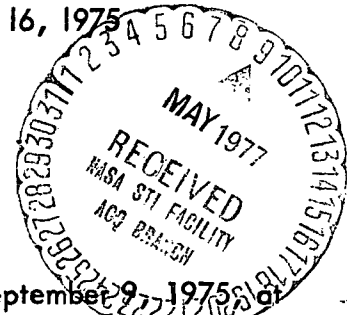


MEMORANDUM

TO: A/Administrator
FROM: SL/Viking Program Manager
SUBJECT: Viking Mission Post Launch Report #2

September 16, 1975



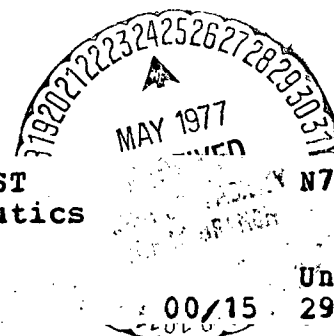
The second Viking spacecraft was successfully launched on September 9, 1975 at 2:38:59.9 p.m. EDT. The spacecraft trajectory is within the designed 3 sigma limits and when translated into the Mars encounter geometry, the achieved injection point is 279,259 kilometers from the targeted point. The arrival time is off by 20h19m24s (see Figure 1). As in the case of Viking 1, the Viking 2 target point was biased away from the planet to assure that planetary quarantine constraints would not be violated. On September 19, 1975, a trajectory correction maneuver will be performed to target Viking 2 for the Mars Orbital Insertion (MOI) point.

All launch events were nominal (see Table 1), and as of this report, both spacecraft are operating satisfactorily. The trajectory correction maneuver of Viking 1 was of sufficient accuracy to preclude the need for another maneuver until 30 days before MOI.

Because of the difficulty encountered with the first launch attempt (see Post Launch Report #1), the second spacecraft was scheduled to be launched on September 1, 1975. On August 28, during a scheduled Orbiter Precount test, the radio receiver experienced a degradation in its detection threshold. The problem was investigated for a full day and at 00:20 a.m. on August 31, the Project decided to remove the spacecraft from the launch vehicle and return it to the SAEF Building for further tests and investigation. This decision required that the launch be rescheduled for September 9. After extensive testing of the Orbiter radio and antenna system, the Project concluded that the anomaly was most probably due to a faulty connector or conductor between the diplexer module and the high gain antenna. Since the faulty part could not be isolated, all the parts from the diplexer through the high gain antenna were replaced. When the parts had been replaced, the Orbiter and Lander were retested, encapsulated, and mated with the launch vehicle. All tests subsequent to replacing the suspect parts were nominal.

W. Jakobowski
Walter Jakobowski

(NASA-TM-X-74697) VIKING MISSION POST
LAUNCH REPORT NO. 2 (National Aeronautics
and Space Administration) 3 p



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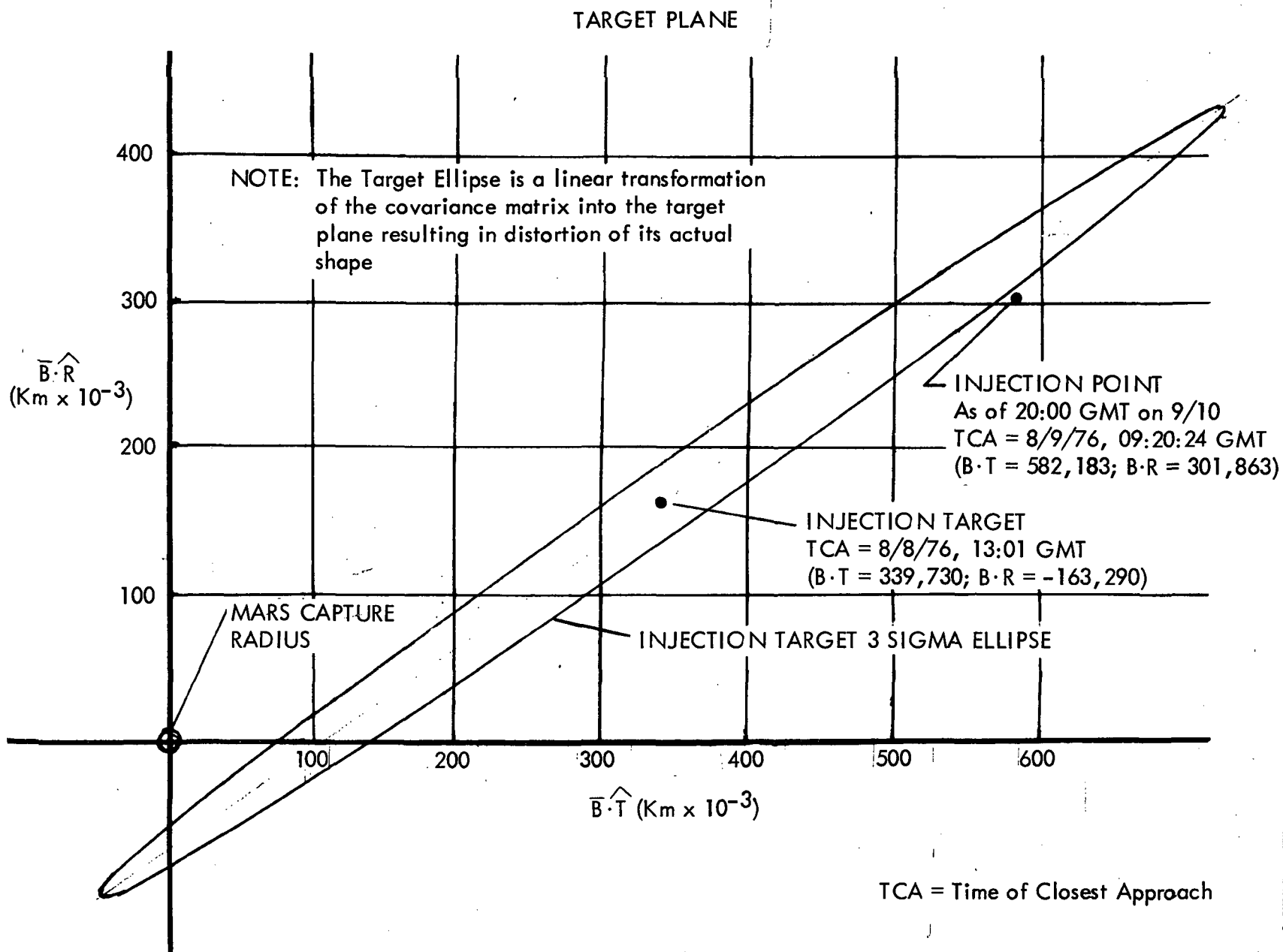


Fig. 1

S-815-75-01/02

TABLE 1
VIKING 2 LAUNCH — MAJOR EVENTS

<u>MARK NO.</u>	<u>EVENT</u>	<u>TIME (GMT)</u>
	Liftoff	18:38:59.9
1	FB Release	18:40:40.0
2	Stage 1 Ignition	18:40:52.0
3	Stage 0 Jettison	18:41:02.9
4	Stage 1 Shutdown	18:43:21.0
5	Stage 1 Jettison	18:42:21.0
6	Stage 2 Ignition	18:43:21.8
7	Centaur Shroud Jettison	18:43:33.3
8	Stage 2 Shutdown	18:46:50.0
9	Stage 2 Jettison	18:46:53.2
10	Centaur Main Engine Start (MES) #1	18:47:05.1
11	Centaur Main Engine Cutoff (MECO) #1	18:49:13.2
12	MES #2	19:07:27.0
13	MECO #2	19:12:27.8
14	Centaur/Spacecraft Separation	19:16:07.8
15	Solar Panel Deployment	19:18:23.0
16	Centaur Retro Start	19:30:22.8
	Sun Acquisition	19:30:13.0
17	Centaur Retro End	19:34:33.0
	High Gain Antenna Deploy	19:39:17.9
18	Bioshield Jettison	20:47:00.0
	Canopus Acquisition	22:00:38.0