

This note shows three things. (a) The tidal information available to mariners is impeccable; (b) even with most primitive instruments, dead reckoning can be staggeringly accurate if pains are taken; (c) sea-swim problems can only be generalized to a certain extent; ultimately each swim becomes a special case. Even a difference of 0.1 m.p.h. can arrive a swimmer in a place where a very different train of tidal circumstances would have ensued 30 minutes earlier (or later.)

A precisely known speed is the only key to sea-swim navigation.

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### 'NAVIGATION'

*Navigation*, the quarterly Journal of the American Institute of Navigation, is available to members of this Institute at a reduced subscription of £1 a year. The Summer 1959 number contains the following papers:

#### SUBMARINE NAVIGATION

*By Lieut. William P. St. Lawrence, Jr., USN*

#### A PRECISION GYROCOMPASS FOR USE ON FIXED BASES

*By M. E. Campbell and J. M. Slater*

#### PRECISE SHIP POSITIONING

*By Lt. Comdr. Guy E. Thompson, USN*

#### GLOBAL NAVIGATION DISPLAY

*By Robert H. Courtney, Jr., Milton Goldin, and Marshall M. Risdon*

#### CHANGES OF MAGNETIC STRUCTURE IN A NEW STEEL TRAWLER

*By William V. Kielhorn and Henry W. Klimm, Jr.*

#### AN EXTENSION OF THE GEOGRAPHICAL COORDINATE SYSTEM AS APPLIED TO AUTOMATIC GROUND POSITION COMPUTATION

*By Glenn B. Shoemaker*

#### ISENTROPIC THERMAL SHEAR IN METEOROLOGICAL NAVIGATION

*By Willibald Partl*

#### CHARTS FOR AMERICA'S FASTEST GROWING FLEET

*By Rear Adm. Charles Pierce, USC&GS*

#### ELECTRONIC TRANSMISSION OF AERONAUTICAL CHARTS

*By John D. Kay*

#### PRESIDENTIAL REMARKS FROM THE ANNUAL MEETING

*By Henry F. Rempt*

#### THE INSTITUTE AND THE SEARCH FOR KNOWLEDGE

*By Capt. Alton B. Moody, USNR*