

## Titan Shadow Transits on Saturn, 2025

Based on Bob King's Online S&T Article posted May 14, 2025

Converted from UT to EDT (UT-4), all being AM; Astronomical Twilight and Sunrise are for 40°N-75°W

Date, 2025	Twilight Begins	Sunrise	Transit Starts	Mid-Transit	Transit Ends
May 15	3:54	5:45	5:49	8:39	11:44
May 31	3:35	5:34	5:05	8:12	10:53
June 16	3:28	5:31	4:21	7:24	10:00
July 2	3:34	5:36	3:40	6:35	9:03
July 18	3:51	5:46	3:00	5:44	8:05
August 3	4:13	6:01	2:25	4:52	7:04
August 19	4:36	6:16	1:52	4:01	6:00
September 4	4:56	6:31	1:25	3:09	4:50
September 20	5:15	6:46	1:09	2:20	3:34
October 6	5:32	7:02	--	1:32	--

These transit times represent the shadow being fully on Saturn's disc after ingress or before egress. The final transit on October 6 is along the northern limb, so at mid-transit, it's just shy of being fully on the disc. Times are from WinJUPOS.

Note that Titan has an orbital period of about 16 days (more precisely, 15.945 days per Wikipedia), so the shadow transits recur at 16-day intervals within this date range. Saturn reaches opposition on September 21, 2025, at 1:46 am EDT.