

# The JOURNAL of THE INSTITUTE OF NAVIGATION

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VOL. X, NO. 2

APRIL

1957

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## The Journal of the Institute of Navigation

THE *Journal* is published quarterly by the Institute and is edited by the Executive Secretary. It contains original papers contributing to the science of navigation, including those presented at meetings of the Institute together with the ensuing discussion. In addition the *Journal* includes a record of current navigational work, reviews of important books, and other matters of concern to those interested in navigation. The views expressed in the *Journal* are not necessarily those of the Institute, or of any organization or department to which the authors may belong.

The *Journal* is free to all members of the Institute. It is sold to the public at ten shillings per copy or, by subscription, at forty-one shillings per annum (post free) and may be obtained through all booksellers and John Murray (Publishers) Ltd., 50 Albemarle Street, London W1.

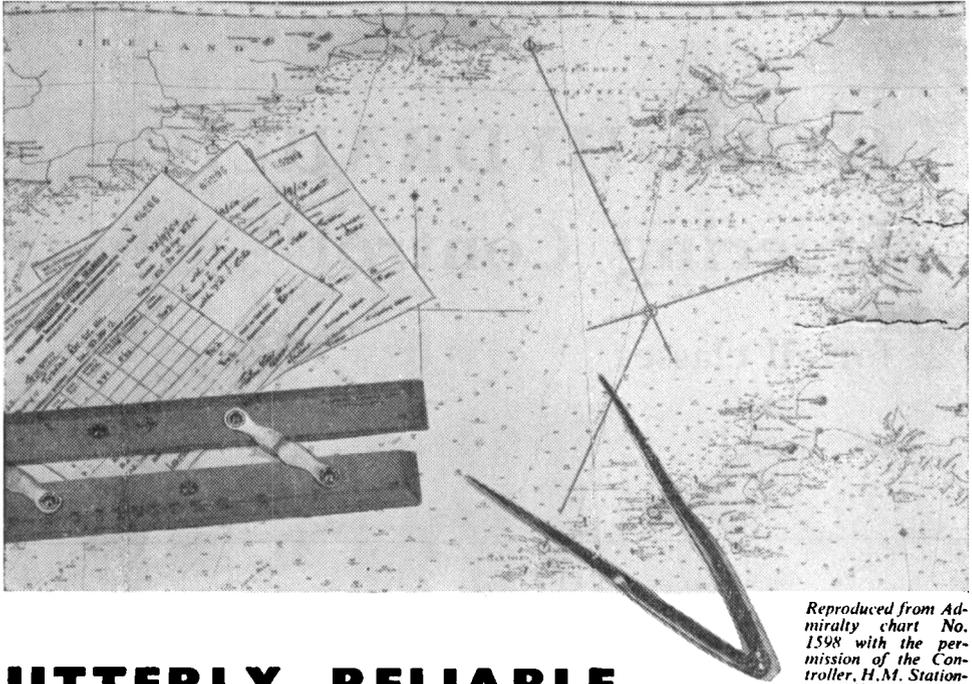
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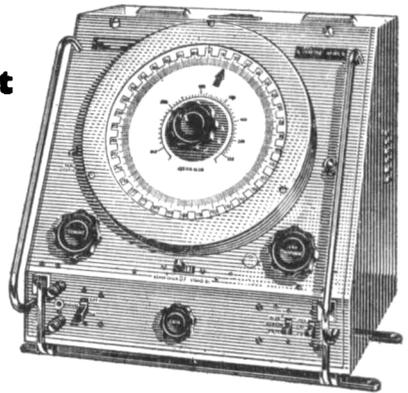


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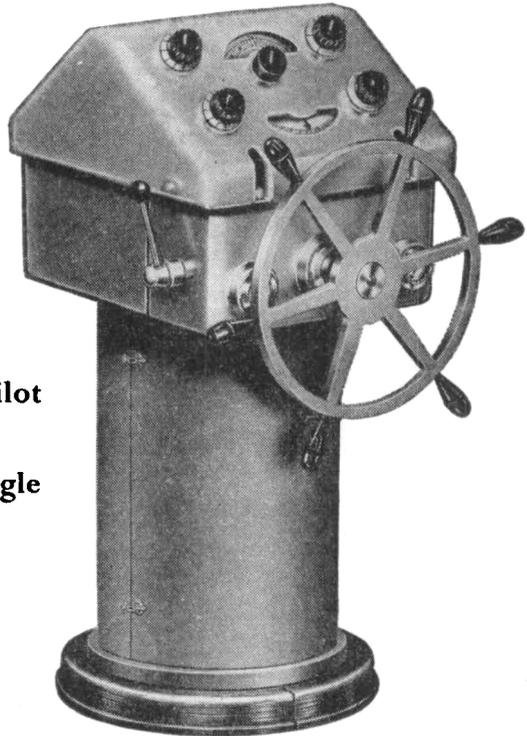
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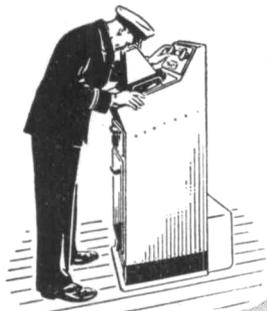
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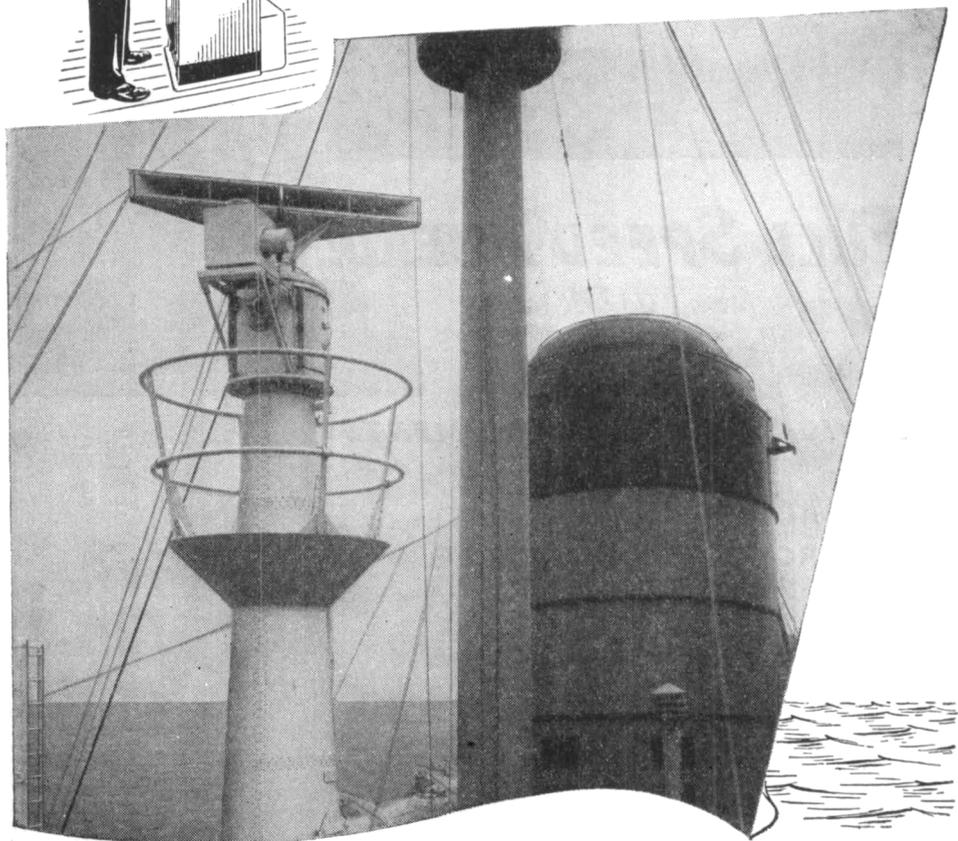
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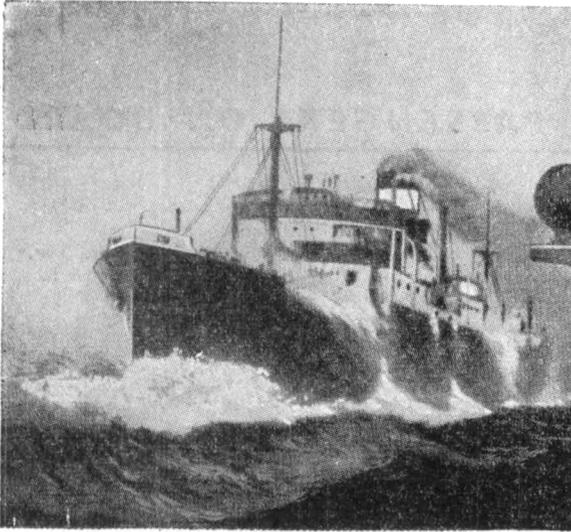


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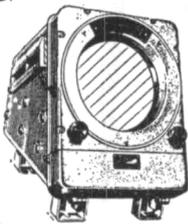
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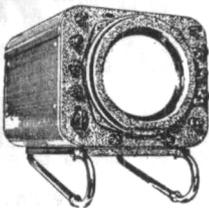
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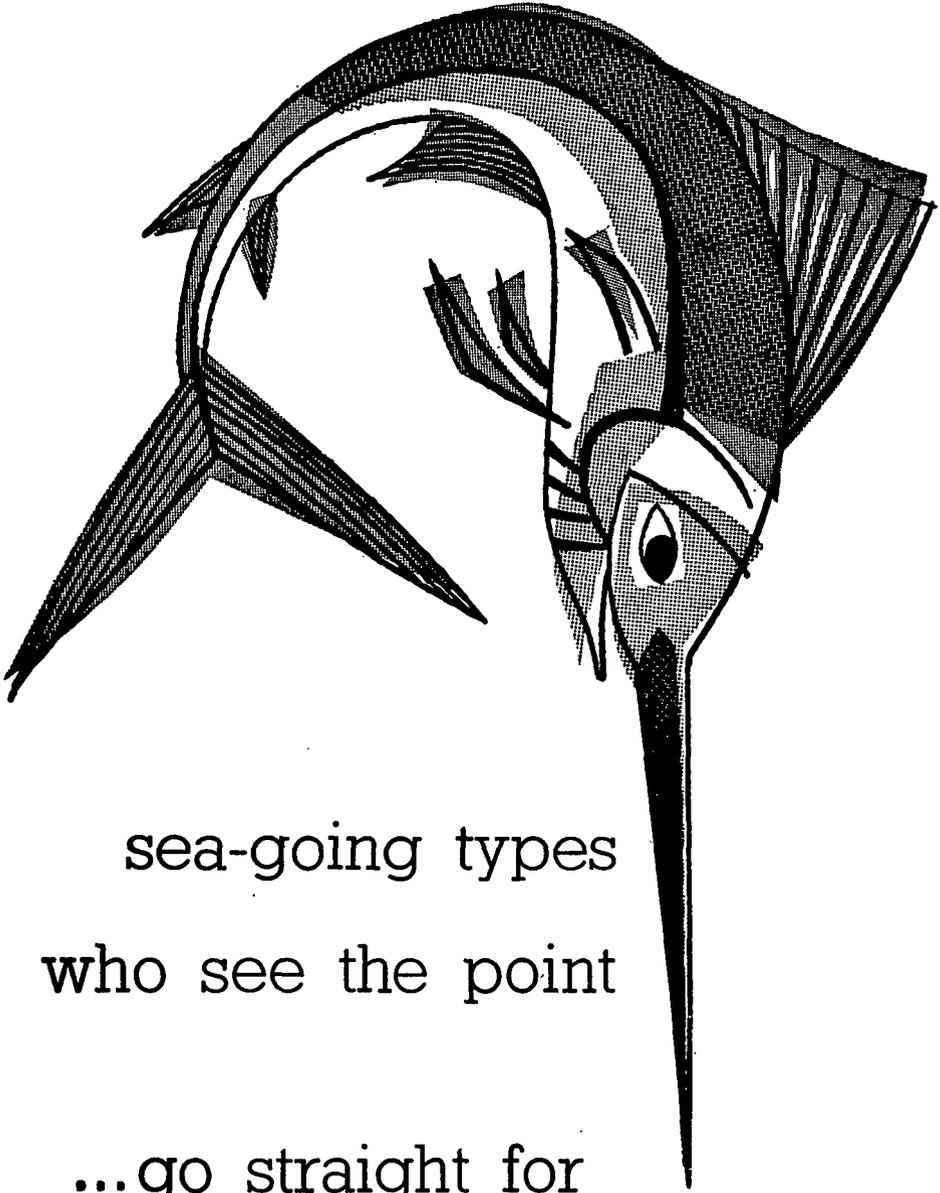
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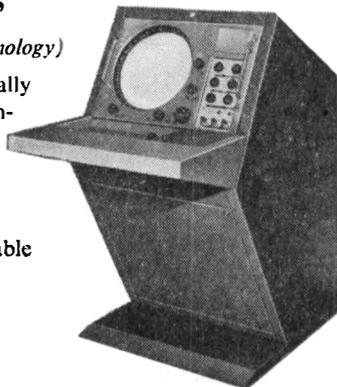


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# OBSERVATIONAL ERRORS

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This is the first of a series of monographs which the Institute is sponsoring on subjects closely allied to navigation. Essentially it gives an elementary account of the ideas and concepts behind the statistical theory of errors. Though the examples used are primarily navigational, it is designed to appeal to all who have to deal with information or observations which are subject to error; navigation thus appears mainly as a convenient and convincing source of illustration. The style of writing is vivid and direct, and has led to an unconventional but simple presentation that will appeal to the practical man.

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# Institute Meetings

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Friday, 26 April at 5.15 p.m.

## METHODS OF OBTAINING A SHIP'S ASPECT AND SPEED BY RADAR

Captain R. G. Swallow, R.N. and A. L. P. Milwright

In considering this question, which lies at the root of the collision problem, Captain Swallow of the Radio Advisory Service will first assess the value of the true-motion radar display, and Mr. Milwright of the Royal Naval Scientific Service will then describe other systems which might achieve the same purpose.

Friday, 17 May at 5.15 p.m.

## NAVIGATION AND THE AIRLINES

E. W. Pike

In this Paper the Navigation and Control Superintendent of British Overseas Airways Corporation examines the probable effect that increases in speed and traffic will have on route organization. He suggests that navigation may be inseparable as a subject from other aspects of air line operation.

Wednesday, Thursday, Friday, 5, 6, 7 June

## THE AVOIDANCE OF COLLISION BY SHIPBORNE AND AIRBORNE MEANS

A three-day joint meeting of the Institute, the Institut Français de Navigation and the Ausschuss für Funkortung. Details of the programme have been announced separately. There will be a registration fee of £1.

Friday, 21 June

## THE ACCURACY OF ASTRONOMICAL OBSERVATIONS AT SEA

D. H. Sadler, O.B.E.

Mr. Sadler, as Chairman, will present the report of the Institute's Working Party set up in 1951 to obtain and collate information on the accuracy of astronomical observations obtained under normal conditions at sea.

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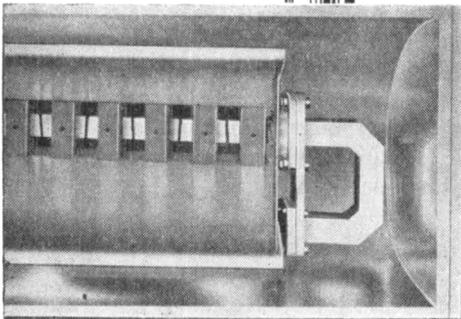
There will be tea at 4.30 p.m., before all meetings except during the three-day Conference.



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## THE AVOIDANCE OF COLLISION BY AIRBORNE AND SHIPBORNE MEANS

A JOINT meeting of the Institute with the French Institute of Navigation and the Ausschuss für Funkortung, to be held at the Royal Geographical Society on 5, 6, 7 June. There will be a registration fee of £1 for the three-day conference and the papers will be available to those attending for an extra charge of 10s.

### 1. The Mathematics of Collision Avoidance at Sea

D. H. SADLER, O.B.E.

### 2. Collision Situations at Sea in Good and Poor Visibility

CAPTAIN F. J. WYLIE, R.N., with further contributions from

(a) DR. F. W. MARIENFELD

(b) COMMANDANT L. LEMOINE-KARMOR

### 3. Radar Manœuvring at Sea and the Collision Regulations

P. HUGON, with further contributions from

(a) CAPTAIN H. D. HARRIES

(b) CAPTAIN R. G. SWALLOW, R.N.

### 4. Electronic Solutions to the Collision Problem at Sea

DR. H. C. FREIESLEBEN and CAPTAIN S. SCHNEGELSBURG

(a) The Use of Port Radar for Marine Traffic Control

G. WIEDEMANN, and contributions on 4 by

(b) A. L. P. MILWRIGHT

(c) CAPTAIN G. CREPET

### 5. The Statistical Probability of Collisions in the Air

DR. E. ROSSGER, with further contributions from

(a) J. B. PARKER

(b) GENERAL DE L'AIR SARAUULT

### 6. The Problems of Controlling Air Traffic from the Ground

D. O. FRASER

### 7. Electronic Methods of Avoiding Collisions in the Air

COLONEL P. GAUDILLERE, with further contributions from

(a) J. K. E. KARWATH

(b) R. BUTLER

### 8. Some Physiological Aspects of Collision Avoidance in the Air

E. R. M. DUCROS, A. R. MISSEARD and G. F. J. PERDRIEL

### 9. Conclusions of the Conference

(a) CAPTAIN F. J. WYLIE, R.N.

(b) WING COMMANDER E. W. ANDERSON



*Flight-progress boards—the basis of present-day separation between aircraft, by air traffic control. Flight plans are represented by flight-progress strips indicating time and altitude over each designated reporting point. The controller maintains altitude or time separation through each reporting point. The a.t.c. centre depicted is Uxbridge (transferred to London Airport in 1954 on being integrated with Southern Radar).*