
4.0 SUMMARY

Ground station controlled maneuvers may be used to bring a satellite into acquisition range for rendezvous. The procedure involved rests on careful timing of all events.

To avoid excessive fuel costs imposed by planar changes launch is planned for the time the launch site crosses the target orbital plane. A phasing orbit is used to establish the necessary relative positions of the two satellites. A planar transfer is then made to reach the intercept point.

The timing of all maneuvers is critical to this procedure. Any deviation from the time of launch results in fuel costs for adjustments. A missed launch time would require waiting for the repetition cycle of the target orbit to repeat, or in redesign of the rendezvous procedure.

The procedure allows selection of the point of rendezvous and incorporation of geographic constraints. Parameters which are adjusted to meet the conditions for rendezvous are those of the phasing orbit. Due to the timing restrictions only a few solutions are available for any given launch site.