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ON THE VARIATION OF THE NEEDLE, AS OBSERVED DURING
A VOYAGE TO AND FROM INDIA. BY W. H. WHITE, H.M.C.S.

To the Editors of the Philosophical Magazine and Annals.
Gentlemen,

Not having seen any thing lately on the variation of the mariner's compass, and having just perused the private log of a gentleman recently returned from India, I have extracted a few observations, showing the variation at four nearly corresponding latitudes, outward and inward.

Outward bound.

Latitude.	Longitude.	Variation.
49° 30' N.	5° 30' W.	27° W.
10 S.	23 30 W.	10 W.
21 00 S.	37 00 W.	00
40 00 S.	31 00 E.	31 W.

Homeward bound.

Latitude.	Longitude.	Variation.
36° 30' S.	23° 00' E.	28° W.
21 30 S.	2 51 E.	20 W.
20 N.	18 25 W.	11 W.
49 40 N.	5 40 W.	25 W.

In the outward passage, it appears that the variation diminished as the latitude diminished and the longitude increased westward, till the ship reached latitude 21° S., longitude 37° W., when it entirely ceased. A progressive increase again took place as the ship continued to sail southward, making E. longitude.

In the homeward passage there is a regular diminution of variation as the ship sails westward; and as a proof that the compass is not influenced by latitude, at least in the torrid zone, we find in latitude 21° 30' S. the variation was 20° W., whereas in 21° S. in the outward passage, having a difference of 39° 51' W. longitude, there was no variation. Hence it appears as the ship increases in E. longitude from 37° W., the variation of the compass increases W., but to what extent I believe is not determined.

Should these observations be worthy of insertion in your scientific Journal, they may lead to a completion of facts that would highly benefit the science of navigation.

I am, Gentlemen, yours, &c.

Bedford, July 8, 1829.

W. H. WHITE, H.M.C.S.

ACTIVE MOLECULES IN ORGANIC AND INORGANIC BODIES.

The peculiar and apparently inherent motion of these molecules discovered some time since by R. Brown, Esq. F.R.S.,* excites an increased interest in consequence of the difficulty of accounting for it satisfactorily. Mr. Holland, who has for some time closely applied himself to microscopic researches, has found that the motion continues equally vivid, when the liquid containing the molecules

* See Phil. Mag. and Annals, N.S. vol. iv. p. 161.