To: Code 5170

From: Code 5435

Subj: Mission 7105, description of.

1. In order to establish a firmer understanding of the Major goals for the 5430 Experiments to be flown in Payloads #151, 152, 153 and 154, this paper is being prepared. It is also hoped that as this documentary effort will continue through the evolution of these payloads, and a written record of the contemporary requirements be maintained by the two Branches involved.

2. #151
a) spherical payload with system of eight solar cell each 9" dia; 24 inch/power conservative experiments are desirable to sustain normal Data Link Power capabilities. (D/L turned on 25% of time with continuous data duty cycle of 25% & power radiated from turnstile ~~equal or greater than one-half watt~~ between one half and one watt; nulls in radiation pattern less than 3 db. are tolerable.)

b) #151 will be two-axis stabilized with a "Flip" capability which is available for command for use as often as once per week.

c) the collection bands proposed are shown, along with those of the other three payloads, in Table #1.

d) Normal flight configuration will be with Boom UPWARD. Turnstile antenna is proposed for location on South hemisphere 37° Latitude.

e) Proposed location of the four dual-coverage antennas for band #1 & 2 is on North hemisphere 37° Latitude ~~thus having the low frequency collection antennas~~ at right angles to the turnstiles and avoid coupling troubles.

f) Four each of the monopole ~~dual-coverage~~ antennas used for Bands #3 & 6, 4 & 7, ~~and~~ 5 & 8 7, 9, 8, 10 are proposed to be located on the 7 inch cylindrical equator band of the payload. In order to provide collection below the Payload one each of these dual antennas is to be mounted parallel to the south-pole axis and elevated so that it can operated without shading from the spearation flange. ~~BYEMAN TALENT KEYHOLE~~ CONTROL

(3) Four each of the dual antennas for bands 3 & 5 and 4 & 6 will be located on the north and south hemispheres respectively.