First Quasi-Zenith Satellite MICHIBIKI
Orbit Calculation Results and Schedule of the First Apogee Engine Firing

The Japan Aerospace Exploration Agency (JAXA) confirmed that the first quasi-zenith satellite "MICHIBIKI" has been injected into the preordained first transfer orbit as a result of its orbit calculation. The following is the result of the orbit calculation.

	Result *	Schedule *
Apogee altitude	36,150km	36,140(km)
Perigee altitude	250km	250(km)
Orbit inclination	31.9degrees	31.9(degrees)
Period	10h39m	10h39m

We will perform apogee engine firing (AEF) five times, thus the satellite will go through the second, third, fourth and fifth transfer before it is injected into the drift orbit. (Please refer to the following attachment.)

The first AEF is scheduled to be conducted for about 67 minutes from around 12:02 p.m. on 9.12, 2010 (Japan Standard Time, JST) to inject the MICHIBIKI into the second transfer orbit.
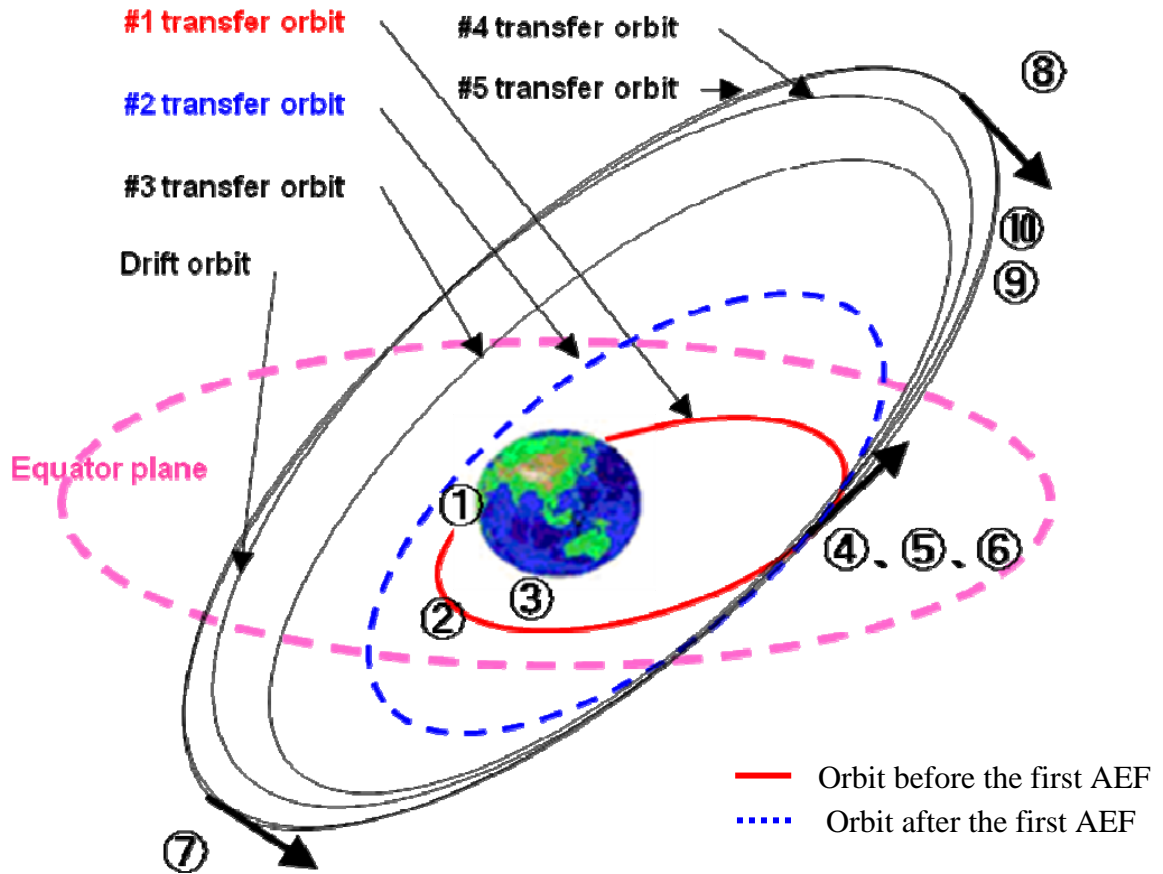
The satellite is in good health.

(Note)

- Transfer orbit: A temporary orbit for a satellite between the launched orbit and its final orbit. After being launched and injected into a transfer orbit by the launch vehicle, the satellite is gradually maneuvered and injected into the quasi-zenith orbit.

- Apogee engine An engine to be fired at the apogee point on the transfer orbit to increase the perigee altitude so that the satellite will move up to the quasi-zenith orbit.

- Drift orbit: The last step orbit prior to the quasi-zenith orbit. The orbit altitude and inclination (angle against the equator) are equal to those of the quasi-zenith orbit, but the longitude of the center of the figure-8 orbit is not above Japan. After being injected into the drift orbit, it will take a few days to maneuver the satellite to have its figure-8 center above Japan, thus it will ultimately fly in a quasi-zenith orbit.

(Next information release schedule)

We plan to announce the first apogee engine firing results at around 3:00 p.m. on 9.12 (JST.)

#1 transfer orbit #4 transfer orbit

#2 transfer orbit #5 transfer orbit →

#3 transfer orbit

Drift orbit

Equator plane

⑧ ⑩ ⑨

① ② ③ ④、⑤、⑥ ⑦

—— Orbit before the first AEF

····· Orbit after the first AEF

Event	Revolution
① Payload separation	1
② Solar array paddle deployment	1
③ Sun acquisition by the solar array paddle	1
④ **First apogee engine firing**	**2**
⑤ Second apogee engine firing	4
⑥ Third apogee engine firing	5
⑦ Fourth apogee engine firing	7
⑧ Fifth apogee engine firing	8
⑨ Paddle auto-tracking	10
⑩ Shift to the regular control mode	10

Flight Plan of MICHIBIKI