



[Home \(/\)](#) / [Tools \(/tools/\)](#) / Small-Body Database Lookup

# Small-Body Database Lookup



[show instructions](#)

## C/2021 F1 (Lemmon-PANSTARRS)

**Classification:** Comet

**SPKID:** 1003834

**Related Links:** [Ephemeris \(/horizons/app.html#/?spk=1003834\)](#)

[Orbit Viewer](#) [\[show\]](#)

[Orbit Parameters](#) [\[hide\]](#)

### Osculating Orbital Elements

Epoch 2459413.5 (2021-Jul-18.0) TDB			
Reference: <b>JPL 9</b> (heliocentric <b>IAU76/J2000</b> ecliptic)			
Element	Value	Uncertainty (1-sigma)	Units
<u>e</u>	0.9958421168768592	2.5039E-6	
<u>a</u>	239.4307787060568	.14449	<u>au</u>
<u>q</u>	0.9955251939423744	1.5515E-6	<u>au</u>
<u>i</u>	107.3188084075283	2.9508E-5	<u>deg</u>
<u>node</u>	203.4468700786883	1.6186E-5	<u>deg</u>
<u>peri</u>	146.8168001379853	.00013402	<u>deg</u>
<u>M</u>	359.9300688626377	6.3328E-5	<u>deg</u>
<u>tp</u>	2459676.367251818967	9.6326E-5	<u>TDB</u>
<u>period</u>	1353219.956433483	1225.	<u>d</u>
	3704.914322884279	3.3539e+0	<u>y</u>
<u>n</u>	0.0002660321393343977	2.4082E-7	<u>deg/d</u>
<u>Q</u>	477.8660322181713	.28838	<u>au</u>

### Miscellaneous Details

<u>solution date</u>	2022-Apr-11 23:22:27
<u># obs. used (total)</u>	493
<u>data-arc span</u>	374 days (1.02 years)
<u>first obs. used</u>	2021-03-19
<u>last obs. used</u>	2022-03-28
<u>planetary ephem.</u>	DE441

<b>SB-pert. ephem.</b>	SB441-N16
<b>norm. resid. RMS</b>	.50318
<b>source</b>	JPL
<b>producer</b>	Otto Matic
<b>Earth MOID</b>	.0835449 au
<b>Jupiter MOID</b>	1.36334 au
<b>T_jup</b>	-0.346

**Physical Parameters** [hide]

Parameter	Value	Units	Sigma	Reference	Notes
<b>[M1] comet total magnitude</b>	13.3		0.8	9	<b>2 parameter fit from 366 observations, a...</b>
<b>[K1] comet total magnitude slope</b>	7.75			9	autocmod 3.0a

[expand table contents](#)

SSD  
Solar System Dynamics

[Site Map \(/sitemap.html\)](#)[Privacy](#)[Image Policy](#)[Contact Us \(/contact/\)](#)

Site Manager: Ryan Park

Site Design: Alan B. Chamberlin

URS Clearance: CL#21-4165