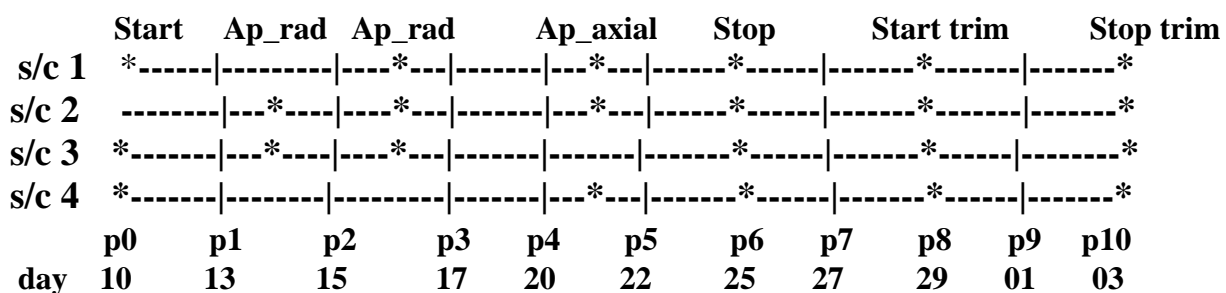


1. Manoeuvre Sequence

S/C	Comment	Loc	Epoch	v°	Thr.	Dur. (s)	Dv(m/s)
3	Drift Start	Pg 0	01/05/10 17:39	338.8	AX+	121.0	3.50
4	Drift Start	Pg 0	01/05/10 17:59	349.6	AX-	7.0	0.20
1	Drift Start	Pg 0	01/05/10 18:05	358.0	AX+	54.0	1.58
3	Rad. Ascend	Ap 2	01/05/13 11:14	132.4	RAD	3946.5	25.74
2	Rad. Ascend	Ap 2	01/05/13 14:29	142.7	RAD	2166.2	13.72
1	Rad. Descend	Ap 3	01/05/16 22:46	191.6	RAD	1623.0	10.74
2	Rad. Descend	Ap 3	01/05/17 12:56	228.9	RAD	321.7	2.04
3	Rad. Descend	Ap 3	01/05/17 17:28	249.7	RAD	2013.6	13.15
1	Ap. Axial	Ap 5	01/05/20 23:38	159.6	AX+	539.3	15.84
1	Spin Change	Ap 5	01/05/21 01:00	162.2	RAD	TBD	0.00
4	Ap. Axial	Ap 5	01/05/21 03:38	166.1	AX-	332.5	9.50
3	Att. Slew	Ap 5	01/05/21 18:00	190.8	AX	TBD	0.00
3	Spin Change	Ap 5	01/05/21 20:00	194.7	RAD	TBD	0.00
2	Ap. Axial	Ap 5	01/05/21 23:50	205.2	AX+	115.8	3.30
2	Spin Change	Ap 5	01/05/22 01:00	208.2	RAD	TBD	0.00
4	Drift Stop	Pg 6	01/05/25 00:20	349.4	AX-	55.0	1.57
1	Drift Stop	Pg 6	01/05/25 00:30	357.2	AX+	75.8	2.23
2	Drift Stop	Pg 6	01/05/25 00:40	3.9	AX+	10.6	0.30
3	Drift Stop	Pg 6	01/05/25 02:15	35.2	AX-	57.4	1.70
4	Start trim	Pg 8	01/05/29 18:34	349.6	AX-	0.46	0.013
1	Start trim	Pg 8	01/05/29 18:45	358.0	AX-	0.93	0.027
3	Start trim	Pg 8	01/05/29 18:59	338.8	AX-	0.06	0.002
2	Start trim	Pg 8	01/05/29 19:00	0.0	AX	0.0	0.0
1	Stop trim	Pg 10	01/06/03 13:02	0.0	AX	0.0	0.00
2	Stop trim	Pg 10	01/06/03 13:02	0.0	AX	0.0	0.00
4	Stop trim	Pg 10	01/06/03 13:03	0.0	AX	0.0	0.00
3	Stop trim	Pg 10	01/06/03 13:46	0.0	AX	0.0	0.00



2. Evolution of SAA

S/C	Initial Values 10/05	Radial Start	Radial End	Delta Radial	Prior Slew 21/05	Slew 21/05	Post Slew 21/05
1	95.33	95.57	95.39	-0.18	95.53	no	95.53
2	94.78	94.87	95.34	0.47	95.53	no	95.53
3	95.90	95.83	93.96	-1.87	93.90	yes	95.53
4	95.09	95.39	95.39	0.0	95.52	no	95.52

The constraints on the solar aspect angle are:

$$93.20 \text{ deg} \leq \text{SAA} \leq 96.20 \text{ deg}$$

SAA increases to a maximum of 95.95 deg on 01/06/14 after which it decreases to 93.50 deg on 01/08/06 and to 93.26 deg on 01/08/09.

Without the slew, the SAA of S/C 3 reduces to 93.52 deg on 01/06/06 and to 93.21 deg on 01/06/15.

3. Evolution of Spin Rate

S/C	Prior to Radial (10/05, rpm)	Post Radial (21/05, rpm)	Delta Spin Rate (rpm)
1	14.970	14.933	-0.037
2	14.915	14.753	-0.162
3	14.956	14.387	-0.569
4	14.955	14.950	-0.005

4. Fuel Consumption for Manoeuvre Sequence

ID	Fuel Before (kg)	Fuel Used (kg)	Fuel Left (kg)
S/C 1	60.78	2.99	57.79
S/C 2	59.94	2.04	57.90
S/C 3	62.47	4.62	57.85
S/C 4	58.86	1.07	57.79

5. Conclusions

Id	Description
1	The start of the manoeuvre sequence is delayed 3 revolutions.
2	The manoeuvre sequence is stretched by 2 revolutions: 1. a revolution is added between the ascending and descending radial manoeuvres. 2. a revolution is added between the descending radial manoeuvres and the apogee axial manoeuvres.
3	Stretching the manoeuvre sequence has changed the nature of the solution for S/C 2. S/C 2 has no drift start manoeuvre but a new apogee axial manoeuvre. Having three apogee axial manoeuvres allows the S/C 3 attitude slew to be conducted in balanced mode.
4	All other aspects of the manoeuvre sequence are as for the original sequence.

