

NO/9/59/61 GL/20

Secretary, Dr. W. S. Woodcock, Office of Oceanography, London

Paris, 22 June 1962

Dear Sir,

In circular memorandum of 15 September 1961 the President of SCOR, Dr. G.P. Humphrey, proposed establishing in the Indian Ocean a number of reference stations at which standard measurements would be made as frequently as possible by all the expeditions working at the corresponding areas.

The idea supporting this proposal is that various observations in the surface layer at these stations can provide us with useful information on seasonal changes in various oceanographic characteristics, while deep water observations at these stations might serve as a kind of check on the consistency of analyses and comparability of methods.

Comments to this proposal were discussed at the SCOR Executive Committee Meeting in London, 16-18 April 1962, and some additional proposals were made at the coordinating meeting for the southwestern Indian Ocean in Laurence Marques in May this year.

Following is the list of agreed reference stations:

- 1. 32°S., 111°50'E. Agreed at London meeting. Already sampled by "DIAMANTINA" since 1957.
- 2. 9°S., 105°E. Agreed at London meeting.
- 3. 5°N., 69°E. Agreed provisionally at London meeting. Subject to further discussion at the regional coordinating meetings.
- 4. 8°S., 44°E. } Agreed at Laurence Marques meeting
- 5. 18°S., 41°E. }
- 6. 32°S., 35°20'E. }

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The Secretary of the IOC, having accepted the authority and responsibility for coordination of the International Indian Ocean Expedition, now recommends these stations to all participants of the Expedition with the understanding that recommendations concerning the nature and volume of measurements at these stations and also ways of exchange and publication of results should be discussed at the planned regional meetings and probably at the Second Session of the IOC. As an example, Australian procedure at reference stations is outlined in the enclosure to this letter.

Yours very truly,

Warren S. Wooster

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Secretary, Intergovernmental Oceanographic
Commission

STANDARDIZED PROCEDURE AT REFERENCE STATIONS

<u>Reference Station 1</u>	(32°S., 111°50'E.)
S, T, O ₂ , nitrate and inorganic P	0, 25, 50, 75, 100, 150, 200, 300, 500, 700, 900, 1100, 1300, and 1500 m and then at 500 m intervals to the bottom.
Total P	As above except 25, 75, and 150 m
Primary production using ¹⁴ CO ₂	0, 25, 50, 75, 100, and 150 m
Pigments	As for primary production
Zooplankton	Oblique haul with Clarke-Bumpus sampler : surface - 200 m - surface. Ship speed : 2 to 3 knots. Speed of paying out and recovering wire : 20 m/minute. Duration of tow : 35 minutes.
	When the Indian Ocean Standard net arrives, standard tows will be made with it and the catch will be sent to the Indian Ocean Biological Centre.
<u>Miscellaneous</u>	Depth, air temperature (wet and dry), wind, cloud, visibility, sea, swell, and pressure.
<u>Reference Station 2</u>	(9°S., 105°E)
S, T, O ₂ , nitrate and inorganic P	0, 25, 50, 75, 100, 125, 150, 200, 250, 300, 400, 500, 700, 900, 1100, 1300, and 1500 m, and then at 500 m intervals to the bottom.
Total P	As above except 25, 75, 125, 150, 250, and 400 m.
Primary production, pigments, zooplankton and miscellaneous as at Reference Station 1.	

