

The history information of QZS-4 operation

| date      | event                          | history   |                    |                    |          |              |              |              | mass(kg)<br>(*2) |
|-----------|--------------------------------|-----------|--------------------|--------------------|----------|--------------|--------------|--------------|------------------|
|           |                                |           | start(UT)          | stop(UT)           | duration | $\Delta V_x$ | $\Delta V_y$ | $\Delta V_z$ |                  |
| 2018/1/12 | Service in                     |           |                    |                    |          |              |              |              | 2355             |
| 2018/2/19 | orbit maintenance maneuver(*1) | UNLD      | 2018/2/19 8:18:00  | 2018/2/19 8:21:20  |          |              |              |              | 2353             |
|           |                                | YS→ON     | 2018/2/19 8:38:20  | 2018/2/19 8:39:09  |          |              |              |              |                  |
|           |                                | #1        | 2018/2/19 8:46:30  | 2018/2/19 8:47:06  | 0:00:36  | -0.581       | -0.003       | 0.008        |                  |
|           |                                | #2        | 2018/2/19 16:16:34 | 2018/2/19 16:17:03 | 0:00:29  | 0.463        | 0.009        | 0.004        |                  |
|           |                                | UNLD      | 2018/2/19 20:09:20 | 2018/2/19 20:11:20 |          |              |              |              |                  |
|           |                                | ON→YS     | 2018/2/19 20:15:57 | 2018/2/19 20:19:26 |          |              |              |              |                  |
|           |                                | UNLD      | 2018/2/19 20:22:16 | 2018/2/19 20:24:16 |          |              |              |              |                  |
| 2018/4/21 | change of Yaw Steering Status  | Pseudo YS | 2018/4/21 15:34:40 | 2018/4/21 15:40:16 |          |              |              |              |                  |
| 2018/4/22 | change of Yaw Steering Status  | Pseudo YS | 2018/4/22 15:28:40 | 2018/4/22 15:42:48 |          |              |              |              |                  |
| 2018/4/23 | change of Yaw Steering Status  | Pseudo YS | 2018/4/23 2:23:44  | 2018/4/23 2:35:28  |          |              |              |              |                  |
|           | change of Yaw Steering Status  | Pseudo YS | 2018/4/23 15:24:56 | 2018/4/23 15:46:48 |          |              |              |              |                  |
| 2018/4/24 | change of Yaw Steering Status  | Pseudo YS | 2018/4/24 2:19:44  | 2018/4/24 2:37:12  |          |              |              |              |                  |
|           | change of Yaw Steering Status  | Pseudo YS | 2018/4/24 15:22:00 | 2018/4/24 15:49:44 |          |              |              |              |                  |
| 2018/4/25 | change of Yaw Steering Status  | Pseudo YS | 2018/4/25 2:16:56  | 2018/4/25 2:42:48  |          |              |              |              |                  |
|           | change of Yaw Steering Status  | Pseudo YS | 2018/4/25 15:19:28 | 2018/4/25 15:51:44 |          |              |              |              |                  |
| 2018/4/26 | change of Yaw Steering Status  | Pseudo YS | 2018/4/26 2:14:32  | 2018/4/26 2:45:28  |          |              |              |              |                  |
|           | change of Yaw Steering Status  | Pseudo YS | 2018/4/26 15:17:12 | 2018/4/26 15:33:12 |          |              |              |              |                  |
| 2018/4/27 | change of Yaw Steering Status  | Pseudo YS | 2018/4/27 2:12:24  | 2018/4/27 2:47:28  |          |              |              |              |                  |
|           | change of Yaw Steering Status  | Pseudo YS | 2018/4/27 15:15:12 | 2018/4/27 15:54:24 |          |              |              |              |                  |
| 2018/4/28 | change of Yaw Steering Status  | Pseudo YS | 2018/4/28 2:10:41  | 2018/4/28 2:49:13  |          |              |              |              |                  |
|           | change of Yaw Steering Status  | Pseudo YS | 2018/4/28 15:13:21 | 2018/4/28 15:55:21 |          |              |              |              |                  |
|           |                                |           |                    |                    |          |              |              |              |                  |
|           |                                |           |                    |                    |          |              |              |              |                  |
|           |                                |           |                    |                    |          |              |              |              |                  |
|           |                                |           |                    |                    |          |              |              |              |                  |

(\*1)  
The  $\Delta V$  information shows the planned value.

(\*2)  
This information includes the analysis error.