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*notes*

Intermediary Free-Fall

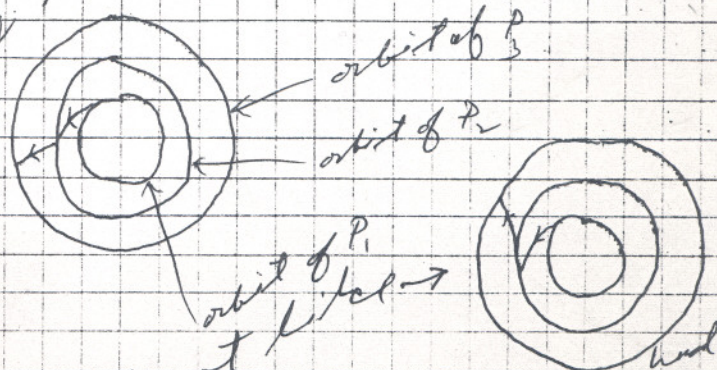
Reconnaissance Trajectories

Feb. 20 1962

MA 11

Begin tests of one-way program

I kept track of many of my trajectory calculations in log books. The first JPLA computer facility copied out of my log books. One of the first tasks was to identify one of the trajectory problems for  $P_1, P_2, P_3$  for various years. For example a trajectory problem



is reasonable but not literal → Hence planetary configurations had to be known before I could expect a certain profile  $P_1, P_2, \dots, P_n$  to be physically realized

↓ ore

the following figures were drawn  
some time between Feb 20 1962  
and April 6 1962. (more likely  
nearer to Feb 20). They represent  
the planetary configurations for all  
the planets on Jan 1 from 1965  
through 1981 (Jan 1 of each year)

This guided my selection of  
trajectory profiles. A list of 510  
possible sequences  $P_1 - P_2 - P_3 - \dots - P_n$   
was written down. Each one was  
compared to the planetary configurations  
and were rated by " $\star$ ". The years of  
probable physical realization  
was often given in the right hand  
side near the " $\star$ ". For example  
a profile having a launch date  $T_1$   
after 1977 is sometimes ~~seen~~ noted  
by  $T_1 \geq 77$  etc.

It is interesting to note that all  
of the so called "Grand Tour and  
Venus Swingby (or gravity assisted) missions  
were conceived & identified here!