

## ATTACHMENT A

### CELESTIALLY NAVIGATED YACHT CLASSIFICATION REQUIREMENTS

#### **1. CELESTIAL ELECTION**

A yacht with a navigator skilled and experienced in celestial navigation at sea may elect to compete using celestial navigation. This election must be made in the online registration system on or before June 7, 2023.

#### **2. HANDICAP ADJUSTMENT**

Yachts that elect to compete using celestial navigation will have her elapsed time reduced by 3%. The adjustment will be calculated in the following manner:

Celestial\_Elapsed\_Time = Elapsed\_Time  $0.97$       rounded to nearest second  
with 0.5 second rounded up.

#### **3. NAVIGATION**

1. During the race a yacht's location must be determined by traditional star, sun, planet or moon sights. Navigators of yachts competing using celestial navigation must at a minimum maintain, and have ready for inspection in Bermuda, the paper-based plotting sheets for the entire race which demonstrate the method of obtaining the vessel's position at any time during the race. All fixes resulting from Lines of Position shall have recorded the GMT, altitude, azimuth and intercept of the body or bodies of each LOP. Any Local Apparent Noon fixes shall have GMT and altitude data recorded and available for inspection. Most important will be the fix used to determine that the yacht was, or was not, within 50 NM of Kitchen Shoals beacon.
2. The yacht's log must be maintained hourly and dead-reckoning positions must be easily derived from the log entries for any time during the race.
3. The Compliance Committee may ask a navigator to demonstrate how a particular fix on the plotting sheets was derived using the corresponding sight data.

#### **4. NAVIGATION DEVICES**

1. The following electronic navigation devices may be used throughout the race:
  - Knotmeter,
  - Log,
  - Compass,
  - Depth finder,

- Wind speed and direction indicator,
  - Radio receiver,
  - Radar,
  - Temperature indicating devices,
  - Voice recorders and other note-taking devices,
  - Calculators or computers for reducing sights or computing courses
2. No GPS device may be used for distance or speed over ground information. Any electronic device aboard, including AIS, VHF radios, SSB radios, chartplotters and hand-held instruments that display or report position information must be placarded (covered from view) while the yacht is under celestial navigation. Placards are to be removed only in case of emergency. The existence and effectiveness of placards must be demonstrable to the Compliance Committee in Bermuda.

## 5. POSITION INFORMATION

Viewing or downloading any information that can be used to derive the yacht's position is strictly prohibited. Any yacht sailing in the Celestial Division that chooses or inadvertently receives position data from another vessel (including via AIS) shall log each such occasion and must state in the *Certificate of Compliance* that in no instance (other than an emergency) were the coordinates of that vessel recorded and or otherwise used to determine or infer the position of the yacht.

## 6. PUBLIC INFORMATION

Downloading free, publicly available weather or ocean current information is allowed.

## 7. ELECTRONIC POSITIONING

1. Electronic positioning devices, such as GPS, may be used within Buzzards Bay and out to 20 nautical miles from the tower on Nomans Island, and within 50 nautical miles of Kitchen Shoals beacon off Bermuda. If, on approach to Bermuda, a celestially-navigated yacht turns on a GPS or other electronic positioning system before finishing, she must determine and show on her *Certificate of Compliance*:
  - the time she turned on her electronic positioning device;
  - her dead-reckoned ("DR") position or celestial fix at that time;
  - the position shown on her electronic positioning device at that time; and
  - the bearing and distance to the Kitchen Shoal beacon from both the celestial fix or DR and from the electronic fix.

2. All uses of electronic positioning devices by a celestially navigated yacht must be fully documented and included in the yacht's *Certificate of Compliance*.

## **8. NON-COMPLIANCE**

1. If when approaching Bermuda the initial electronic fix places the yacht greater than 50 nautical miles from Kitchen Shoal beacon the Compliance Committee may impose a time penalty.
2. If the Compliance Committee determines that a yacht which elected to be navigated celestially has not complied with all other conditions the Committee shall impose a time penalty.

## **9. CONVERSION TO ELECTRONIC NAVIGATION**

If a yacht which elected to be navigated celestially converts to electronic navigation during the race, she shall lose her 3.0% time adjustment and a time penalty as determined by the Compliance Committee shall be imposed.