

NATIONAL SCIENCE FOUNDATION
BIOLOGICAL AND MEDICAL SCIENCES

PROPOSAL EVALUATION SHEET

<u>No.</u>	<u>TITLE</u>	<u>INVESTIGATOR</u>	<u>INSTITUTION</u>
B-7092	Detection of Microorganisms on other Planets: Suitable Instruments	W Vishniac	Yale U

COMMENTS (IF MORE SPACE IS REQUIRED PLEASE USE ADDITIONAL PAGE)

I am not altogether an objective bystander on this proposal, having played some part in instigating the discussions at MIT, and some corresponding ones here. I am hopeful that there will be additional proposals of a similar nature relative to scheduled contact probes, especially to Mars, about 5 years from now. It is important to get microbiologists of Vishniac's (high) calibre interested in these questions, and without inordinate delay if the most efficient use is to be made of the early probes.

Dr. Vishniac is certainly asking for a modest sum-- perhaps unrealistically so-- and the main virtue of his preliminary work may be to discover the kinds of design problems that will be encountered in optimization of the detector. It is possible (though not immediately evident) that similar automatic devices may play a useful role in other types of research.

However, in view of the limitations of funds available to NSF, and the liberal support given to NASA, it seems quite plausible that responsibility for the project should be accepted by NASA. There are two reservations on this statement: (1) it should not be used as an excuse to deflect or defer support for the project, ~~and~~ particularly if NASA is still at an organizational stage where it may not be making grants of this type, and (2) that fundamental work in space-related sciences, as opposed to the development of payload hardware, should certainly not be the special responsibility of NASA. Certainly I can see no sound objection to NSF devoting small sums for preliminary work if NSF is the most expeditious source. If NSF is to administer funds on the likely scale required, for example to build actual ~~plans~~ prototypes of the payload detectors, it would need ~~an~~ additional funds ~~at~~ in no mean measure to ensure adequate support for other basic programs.

If Vishniac had less integrity or ability as a scientist, the 'hardware' argument might be more compelling an argument against the proposal. At the moment, the 'hardware' has to be developed as the means to answer some very pervasive questions and if the NSF, for any reason, cannot support the project itself, it should be certain that prompt support is available elsewhere.

SCORE 1
FROM 1 (HIGH) TO 5 (LOW)
(1 - HIGHLY MERITORIOUS
(2 - MERITORIOUS
(3 - ACCEPTABLE
(4 - QUESTIONABLE
(5 - DECLINE

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ENVIRONMENTAL BIOLOGY