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ZGF ZENTRALSTELLE FÜR GEO-PHOTOGRAMMETRIE UND FERNERKUNDUNG (DFG)

(E80-10107) APPLICATION EXPLORER MISSION A:
HEAT CAPACITY MAPPING MISSION (Zentralstelle
für Geo-Photogrammetrie) 3 p HC A02/MF A01
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Ref.: Application Explorer Mission - A
Heat Capacity Mapping Mission

Dear Mr. Stuart,

with respect to my last visit (December 79) at your office and our discussions on the HCMM project I send you some additional information on the status of our work.

Until now we have received some hundred images of the HCMM mission. Out of the received transparencies about 20% do not cover the areas of interest. This refers to data from Spain, France, England and Scandinavia.

A very good coverage has been obtained from Italy and Marocco. Data from Germany only amount to about 10%. Some frames had wrong geographic coordinates and about 20 frames were sent twice.

From the ESA receiving station at Lannion we receive quick look data as prints. The quality of these images is sufficient to examine cloud cover.

The images from Germany were distributed to the individual co-investigators.

With respect to cloud cover problems it has been indicated that the planned investigations based on long

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term observations cannot be carried out. This refers to the planned investigations described under "Objective I" of the submitted proposal.

A visual interpretation of thermal data covering southern Germany has revealed some interesting geological features in the foreland of the alps. Probably due to soil moisture the folded molasse can be very distinctly mapped thru the vegetation cover - a phenomenon not visible on Landsat data. A more detailed investigation is in preperation.

In addition to HCMM data Landsat tapes of the Maroccan and Italian test area have been ordered. Just now we are preparing a set of digitally processed products which permit the superimposition of images derived from both missions. For this purpose we had to carry out software changes in order to allow the definition of pass-points via an off line HP-Computer with an digitizing tablet.

Images representing Italy and Marocco can be used for most of the proposed investigations. On the basis of a careful review of all available data a selection of CCT's has been carried out and submitted to NASA during the December visit. First results on the basis of CCT's are expected towards the middle of the year. Also on the basis of our HCMM investigatorship we received additional funds and a further digital image processing system (ISI Earthview) in order to support interactive processing of the data. The system is already available and accepts also HCMM tapes.

On the basis of the delayed delivery of digital data and also problems with getting together all the tools from our side we feel that it will be very difficult for us to finish the proposed investigation within the given time-frame.

On the other hand we feel that the HCMM program will give significant inputs to the remote sensing concept which justifies a prolongation of the investigations over the given period of time. Therefore we kindly ask NASA to give us at least 6 months more for the preparation of the final report.

Sincerely Yours

A handwritten signature in cursive script, appearing to read 'R. Haydn'.

(Dr. R. Haydn)