

CCAS Minutes 9/3/15

The Sept. 3, 2015 meeting convened at 7:30 P.M.

Larry Brookhart took us on a delightful journey down the CCAS “memory lane”.

Larry has been a member of CCAS for 20 years and has collected a “treasure trove” of memorabilia and funny stories. Thanks for the memories, Larry!

John Carlisle, merchant marine officer and instructor of marine navigation at the Mass Maritime Academy spoke on the topic “Celestial Navigation”.

John described the various techniques for finding one’s location on Earth, generally for navigational purposes at sea.

He used several props to illustrate the various concepts of celestial navigation. They were extremely helpful in visualizing the celestial sphere and how we can correlate it with any point on Earth.

The “fixed” stars, especially the sun, are our roadmap.

The Sight Reduction method requires a navigator using a sextant to measure precisely the altitude of a celestial body and “mark” the EXACT moment, Greenwich Mean Time. Using trigonometry, the navigator can calculate his position.

The task is simplified by use of the U.S. Nautical Almanac, where the calculations have already been made for the sun, moon, planets and 57 stars, for every day of the year.

Speaker Carlisle also touched upon the older Intercept method of celestial navigation. This method does not require knowing the precise time. The navigator must “shoot” a celestial body and from that angle, plot a “circle of equal latitude” on his navigational chart (all points on the circle are the same latitude). If he then shoots a second star, and plots it on the same chart, there will be two points where the circles of equal latitude intersect. One of these points is the correct longitude. Since these two points of longitude are usually many hundreds of miles apart, the correct longitude can generally be deduced (unless you are REALLY lost)!

John taught “Celestial Navigation” aboard the MMA *T.S. Kennedy* cruise ship at sea. His sailors used celestial navigation techniques and competed with GPS for accuracy. They could routinely calculate the ship’s location to within less than a mile of that shown by GPS.

With the advent of GPS, and other technologies, the Navy has discontinued teaching this ancient method of navigation. However, it is gratifying to know that celestial navigation is still being taught at the Massachusetts Maritime Academy in Bourne. Good to know if your GPS fails!

The meeting was adjourned at 9:30 p.m.

Respectfully submitted for Gus Romano,
Gail Smith

[Editor: Thanks very much to Gail. Great job covering a complex subject for Gus and the Society!}]