Comments on the collision between a freighter and a U.S. Navy ship offshore Japan

June 2017(chronologically from bottom to top)

Fri, August 18, 2017 3:03 AM

What seemed obvious to any even mildly competent observer was confirmed by the inquest a month ago. Still, I wonder why all the media sided with the Navy ship and against the freighter right after the collision, and there was no loud reporting of the findings.

> *(CNN), July 21. Preliminary findings in the investigation into the collision between the USS Fitzgerald and a Philippine cargo ship off the coast of Japan in June suggest the accident was caused by multiple errors by the Fitzgerald's crew and a failure to take action in the minutes leading to the collision, according to two defense officials.*
>
> *"They did nothing until the last second," one official said. "A slew of things went wrong." A second official said the crash "will wind up being our (the US Navy's) fault."*
>
> *The collision between the Fitzgerald, a guided-missile destroyer, and the ACX Crystal on June 17 claimed the lives of seven US sailors. It took place 56 nautical miles off the coast of Honshu, Japan, in an area heavily traveled by commercial shipping.*
>
> *The initial findings are just the first stage in what is expected to be a lengthy inquiry. Both officials said the initial investigation found that the Fitzgerald crew failed to understand and acknowledge the cargo ship was approaching and failed to take any action necessary to avoid the collision. It's also not clear if the crew ever called the commanding officer to come to the bridge.*
>
> *The officials say investigators are also looking at the possibility that the ship was traveling at a higher speed than expected to reach a location it was due to arrive at the next day.*
>
> *The preliminary findings will now be reviewed by the 7th Fleet commander, Vice Adm. Joseph Aucoin, even as the investigation continues and they are likely to lead to recommendations about potential punishment.*

Sat, Jun 24, 2017 at 3:18 PM

Below is a headline just released by the New York Times. At least the responsibility is now somewhat shared in the eye of the journalist, but the comments are amusing. Why should the freighter have stopped? Why should there be lookouts on the stern, but none on the bow, if any lookout outside of the bridge was required at all? In the middle of the night, with a last quarter moon very low on the horizon, whether the freighter carried 1,000 or no containers is irrelevant, although 1,000 containers would make her quite a small containership. In my memory, the captain is requested to come to the bridge, quite rarely in fact, but hardly "summoned", and never for such a mundane task as altering course ten or fifteen degrees to starboard in order to avoid a collision.

Why is the reporter assuming the freighter was not spotted? A bad decision does not necessarily entail there were no premises. Very often, the premises are correct, but the decision is faulty.

Why do reporters ever hardly ask for the opinion of those who know better?

Although I understand the freighter swung hard to starboard just before the collision, I am still puzzled about why the Navy ship should have swung to port, instead of starboard, which would be common sense and practice.

The U.S. destroyer didn't dodge, and the freighter didn't stop. That baffling behavior was central to last week's lethal Navy accident.

Friday, June 23, 2017 10:35 PM EDT

There should have been lookouts on watch on the port, starboard and stern of the destroyer Fitzgerald. At 1:30 a.m. last Saturday, off the coast of Japan south of Tokyo, they could hardly have failed to see the 730-foot freighter ACX Crystal, stacked with more than 1,000 containers, as it closed in.

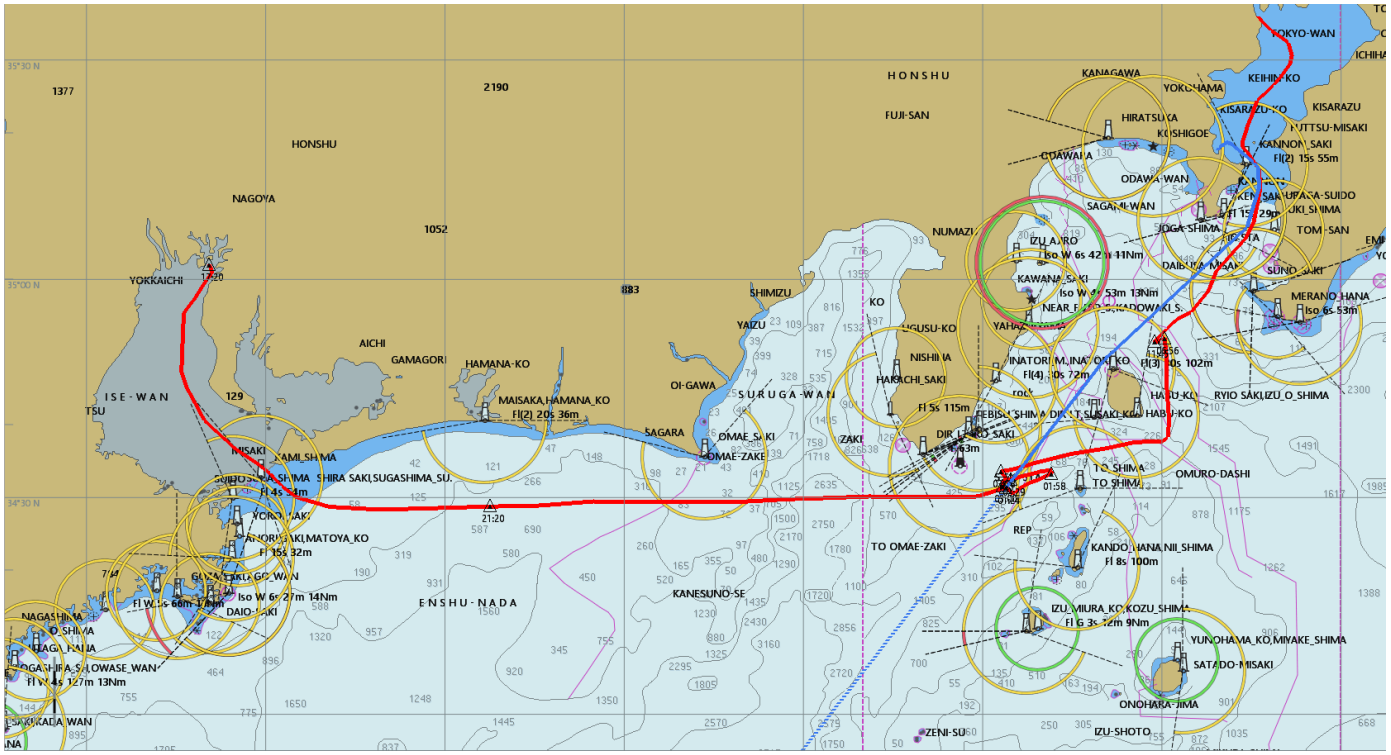
Radar officers should have spotted the freighter's image on their screens. Under standard protocol, the Fitzgerald's captain should have been summoned to the bridge.

Wed, Jun 21, 2017 at 1:55 AM:

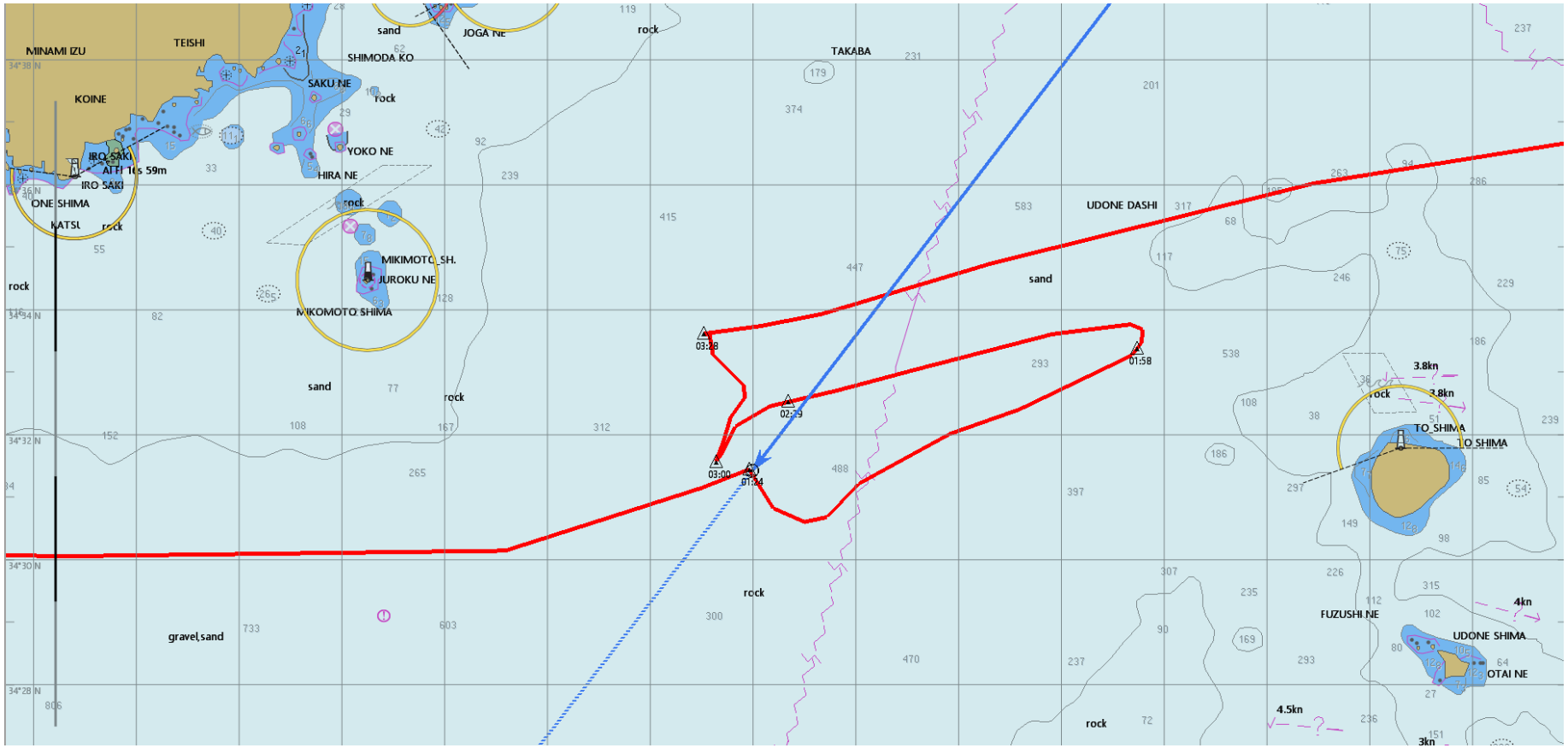
I've been thinking some more.

The Navy won't say whether USS Fitzgerald was sailing to or from Yokosuka, but has stated several times that after the collision the ship 'returned' to Yokosuka. I infer she was sailing from Yokosuka.

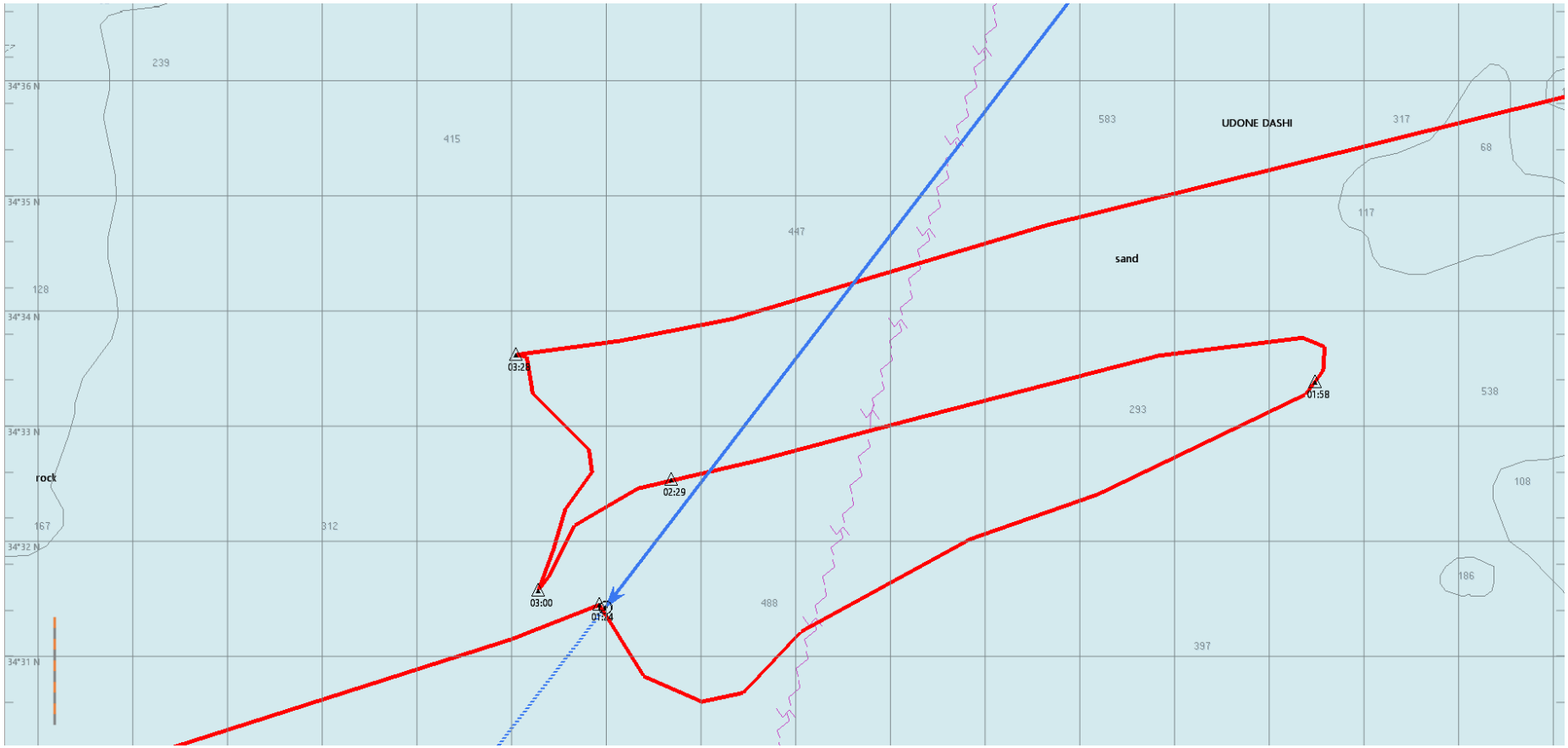
A route passing west of the island of Oshima and then on to the Strait of San Bernardino, or to Okinawa or the Luzon Strait, would have taken USS Fitzgerald through the location where the collision occurred. See the blue route below. The route of ACX Crystal is in red.



Before the collision, ACX Crystal would be heading 071 and USS Fitzgerald 217. The heading difference is 146 degrees, 34 degrees off opposite routes.



Zooming in



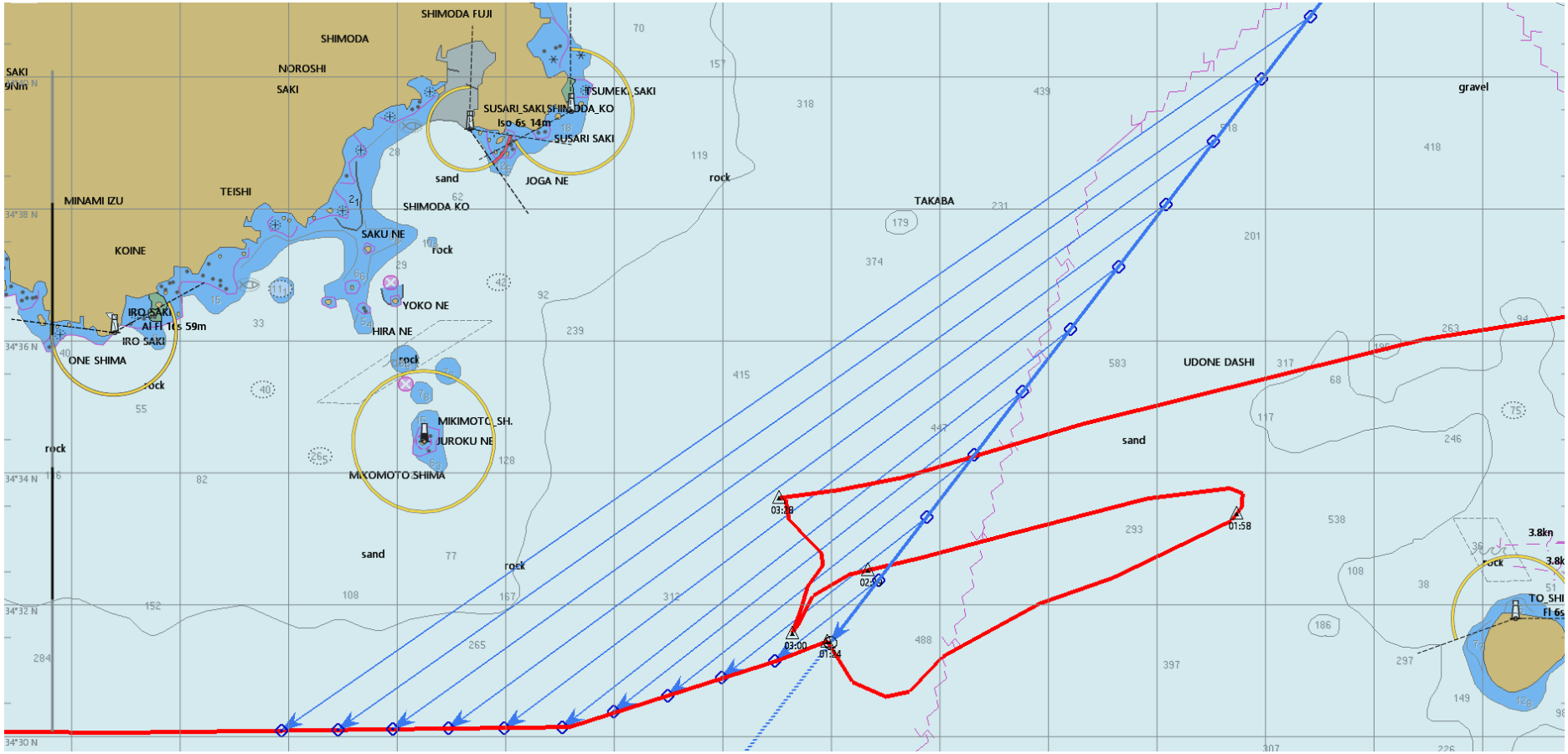
Positions of both ships are plotted below every 3 minutes, assuming that the freighter was going 17 knots at the time, which seems to be the case, and the Navy ship 24 knots. Her maximum speed is in excess of 30 knots, perhaps 35 knots. In routine transit she would sail slower to save fuel.

SSE of Mikimoto, the freighter reached a normal turning point on her route to Tokyo and came 19 degrees to port from 090 to 071. At that point she was about 10 nautical miles from USS Fitzgerald, if the Navy ship's speed was indeed 24 knots, more if the ship was faster, and less if slower.

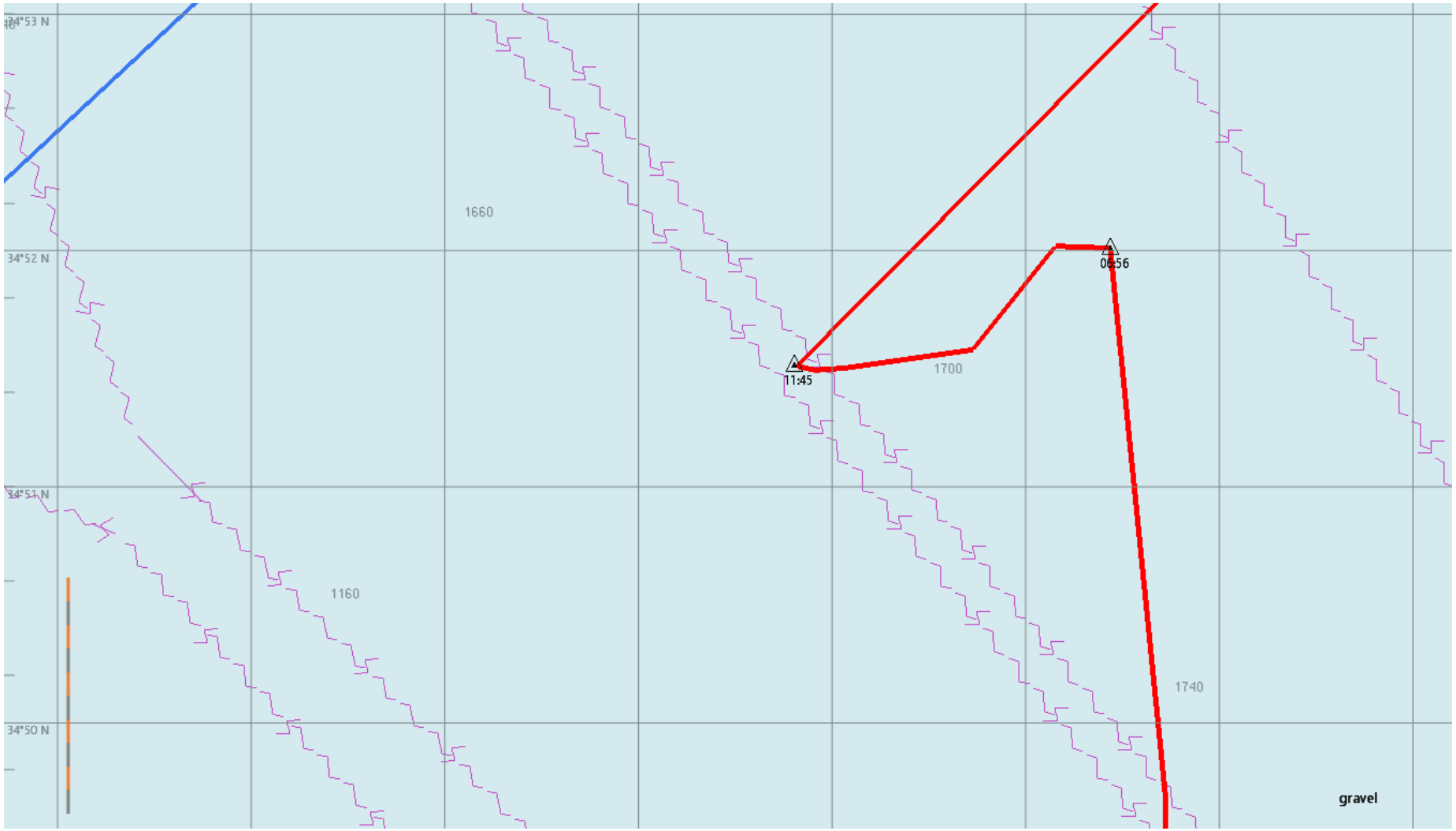
Now, as seen from the USS Fitzgerald's bridge, 30 minutes before the collision, at t – 30, the freighter's range would have been 19.1 NM, bearing 235, which was 18 degrees to starboard; at t – 27: 17.2 and 234; at t – 24: 15.4 and 234; at t – 21: 13.5 and 233; at t – 18: 11.7 and 233; at t – 15: 9.8 and 232; t – 12: 7.9 and 232; t – 9: 5.9 and 231; t – 6: 4.0 and 232; t – 3: 2 and 232. Clearly, the freighter was seen at an almost constant bearing, before and after she altered her course by 19 degrees, and the Navy ship should have come to starboard, if only by a few degrees. I would have altered the course by 15 degrees for a few minutes until the freighter was cleared ahead. The freighter did alter course by 19 degrees, but not only did this not make a big difference where bearings were concerned, any experienced mariner in the area would know as a matter of course that traffic south of Mikimoto should be expected to alter course a few degrees to portside to remain on route to the ports of the Tokyo Bay area.

At the last moment, when the collision appeared to be unavoidable, USS Fitzgerald came hard to port, and ACX Crystal hard to starboard, the usual last minute reflex. The pictures of the damage sustained by the two ships seem to corroborate this scenario. After the collision, the Navy ship would be on ACX Crystal's port side.

It is probable that communication between the two bridges was quite deficient, and at any rate none called the Japanese Coast Guard, apparently. The moon had just risen and was 21 degrees only above the horizon, azimuth 116, so there was probably not enough light to see the other ship clearly. It is likely that after resuming her course, the freighter tried to learn the identity of the other ship, which took apparently 34 minutes. By now she was going 13 knots, She turned around and headed toward the location, this time going 12 knots. At 02:30 she was near the location, by now realized the situation and called the Japanese Coast Guard. She stopped at 03:00, and then put her engines possibly slow astern, going about 5 knots, probably in order not to drift. The wind was NE, reportedly 20 to 25 knots, from my meteorological data. At 03:30, probably after talking to her owners and agents and the Japanese Coast Guard, and possibly with the Navy ship, she resumed course toward Tokyo.


SHIMODA FUJI
SHIMODA
NOROSHI
SAKI
SUSARI_SAKI,SHIMODA_KO
Iso 6s 14m
SUSARI SAKI
TSUMEKI_SAKI
JOGA NE
sand
rock
TEISHI
MINAMI IZU
SHIMODA KO
SAKU NE
KOINE
YOKO NE
HIRA NE
IRO SAKI
Al Fl 10s 59m
IRO SAKI
ONE SHIMA
MIKIMOTO_SH.
JUROKU NE
MIKOMOTO SHIMA
TAKABA
UDONE DASHI
gravel
03:28
01:58
02:50
03:00
01:34
3.8kn

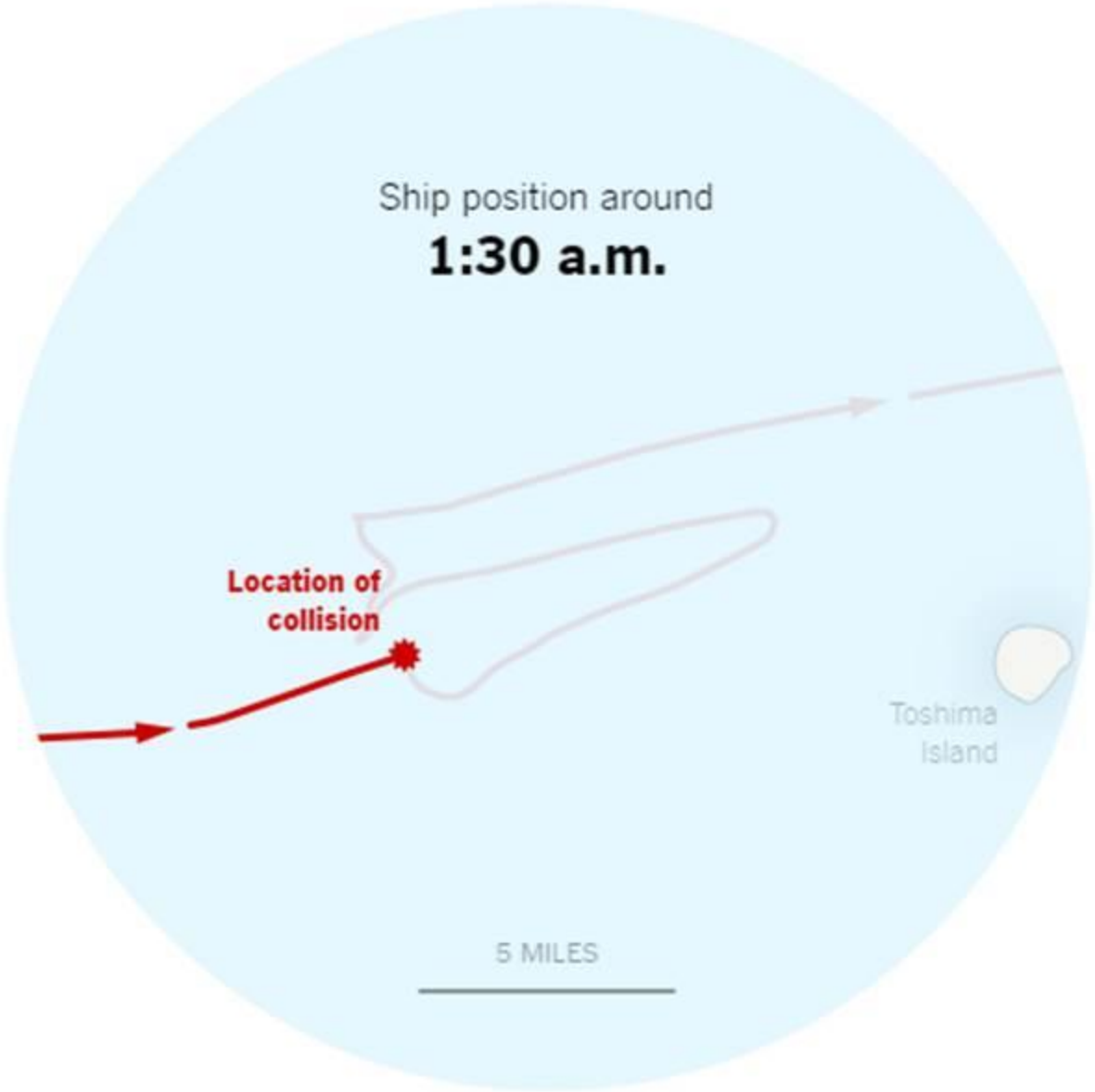
At 07::00, ACX Crystal stopped again, this time for almost 5 hours, and drifted WSW 1.5 nautical miles. She had possibly been instructed to do so by either her owners and / or the Japanese Coast Guard.



Tue, June 20, 2017 2:24 AM

Troubled by the way the media is depicting the collision between a US Navy ship and a freighter, apparently trying to put the onus on the freighter when things would tend to suggest otherwise.

Charts from the New York Times this morning. There is an animation of the newspaper page that provides the timing.


Ship position around
1:30 a.m.
Location of collision
Toshima Island
5 MILES

From pictures distributed by the press, it seems the freighter hit the Navy ship which was coming from portside. The US Navy ship was hit on her starboard side. It appears the freighter's route was deflected naturally to starboard after she was hit on her portside bow, before she resumed her course. During that time she most probably communicated, or tried to, with the Navy ship on Channel 16. After 30 minutes she turned around back to the collision scene, either because the Navy ship asked her to, but hadn't asked before, or because there was no response, and when she arrived on the scene she called the Japanese Coast Guard. It appears the Navy ship did not call the Coast Guard, although ACX Crystal probably assumed she had. When on site, it seems ACX Crystal went astern for a while. She finally left the scene at 3:28 AM, after having been on site one hour. I cannot imagine that the US Navy ship had not agreed to her leaving.

It is also possible that the freighter did not immediately realize they had hit a ship, instead of some other floating item, for half an hour, when she decided to turn around, although there would always be lights on the US Navy ship, even after a possible blackout. The notion, reported by some media that there was no one on the bridge of the freighter, so close to shore (8 miles) seems quite implausible to me. At any rate, why did the US Navy ship's crew not react? Why did they not call shore, or at least their home port?

From the NYT animation:

- **Time of collision: 1:24 AM**
- **Time ACX Crystal turns around: 1:58 AM**
- **Time ACX Crystal is back on the collision scene: 2:29 AM**
- **Time ACX Crystal leaves the scene: 3:28 AM**
- **Time ACX Crystal apparently starts turning around again: 6:56 AM**
- **Distance ACX Crystal sails SSE: 1 NM**
- **Distance ACX Crystal sails ENE: 6.4 NM (13 knots)**
- **Distance back: 5.7 NM (11 knots)**
- **Apparent speed before collision: 17.4 knots**

USS Fitzgerald sustained heavy damage on her starboard side, in the collision with the containership which suffered damage on her port bow. Even if the portside and mast lights on the containership were malfunctioning, the Navy ship has ample ways of detecting any traffic, especially so close to it. Wind was NE 15-20 kts, apparently no fog. The area sees very heavy traffic at all times. It is the landfall to Yokohama and Tokyo Bay.

Rule 15 of the International Regulations for Preventing Collisions at Sea, Crossing situation: '*When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel*.'

If both ships were sailing along the same course, either the Navy ship was overtaking the freighter, or she was being overtaken, although the Navy ship's maximum speed is twice that of the freighter, but she may have chosen to reduce speed, or experienced mechanical trouble. In either case, Rule 13 of the International Regulations for Preventing Collisions at Sea, Overtaking, states that '*any vessel overtaking any other shall keep out of the way of the vessel being overtaken'*.

At first I thought the freighter could have experienced steering gear or autopilot problems but such does not appear to be the case. Maybe the Navy ship did.

The media had alleged that the freighter had done a U-turn 25 minutes prior to the collision, and 25 minutes is quite a long time at sea, but such does not appear to be the case.

The freighter is described in the media as a humongous container ship, but in fact she is a relatively small one, with a capacity of 2,858 containers, as opposed to 19,000 for the largest. Compared to the Navy ship ACX Crystal is 5 times the mass, but half the speed, and one third the power.

Photos taken shortly after the collision:

The freighter’s bow was hit on her portside

The Navy Ship was hit on her starboardside