VARIATION OF THE COMPASS.

1. That every ship has an individual attraction, which affects the compasses on board her; and, to ascertain the exact quantity of its effect, though possible, requires the most particular care and the nicest attention,

2. The effect of this attraction being different in different ships, and not progressive always, but often irregular, no general calculation will therefore apply in the case of all ships, to ascertain it for the purpose of correction; and, cousequently, all the rules hitherto given for obtaining it, particularly in arctic climates, cannot be relied on an indicating with the second second

3. As six compasses were compared with each other on board the Isabella, and found to agree in the same place, and all to disagree, when placed in different situations between the stern and the foremast, it is evident that the aberration in any ship will vary, according to the station of the compass at the time of using it; and, therefore, as the point of change will not be the same at every part of the ship, all observations must be made in one and the same place, when the point of change has been obtained; and to which only that point of change will apply:

4. The aberration does not always continue the same under the same apparent circumstances, and varies according to the point the ship's head is on.

5. The aberration appeared to be materially affected by heat and cold, a well as by atmospheric humidity and density.

6. The direction of the wind seems to have an irregular effect on the aber ration: "of but "03 ad on have ages not size of a direction of the state of the second s

7. The dip, also, has an irregular effect on the aberration.

8. That the points of change found with the compass, in the same part of the ship, will remain the same, unless some material alteration is made in the stowage of metallic substances on board, yet the amount of aberration, with the ship's head on any point of the compass, will be on a proportion, though no a regular one, with the increase or decrease of the variation and dip; by both of which, the aberration appears, in some degree, to be governed, though no the points of its change, they seeming to be independent of any influence bu the ship's attraction or magnetism; and which is not of equal force in every part of the same ship; nor, perhaps, alike in any two. It is, however, presumed that, the experiments and observations that have been made, and the rules proposed and exemplified, will be sufficient to correct the errors in the mariner's course, which have so often proved fatal, and bitherto been attributed perhaps, to defects in compasses, to currents, and other unaccountable causes

CAPTAIN ROSS'S RULES for finding the POINT of CHANGE in Aberration, and given on the last page of this work.

WE now proceed with the TABLES of POSITIONS, exhibiting the authorities with Notes descriptive and explanatory; every division of which conclude with the existing variations of the compass, at the places inserted in the respective Tables. 1. EASTE

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GREEN WICH Observator: Gravesend, chui Sheerness, flagst The Naze of Ess tower [2] ...

Landguard Fort Bawdsey, church Orford, high ligh

Yarmouth, churc

Lynn, old tower

Spurn, lighthous Flamborough He

house..... Whitby Hartlepool, steep Easington, steep Sunderland, light Tynemouth, light Coquet Island, to Sunderland Point Cheviot Hills, sun

feet)..... Farn Islands, k

house [3] · · · · Staples, lighthous Bamboro' Castle Holy Island Castle Berwick upon Tw St. Abb's Head .. Bass Rock or Isle Leith Pier EDINBURG, th St. Monance, spir Pittenween, steep East Anstruther, s Kilrenny, spire · · Crail, spire Fiteness [4] May Island, light