

Alberta Offshore Sailing Association: Bob Goethe, March, 2016

The heart of celestial navigation:

- Tell me where you *think* you are.
- Tell me where the sun *is*. *Nautical Almanac*
- And I will tell you how high the sun should be. *Sight Reduction Tables*

Learning on your own: Tools you need.

Sextant : to measure height of sun/moon/planet/star

Plastic and metal can give a fix within 1 nm of each other.

Metal more fun to use, but more expensive.

From <http://ca.binnacle.com>

Davis Mark 3 plastic - \$70 + \$18 Shipping

Davis Mark 15 plastic - \$220 (shipping included); traditional mirror

Davis Mark 25 plastic - \$300 (shipping included); whole-horizon mirror

Astra IIIb aluminum - \$925 (shipping included)

Sight Reduction Tables: Pub. 249 – Volumes 2 and 3 never need replacing

From: https://www.starpath.com/catalog/books/books_index.htm

Volume 1 – for stars. Needs to be replaced every 5 years. \$25US + shipping

Volume 2 – for sun/stars/planets, when you are 0° to 40° latitude. \$25US + shipping

Volume 3 – for sun/stars/planets, when you are 39° to 89° latitude. \$25US + shipping

Volume 3 is what you want to use when practicing sights in Edmonton, at 53° N latitude.

Nautical Almanac – Commercial Edition¹ - must be replaced annually

From: https://www.starpath.com/catalog/books/books_index.htm

\$27US + Shipping

Correct time – an error of 4 seconds can throw your fix out by 1 nm.

I use ClockSync, a free app from the Android Store. Gives atomic time/Internet time (they are the same thing) with enormous accuracy.

<http://www.time.gov/>

Practicing celestial nav in Edmonton – I use an artificial horizon – a bowl of water or (better yet) molasses. See <http://davidburchnavigation.blogspot.ca/2014/02/molasses-eatable-artificial-horizon.html>

Textbook – You can learn on your own

Go to Amazon.ca and search for:

Celestial Navigation - Using the Sight Reduction Tables from Pub. No 249

By Dominique Prinnet

\$34.66 CDN (free shipping)

Bob's Book Table and Celestial Emporium

Davis Mark 3s – virtually new - used for only 3 sights each: \$80

Pub. 249, volume 3: \$30

Dominique Prinnet's textbook: \$30

¹ Contents of Commercial Edition are exactly the same as the government published version, but costs ½ as much.