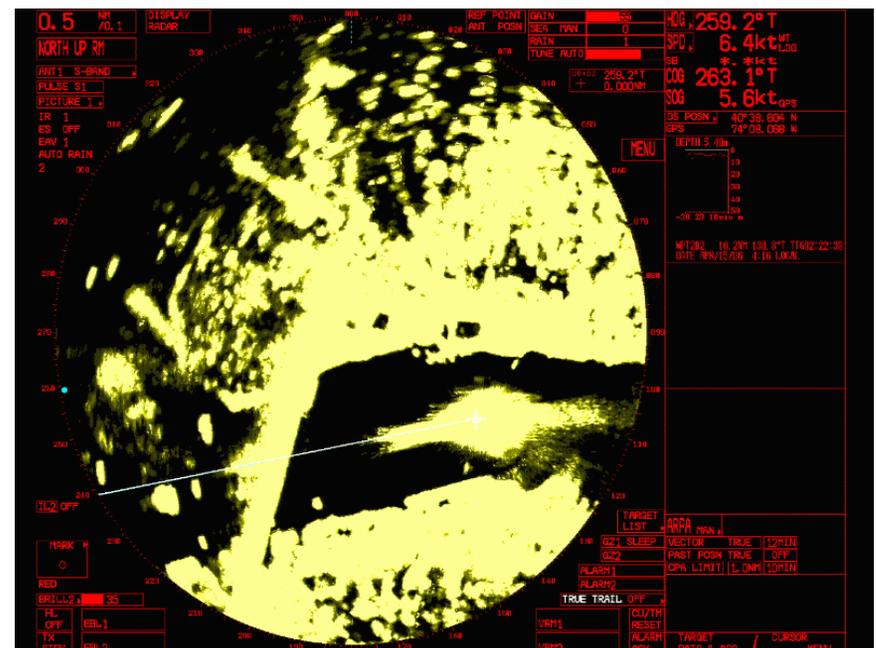
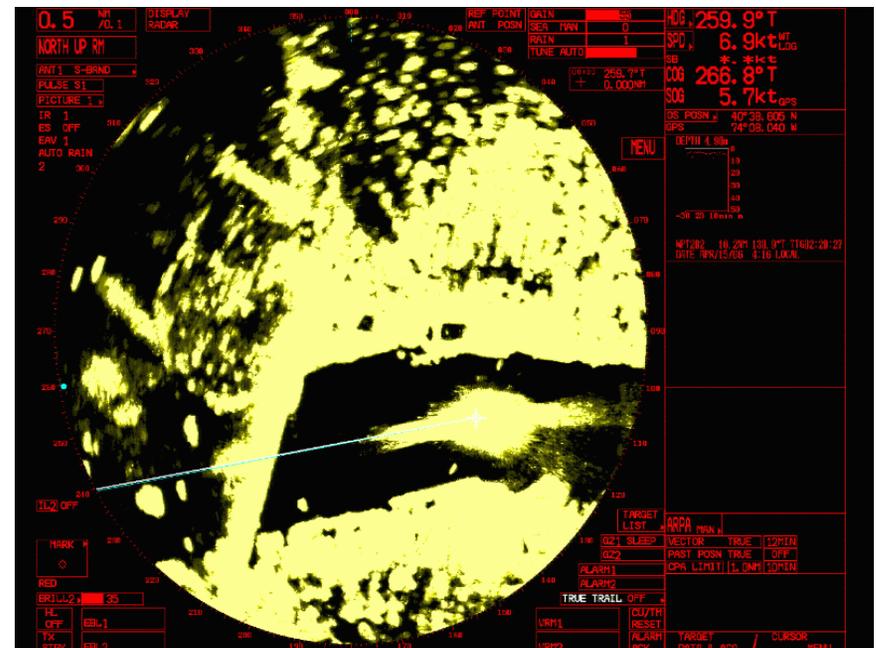
DP 04:16:30 Steady

Helm Steady

DP 04:16:39 When the #### is it going to open up?

DP 04:16:46 What do you think?

DP 04:16:50 That's definitely a buoy there.



VHF-G 04:17:29 I don't see a chock here John.

DP 04:17:31 Don I am looking for anything you can see, I'm at zero here.

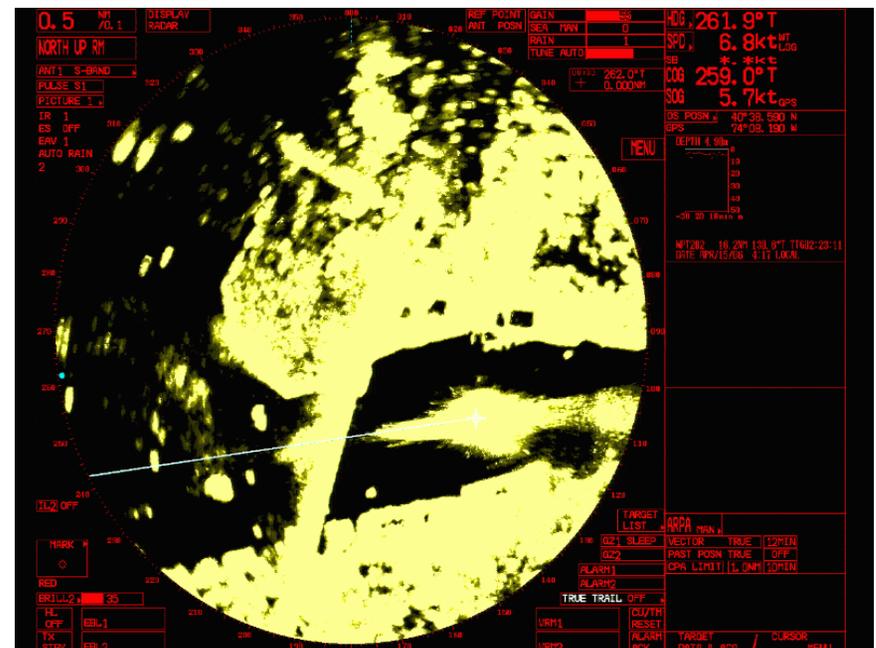
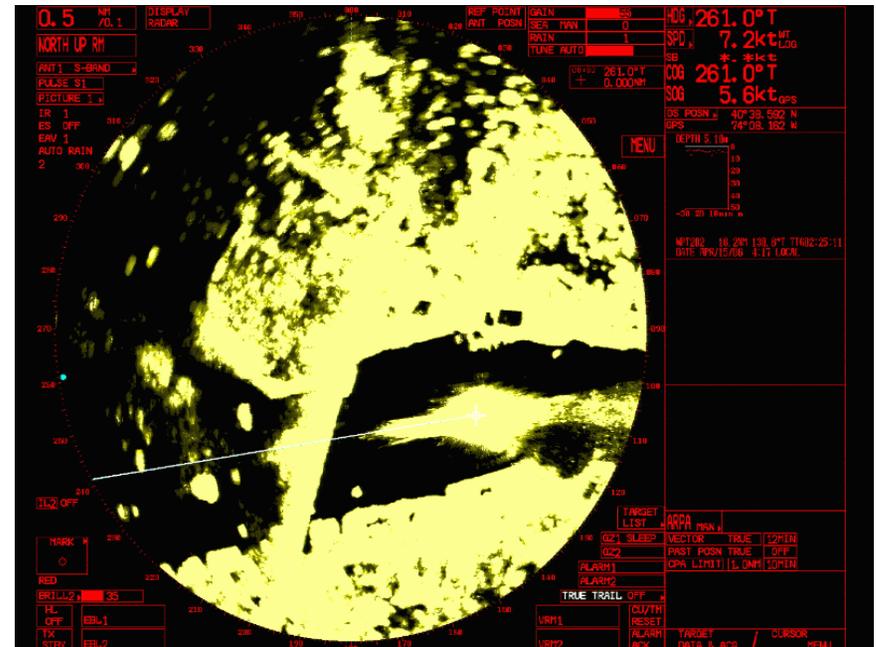
VHF-G 04:17:36 No, I don't see anything

DP 04:17:40 How we looking Joe?

VHF-M 04:17:43 Still looking good you know, you're a little bit right of the middle of the channel but...

DP 04:17:52 What do you think, come right?

SH 04:17:56 Wait until you get under the bridge then you can start coming right



DP0 4:17:58 I'm still ...Midship

Helm Midship

SH 04:18:01 You have a one hundred and ten degree turn...(recorded in a lower muffled tone)

Helm Midship

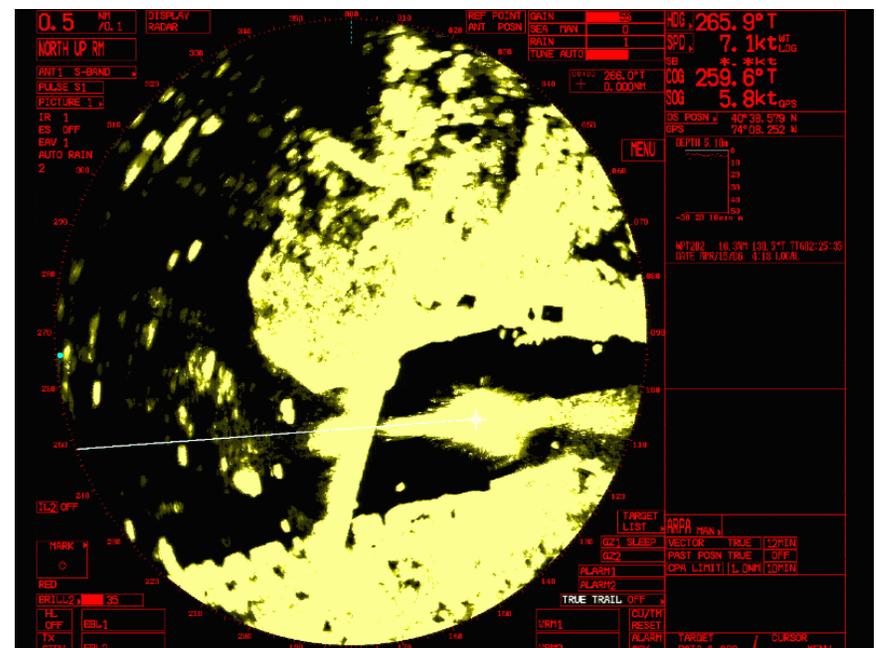
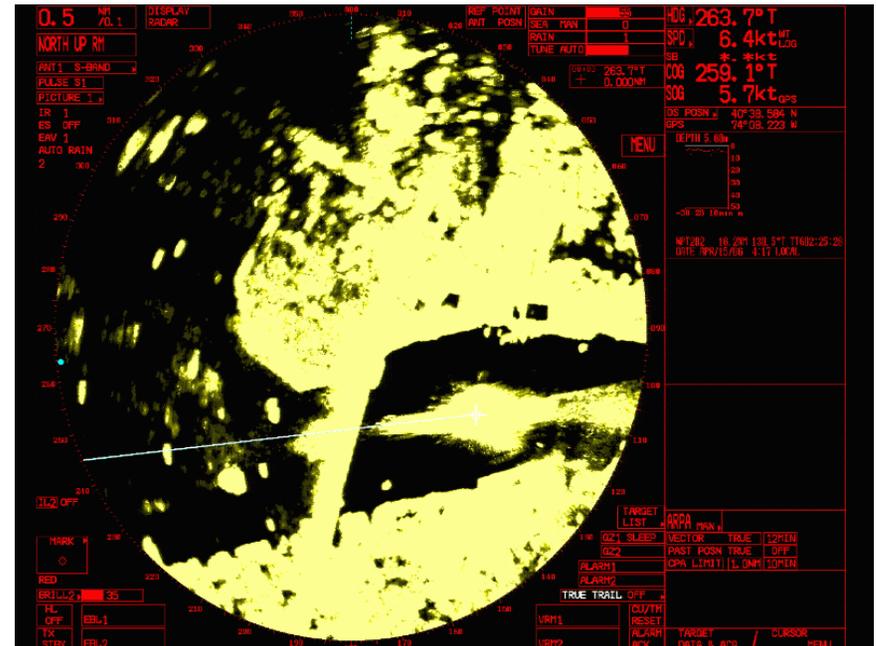
SH 04:18:07 You are under the bridge right now. (recorded in a lower muffled tone)

DP 04:18:09 I want you on the quarter on the ah...Kimberly.

VHF-K 04:18:15 I can do that

DP 04:18:21 Ah we got the bridge there

SH Yeah



SH 04:18:28 Beacon, buoy

DP Beacon?

SH 04:18:32 Beacon here, that's the buoy

DP 04:18:36 We've got another buoy to go around? The other red one?

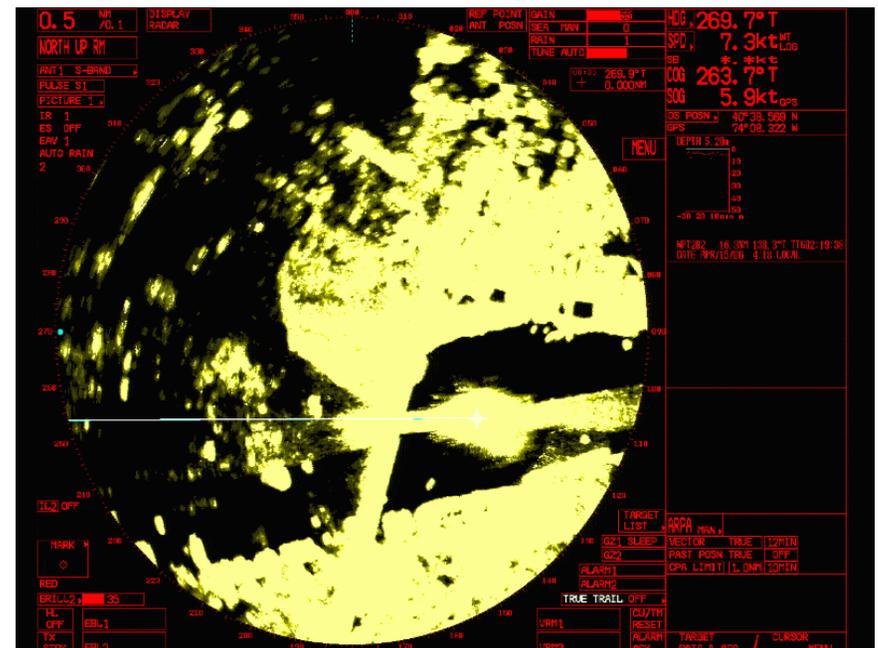
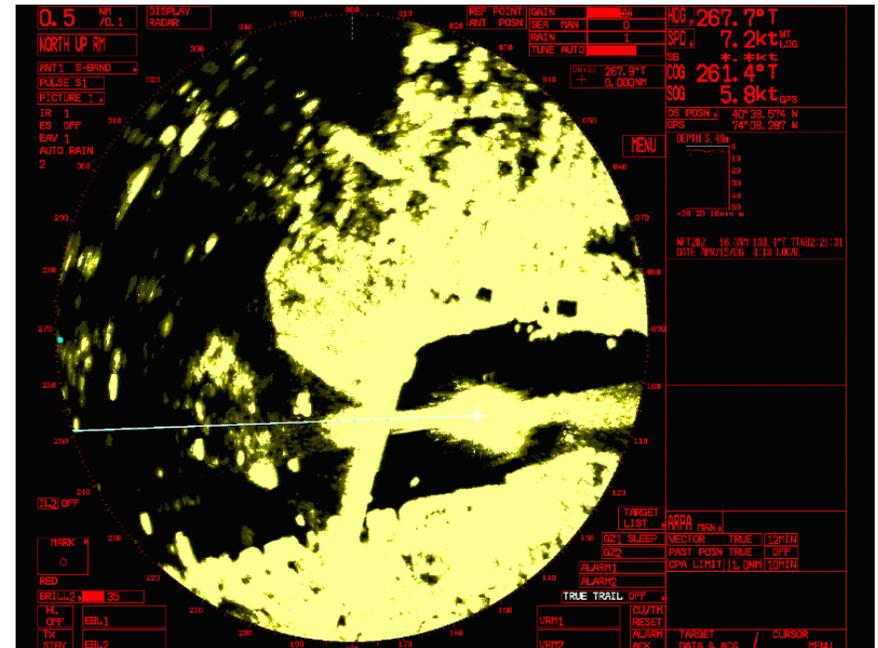
SH 04:18:38 Oh yeah he's probably in this mess right here.

VHF-M Unintelligible

DP 04:18:47 Repeat

VHF-M 04:18:48 I think you are too far right, I'm seeing the red side of the bridge here.

SH 04:18:57 Yeah you want to come left a little bit here John.



DP 04:18:59 Port twenty

SH 04:19:03 Just under the blue light.

Helm Port twenty

DP 04:19:09 Alright how we looking now Joe?

VHF-M 04:19:12 Need to come more left.

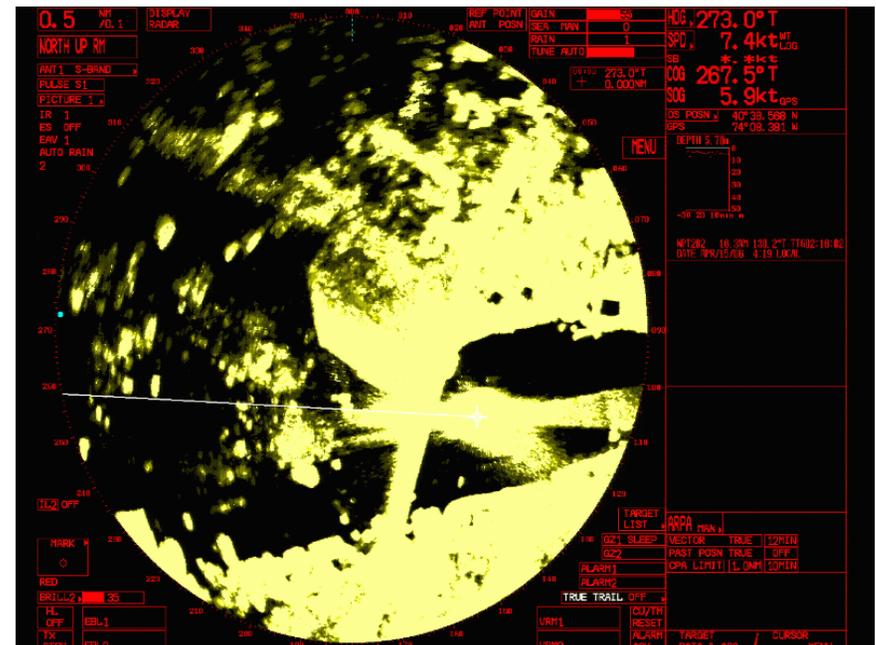
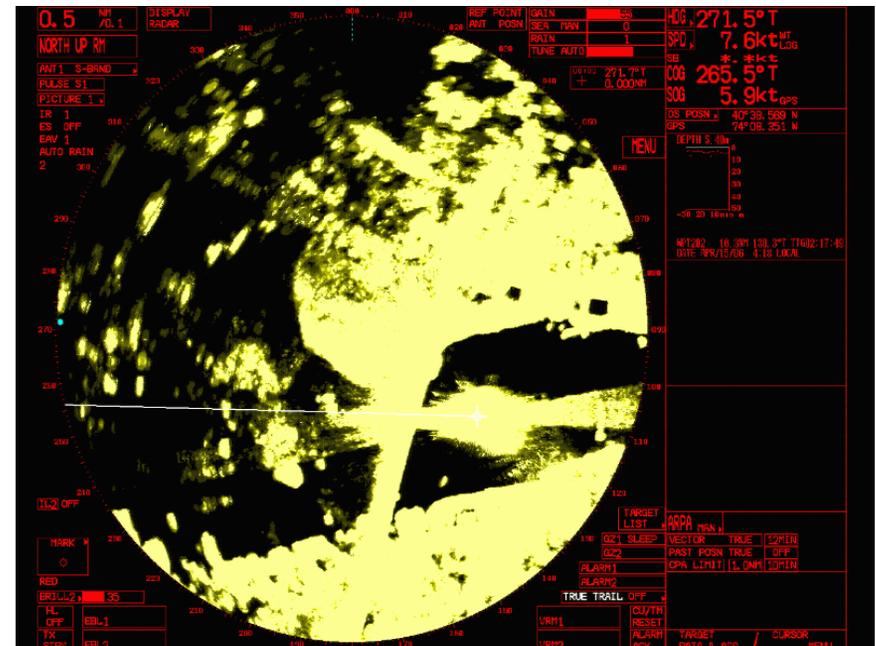
DP 04:19:14 Yeah I'm coming left

DP 04:19:21 How we doing Joe?

VHF-M 04:19:23 Need to come a more left....I'm looking straight out at the buoy

DP 04:19:25 Hard to port

Helm Hard to port



DP 04:19:28 Alright hook it up Joey

VHF-M Hooked up.

Helm 04:19:32 Hard to port

DP 04:19:38 Half astern on the Girls if you have a line up

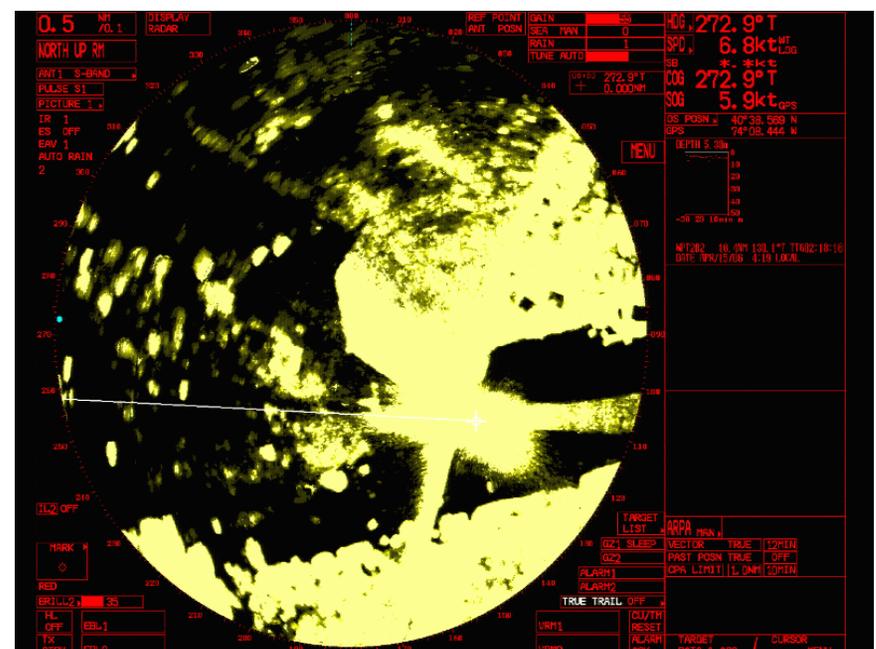
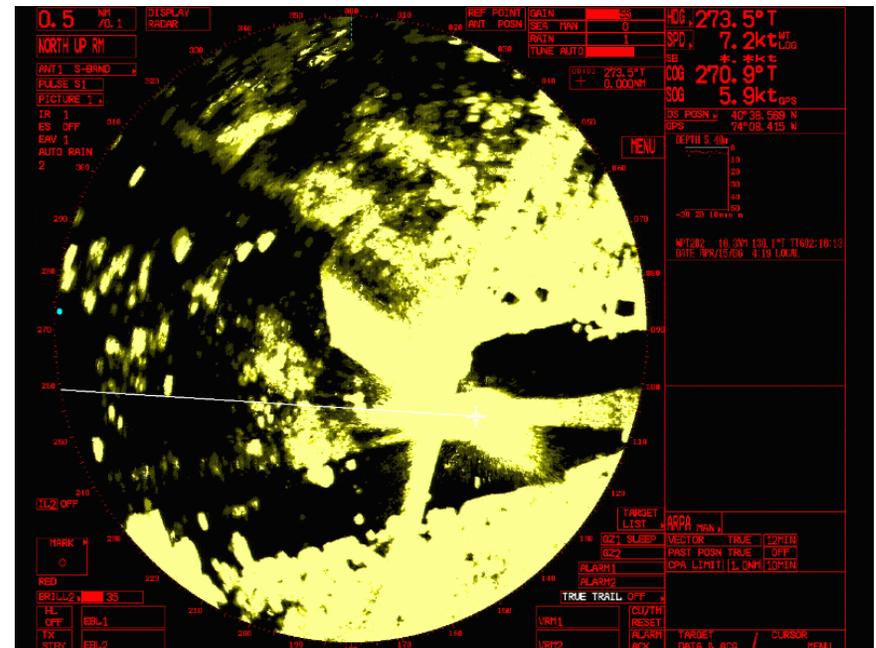
VHF-G 04:19:45 We don't have a line up John

DP 04:19:47 Talk to me Joe

VHF-M 04:19:50 Still looking straight at the buoy.

DP 04:19:52 Hook it up.

CAPT Unintelligible



BAM 04:19:58 (sound from unknown origin)

Crew? 04:20:00 Buoy on the starboard bow

DP 04:20:02 How we looking Joey?

VHF-M 04:20:10 Getting better all the time John

DP Midship

Helm 04:20:13 Midship

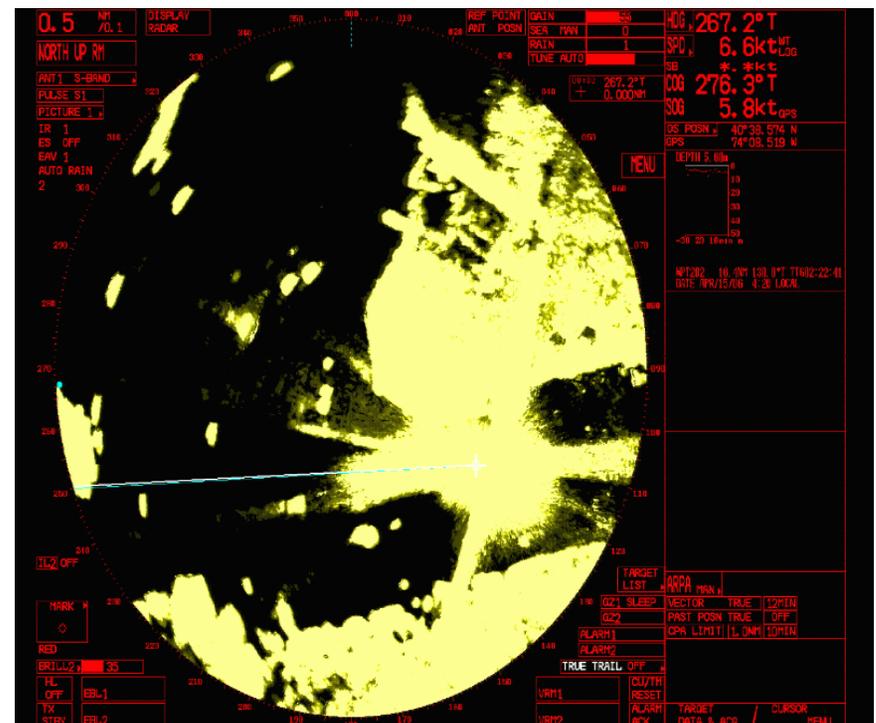
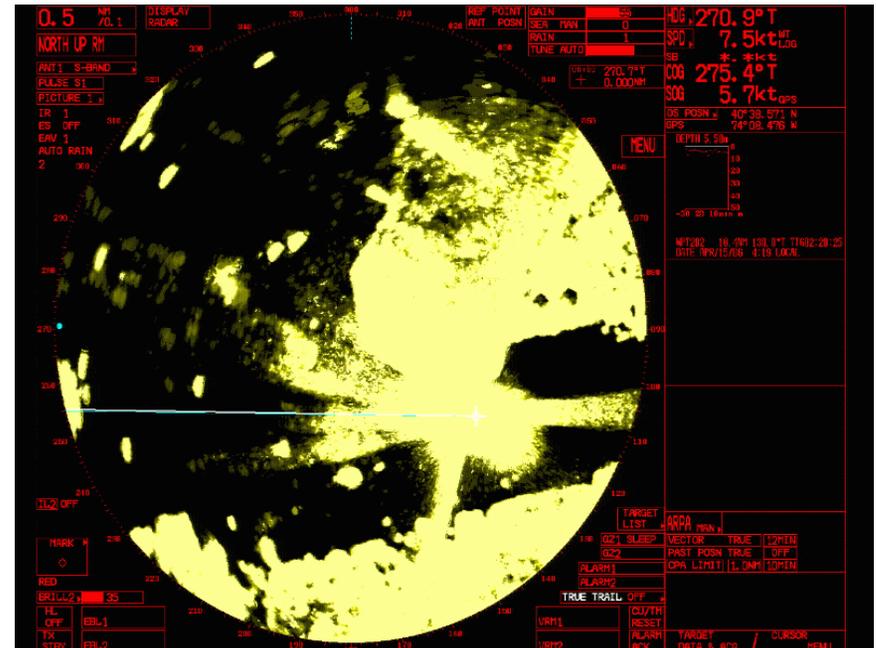
Crew? 04:20:17 Buoy on the starboard bow.

DP 04:20:20 He says we're ok.

Helms Rudder amidship

VHF-M 04:20:22 Passing...passing by the buoy by about seventy or eighty feet.

DP 04:20:26 Alright can you stop then?



SH 04:20:32 Buoy just going by the bow boat now.

DP 04:20:35 Yeah Ok...what's our heading?

Helm 04:20:38 Now is Two six two

DP 04:20:41 Starboard twenty

Helm Starboard twenty....

CAPT 04:20:45 What goes here?

Helm 04:20:47 Starboard twenty

SH 04:20:49 You got it midship John

DP 04:20:51 midship

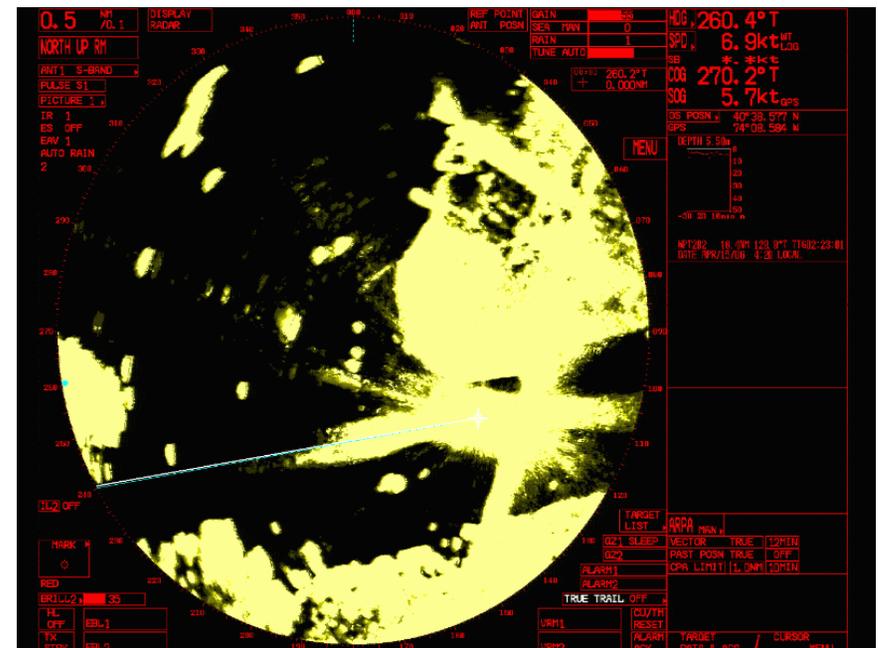
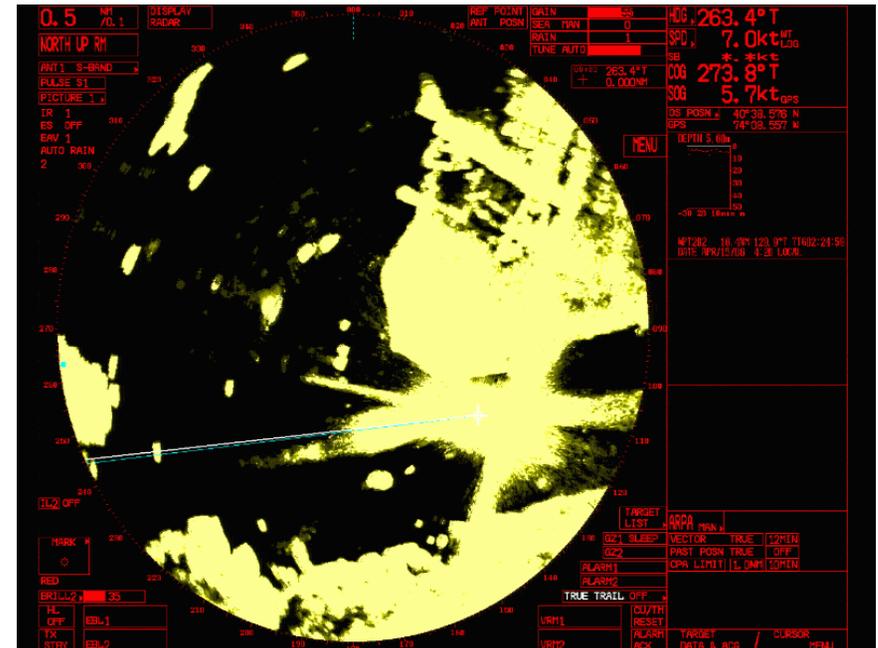
Helm midship

DP 04:20:53 midship (louder)

Helm yes sir

SH 04:20:55 The buoy is yes

DP 04:20:56 We're ok you mean, ok



SH 04:20:58 Yeah yeah

CAPT 04:20:59 Buoy is right here you have to go to starboard or we will hit it.

Helm 04:21:04 Rudder amidships

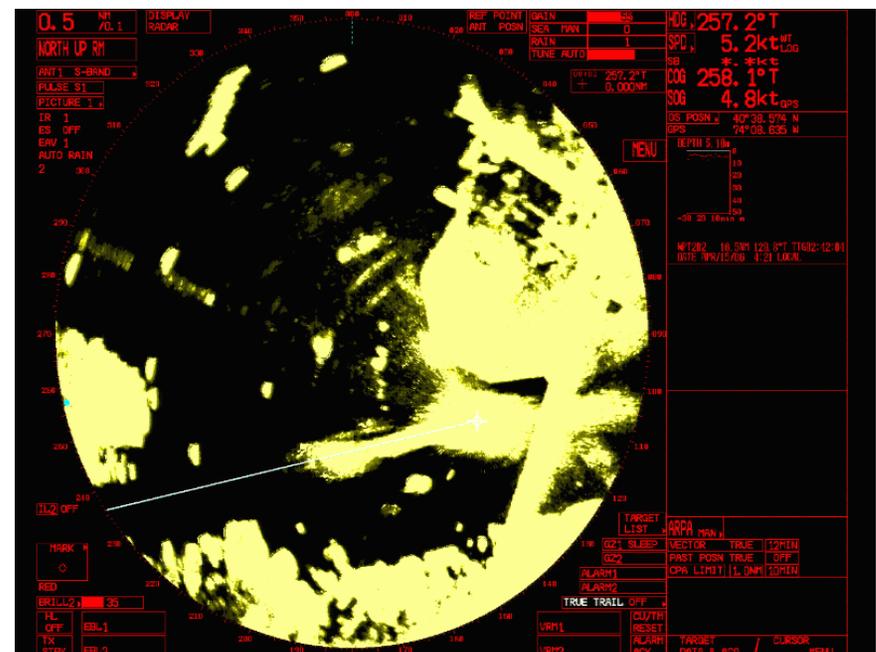
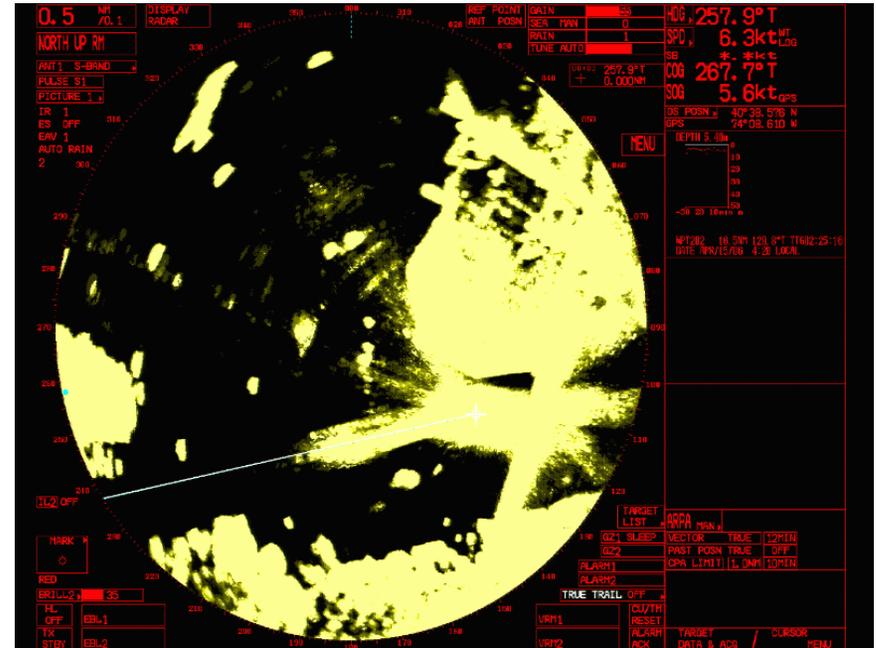
DP 04:21:09 Hard a starboard

Helm Hard starboard

DP 04:21:16 We look alright?... How we doing over there on the buoys?

Helm 04:21:21 Hard starboard

CAPT 04:21:22 Look for a green buoy ahead on the starboard side...



Intcom?04:21:28 There is a green buoy right ahead.

CAPT 04:21:31 There is a green buoy right ahead.

CAPT 04:21:33 How far?

Intcom?04:21:36 It's about...meters

DP 04:21:37 Alright hook it up

CAPT 04:21:38 You want to give speed on the engines?

DP 04:21:40 Stop engines.

2/O 04:21:42 Stop

BAM 04:21:42 (sound of warning horn starts and continues for 3 seconds)

Capt 04:21:49 ... she is going to touch if we go hard starboard.

DP 04:21:52 Midship

Helm 04:21:53 Midship

DP 04:21:54 Which one?

Capt 04:21:55 Something going....

-END OF TRANSCRIPT-

