NTSB Marine Weather Worksheet

NTSB Case number:DCA21FM007Key code:102326Date:Nov. 23, 2020Julian date:Time:0130 ESTUTC:(+5) 0630ZLocation:20nm NE Provincetown, MassachusettsCoordinates:Vessel:Emmy RoseVessel:Emmy RoseType:84ft commercial fishing vesselFatalities:4Day/NighIIC:Brian YoungFatalities:102326

Request: Preliminary Data/Specialist Factual-Analysis/Group Factual-Analysis

Synoptic Conditions: OPC/WPC Surface Analysis, Wind/Wave Analysis - Attached

Observation site:Provincetown (KPVC), MA Automated Weather Observation System (AWOS)Conditions:0156 ESTTemp:51 ° FDewpoint:47° FRelative Humidity:92 %Pressure:30.15 inHgSea-level pressure1021-mbCloud cover:Overcast 1,000 ft aglVisibility:10 smPrecipitation/Obscurations:None within 24-hr priorWind direction/speed:120° 11 knots11 knots1000 km1000 km

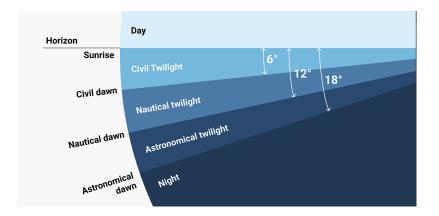
Data from: Cape Code Buoy #44018, 9nm N of Provincetown, MA

Sea Conditions:0130 ESTAir temp:51° FDewpoint (Td): 49° FWater temp:50.5° FWind:ESE 17 knots gusting to 21 knotsSea State:5.6 ft observedSea Swell:5-6Period: 6 secSwell Direction: E (mean wave direction)Ice obstructions present:Yes/No

Astronomical Conditions for Provincetown, MA, obtained from United States Naval Observatory MICA software for the period.

| Nautical sunset: | 1612 EST 22 November |
|----------------------------|----------------------|
| Civil sunset: | 1614 EST |
| End civil twilight: | 1644 EST |
| Nautical evening twilight: | 1718 EST |
| Sinking | 0130 EST 23 November |
| Nautical morning twilight: | 0536 EST |
| Begin civil twilight: | 0613 EST |
| Nautical sunrise: | 0641 EST |
| Civil sunrise: | 0643 EST |
| Sun culmination: | 1128 EST |

At 0130 EST the Moon was 18° below the horizon at an azimuth of 270°, and the phase was a first quarter with 60% of the Moon's visible disk illuminated when visible.



Marine Forecasts, Warnings, and Advisories:

FZUS51 KBOX 230017 CWFBOX

Coastal Waters Forecast for Massachusetts and Rhode Island National Weather Service Boston/Norton MA 716 PM EST Sun Nov 22 2020

...GALE WARNING IN EFFECT FROM MONDAY AFTERNOON THROUGH TUESDAY MORNING...

.TONIGHT...SE winds 15 to 20 kt with gusts up to 25 kt. Seas 5 to 8 ft. Patchy fog after midnight. A chance of showers after midnight.

.MON...S winds around 15 kt with gusts up to 25 kt, becoming W with gusts up to 35 kt in the afternoon. Seas 5 to 8 ft. Patchy fog. Showers likely. Vsby 1 NM or less.

.MON NIGHT...NW winds 20 to 25 kt with gusts up to 40 kt. Seas 6 to 9 ft.