

# Letters to the Editor

## THE VALUE OF MOON SIGHTS

SIR,

I was particularly interested in S. M. Burton's article, *The Value of Moon Sights* (Vol. V, p. 139). I recall that thirty years ago, when I was third officer, the master tried to discourage me from taking Moon sights, pointing out that, to use his own words, 'the Moon travels too fast, does as much in a month as the Sun does in a year, much too fast for accuracy—don't waste your time on it'. However, I persevered with daytime fixes of the Moon and Venus, and after a few months was able to convert the 'Old Man'.

In my experience I found such sights preferable to observations of the Sun, and in 1936 when I was given the job of standardizing and raising the general level of the U.S. Merchant Marine officer examinations throughout the various inspection ports, I introduced such fixes into the examination syllabus of Masters and Mates. Today, at our United States Merchant Marine Academy, our cadet-midshipmen are similarly trained to use such fixes.

Mr. Burton is to be congratulated upon his article. The percentages are, as he says, somewhat surprising.

Superintendent,  
U.S. Merchant Marine Academy,  
King's Point,  
New York.

Yours faithfully,  
Gordon McLintock,  
Rear Admiral, U.S.M.S.

It is interesting to note that B. Chr. Peterson in his investigation of the accuracy of sights (Vol. V, p. 37) concluded that the accuracy of daylight Moon sights probably exceeded that of Sun sights. Members may like to contribute their own views on this matter.—Ed.

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## ADMIRALTY CHART 2649

SIR,

I have studied with interest the coloured contouring of Admiralty Chart 2649, but must admit disappointment in that the colouring stops short at the 400-ft. contour. I realize that there must be many shades of opinion on this problem and that the economics must be considered; nevertheless I would like to emphasize some of the points I made in the discussion reported in this *Journal* (Vol. 3, No. 2, p. 163).

I regard the 200-ft. contour as an extremely important one for a number of reasons. It begins to rise above the radar horizon of a radar aerial 50 ft. above the sea at about 27 miles. This is the kind of distance from land at which the navigator seems to begin to take an active interest in a 'radar' landfall and it is also near the maximum range of many radar sets. If the land at this height has good echoing characteristics from the observer's angle of view it may provide the first identifiable shore target.

The 200-ft. contour is, so to speak, an interesting one. In most parts of the world the land reaches this height in the coastal area; this is much less often true of the 400-ft. contour. The 200-ft. contour frequently has much character,

which lends itself to identification; except in generally high coastal areas the 400-ft. contour is liable to produce a 'blobby' kind of response.

On many coasts the cliffs or steep-to formations rise to 200 ft. One has only to glance at Chart 2649 to see how often this is the case in the west Channel area. A similar study will show how seldom the 400-ft. contour approaches within 5 or even 10 miles of the coast. This, I think, is highly important in connection with coastal identification at ranges less than 25 miles, and colouring of the 200-ft. contour would make comparison rapid rather than an affair of tracing the sometimes inconspicuous contour lines.

In fact, I believe it fair to say that the character, particularly from the radar viewpoint, of a coastal area is defined far more by the 200-ft. contour than by one at any greater height. The section of coastline between Brest and St. Brieuc is quite an average kind of strip. It is interesting to note, however, when the 200-400-ft. area is coloured, that the impression of the degree and variety of the gradients is greatly enhanced, the steep-to parts can be picked out at once and the dissimilarity between the 200-ft. contour and either the coastline or the 400-ft. contour is immediately apparent.

A general study of the chart will show that on a radar-assisted approach to Brest, St. Malo, The Needles, Portland, Exeter, Plymouth, Falmouth and many other places, the 200-ft. contour will be of primary importance. Its colouring would bring the picture into such relief as would be of great value for radar comparison, accentuating particularly the cliff targets so important for accurate ranging.

It may be said that these contentions even if agreed would not justify, say, the expense of another shade of colouring, or that the 200-400-ft. area is generally too large to compete with. I suggest that in this new and specialized subject we should not be unnecessarily bound by tradition and that, if economy demands it, only the area between 200-400 ft. should be coloured and that the 800-ft. contour might be emphasized.

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Yours faithfully,

F. J. WYLIE.

SIR,

The latest version of the Admiralty experimental chart No. 2649 seems to me to be a considerable improvement upon its forerunners and to come very close to fulfilling the requirements. The factual contouring with its layer colouring, the clear delineation of the coastline and the simplification of the town detail are features which are likely to be generally appreciated.

On the choice of the height intervals of the layer colouring, however, I share Captain Wylie's disappointment. When an attempt is being made to correlate a PPI picture of a distant land mass with a chart it is safer to consider all the land which *could* yield echoes rather than isolated hill tops; in other words a ready appreciation of land above the radar horizon is required. This the present chart gives readily only for ranges of 35 miles or so (assuming a 50-ft. aerial height), which is beyond the range at which it is usually practicable to make a radar landfall. At ranges of 25 to 20 miles where the present radar becomes most useful for making a landfall and at the shorter ranges of coastal navigation, the 200-ft. and

the 100-ft. contours become of much greater significance. Colouring the land down to this order of height would, in my opinion, give a much better impression of the general form of the land. Colouring down to 200 ft. could be said to be highly desirable, down to 100 ft. being preferred if possible.

Economy may well dictate the need to keep the number of shades of colouring down to three as in the present chart. If this be so it seems that a coarser interval is to be preferred to a decrease in the overall range. The use of an interval which increases with height has many advantages (including a better correspondence with practical effects); layers at heights of 100 ft., 300 ft. and 900 ft. are suggested as one possible method.

A further useful addition would be a coloured key to the shading giving both heights and ranges at which each layer begins to appear above the radar horizon.

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Kensington,  
London, W.8.

Yours faithfully,

R. F. HANSFORD.

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#### ERRATUM

##### *A Survey of Requirements for Port Radar.*

IN the list of shore radar installations given as an Appendix to Mr. Le Page's paper (Vol. V, No. 3, p. 295), the installation at Vancouver, B.C., was described as being sited on First Narrows Bridge over the Fraser River. First Narrows Bridge in fact spans the harbour waters between Stanley Park and the North Shore.

It is hoped to publish a short description of the installation in the January number of the *Journal*.