

# Solar Orbiter Status

Solar Orbiter is presently undergoing re-assessment in ESA:

- Payload Integration Study  
(performed in industry, January-June 2004)
  - Main conclusion: **KEEP IT SIMPLE**
- ESTEC Concurrent Design Facility (CDF) Study  
(Update to the CDF study in 1999, 4 sessions, March 2004)
- Two Parallel System-level Assessment Studies  
(performed in industry, April-December 2004).
- Current launch date: **no earlier than Oct 2013** (subsequent Venus opportunity is May 2015)

# Status (contd)

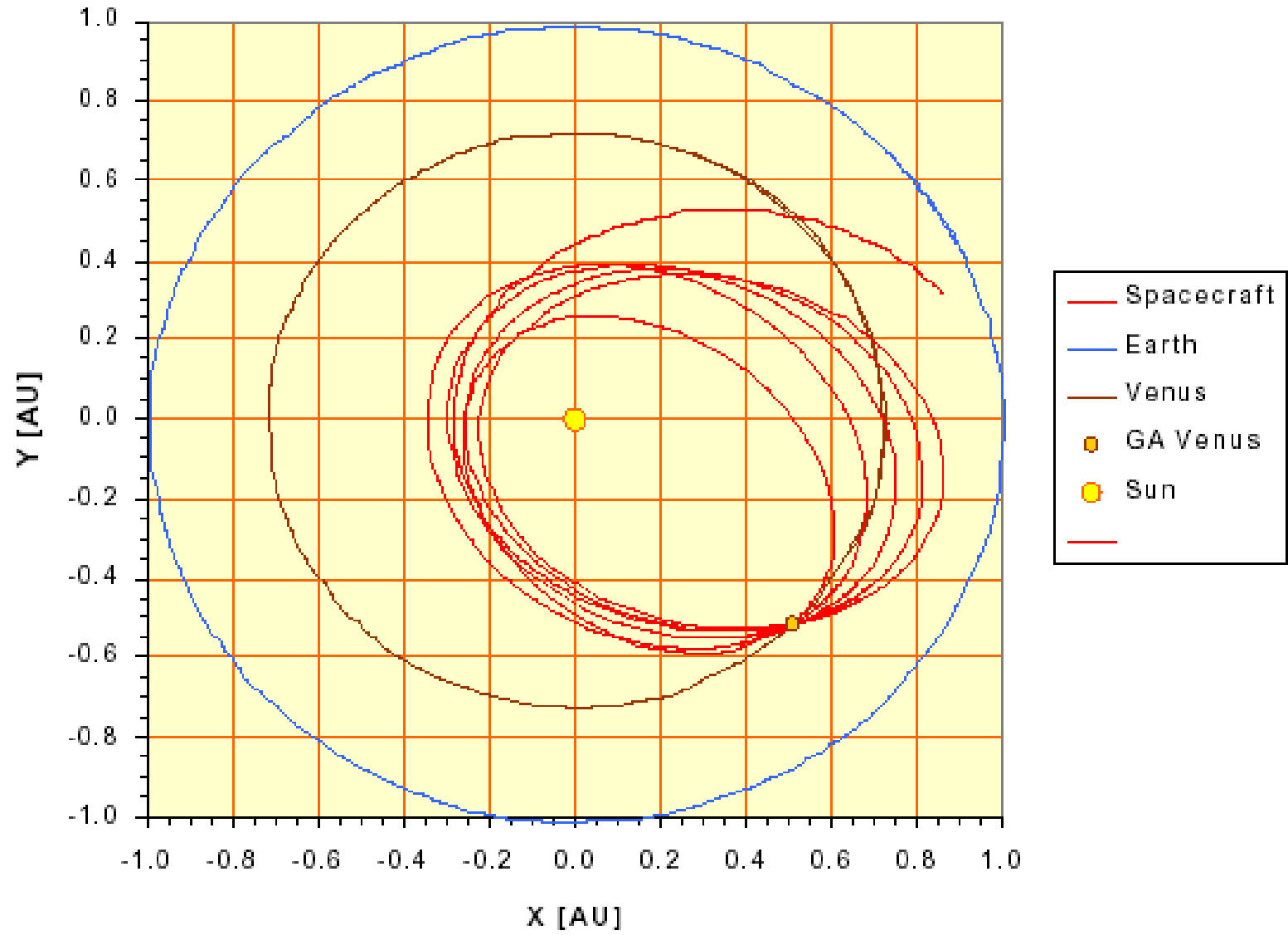
Change in launch date to Oct 2013 has impact on the mission profile:

- Minimum perihelion distance increases from 45 to 48 solar radii (0.210 to 0.222 AU)
- Maximum latitude decreases from 38° to 35°

Improvement in science operations strategy compared with earlier studies:

- Operation of HGA during perihelion passage appears to be feasible

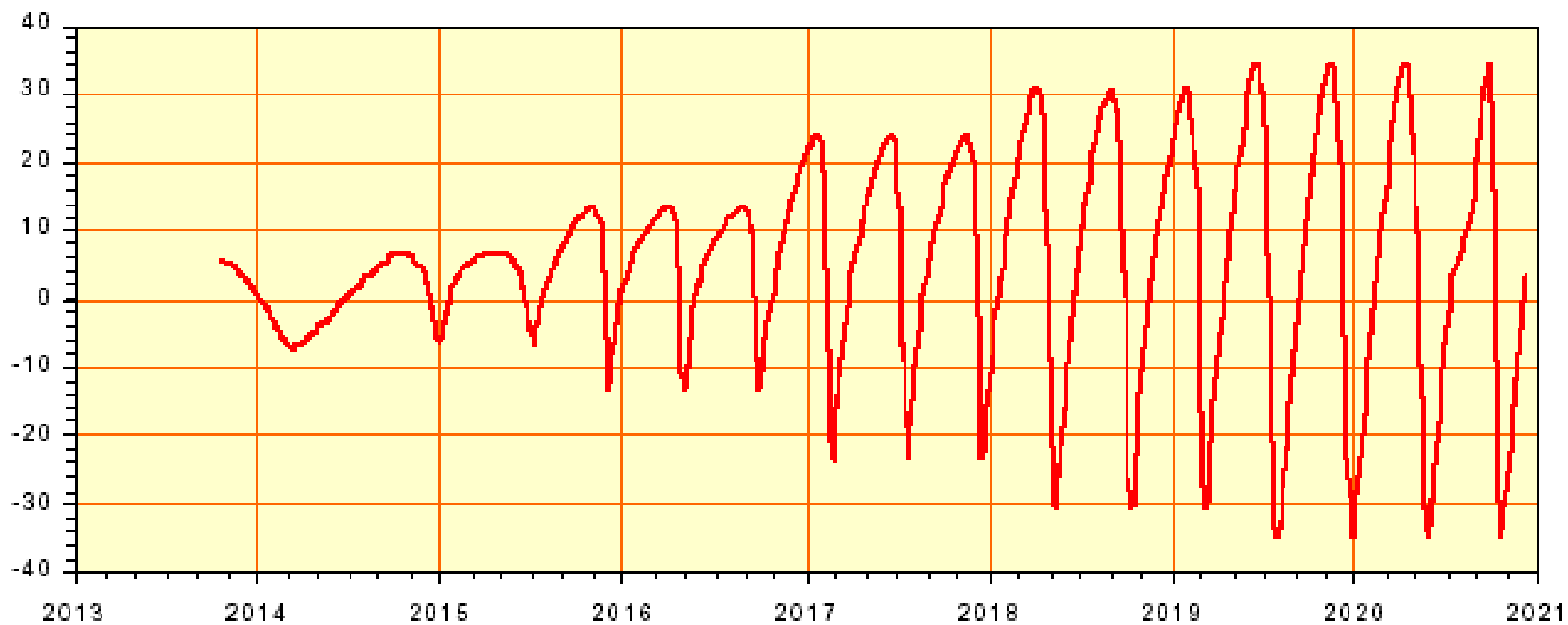
# Science phase: ecliptic plane trajectory



# Perihelion Passages

Date Perihelion	Flight time		Dist. to Sun		Rate [°/d]	
	Days	Years	[AU]	[SR]	/Earth	/Sun
2014-02-07	111	0.30	0.719	155	1.7	-12.4
2014-12-24	431	1.18	0.294	63	7.7	-6.5
2015-07-02	621	1.70	0.292	63	7.7	-6.5
2015-11-29	771	2.11	0.222	48	11.7	-2.5
2016-04-27	921	2.52	0.222	48	11.7	-2.5
2016-09-24	1070	2.93	0.222	48	11.7	-2.5
2017-02-17	1216	3.33	0.257	55	8.8	-5.4
2017-07-17	1366	3.74	0.257	55	8.8	-5.4
2017-12-13	1516	4.15	0.257	55	8.8	-5.4
2018-05-06	1659	4.54	0.307	66	6.3	-7.9
2018-10-03	1809	4.95	0.307	66	6.3	-7.9
2019-03-01	1959	5.36	0.307	66	6.3	-7.9
2019-07-17	2097	5.74	0.357	77	4.6	-9.6
2019-12-14	2246	6.15	0.357	77	4.6	-9.6
2020-05-12	2396	6.56	0.357	77	4.6	-9.6
2020-10-09	2546	6.97	0.248	53	8.3	-5.9

### Solar latitude [deg]



### Science phase: X-Z plane trajectory

