

Department of Atmospheric Sciences

December 12, 1969

Mr. John Sievers
Committee on Atmospheric Sciences
National Academy of Sciences
National Research Council
2101 Constitutional Avenue, N. W.
Washington, D. C. 20418

Dear John:

In reading through the summary notes of the GARP review subcommittee, I find myself in almost total agreement with the views expressed by the other members. About the only point I could find to disagree with was the suggestion of use of business advertising to promote GARP. If it requires this kind of advertising, it is doomed from the start. A point which I agreed with emphatically was that made in the last paragraph. My overriding impression in reading the government response was that GARP was being billed with many costs which government agencies would incur in the normal future expansion of their activities and in some instances perhaps with unnecessary costs. In part these can be attributed to the sketchiness of the U. S. plan which allows ample scope for imagination (e.g., the trade wind and land convection experiments). In part, they can be ascribed to an apparent unwillingness or inability of the agencies to make minor modifications in their future plans to accommodate GARP. A Pacific Systems Test will allegedly require a costly new geosynchronous satellite. One is available to GARP free for an Atlantic Test, however. Yet, it is my understanding that these satellites can be moved easily to temporary locations and restored to their prior positions.

Enclosed is a copy of my first comments on the government reply prepared for the Chicago get together. I meant to give it to you for hand transmittal at the time of your visit, but you had left the building before I remembered to bring it downstairs.

After rereading my initial comments and the documents since provided (the summary notes and the copy of Bob White's letter to Jule), my views are as follows on the three main areas of activity:

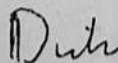
(1) The computer needs and costs should indeed be made the subject of careful scrutiny. Our report was deficient in this respect. The need for additional computer capacity will rise gradually. I doubt if a \$60 million quantum jump lies a few years down the road, if the matter is looked into thoroughly; and I doubt that the expanded computer needs will stem solely from GARP.

(2) The field experiments are indeed unduly expensive as priced by the government. But some of them were not intended to be carried out as such large efforts as assumed. In the case of the air modification, trade wind and land convection experiments the idea was to supply relatively modest additional support to efforts which it was understood certain persons or groups were planning. In the case of CAT, the idea was not so much to acquire additional expensive new equipment as to get some scientific input into the NCAT effort which has floundered too long already and threatens to flounder further under MOCAT. The top priority field experiment(s), as all agree, is the tropical. I still feel it would best be held in the Western Pacific and that it need not cost as much as indicated. I also feel still that the Systems Test and Tropical Experiment should be combined for their obvious mutual advantage. I hesitate to say more in this respect since what happens next will almost certainly depend on the outcome of the Miami meeting.

(3) The Systems Test should indeed coincide with the Nimbus F flight and other ongoing activities, as we suggested. Other nations should indeed be invited to participate, as we intended, though we viewed it, for practical reasons, as primarily a U. S. sponsored event. GHOST balloon releases in the tropics should be part of the Systems Test since tropical wind measurement is still a major problem. This is another reason for combining the Test with the CCL Experiment. And this in turn is a reason for favoring the Pacific as a location.

I sense that we are at a critical point now where GARP runs the risk of becoming merely a new label for things the government agencies want or plan to do anyhow. If my assessment of the situation is correct, it stems not from improper motives on the part of the government officials but from their frustrations with the present and immediately foreseeable budgetary restrictions. GARP needs strong high level support (e.g., OST) at this time if it is truly to be an effort in which the scientists state objectives and requirements and the government makes an all out attempt to meet the stated goals.

Sincerely,



R. J. Reed