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Research Paper

Study of the Orbit of Planet Venus (Revised)

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Orbital properties of Venus arestudied.
(Kindly note that all the positions mentioned are based on Tropical Zodiac, except when specified)
It is observed that the Synodic cycle of Venus is almost repeated with a periodicity of approximately 1247 years.

This is evident from below inferior Conjunction data-

Date	Zodiac	Position
27 Dec -417 (Julian) 18:00	Capricorn	1°19'46
18 Dec 830 (Julian) 19:30	Capricorn	1°23'08
22 Dec 2077 14:41	Capricorn	1°23'09
23 Dec 3324 08:13	Capricorn	1°36'10
24 Dec 4571 03:04	Capricorn	2°15'48

Data of Heliocentric Positionof Venus for Year 2025 & 2026 are analysed to understand Eccentricity of Venus.
ResultantDaily Degree Movement & Orbital Axis of Venus for Yr 2026 are listed below-

Venus Position Heliocentric (Degree)	Venus Daily Degree Movement	Venus Orbital Axis KM
1	1.590816406	1086353910
32	1.599319763	1083462066
62	1.607483	1080707507
91	1.616666612	1077633610
122	1.623809306	1075260890
151	1.625510204	1074698178
182	1.618027347	1077180378
211	1.605782449	1081279599
241	1.592517143	1085773667
272	1.583333408	1088917995
301	1.580952245	1089737727
331	1.583333265	1088918044

Orbital axis of Venus is Calculated from Multiplication ofSemimajor Axis with Root of Average Daily Degree (Average of Perihelion & Aphelion) &its divisionby Root of respective Daily Degree Movement.

Venus	Position Heliocentric (Degree)	Daily Degree Movement	Root of Daily Degree	Orbital Axis (KM)
Semi Major Axis		**1.603401412**	**1.266254876**	**1082082147**
Perihelion (Yr 2025)	147	1.625510204		
Perihelion (Yr 2026)	146	1.626190817		
Perihelion Average	**146.5**	**1.625850511**	**1.275088433**	**1074585700**
Aphelion (Yr 2025)	299	1.580952381		
Aphelion (Yr 2026)	299	1.580952245		
Aphelion Average	**299**	**1.580952313**	**1.257359262**	**1089737704**

Eccentricity is calculated by using below formula;
e = Radius (Aphelion – Perihelion)/ Radius (Aphelion + Perihelion)
e = (1089737704 – 1074585700) / (1089737704 + 1074585700)

Also, Eccentricity is calculated by using below formula;
e = Angular Movement [Root (Perihelion) – Root (Aphelion)] Divided by
Angular Movement [Root (Perihelion) + Root (Aphelion)]
e = 1.275088433 – 1.257359262 / 1.275088433 + 1.257359262
Eccentricity of Venus = 0.0070008

Data of Heliocentric position of Venus (after interval of every 2922 days)are analysed to understand Orbital Period of Venus, as below-

Sl	Date	Venus Position Helio Centric	Degree Cumulative	Degree Moved	Days per Orbit (360 Degree)
1	18-01-2012	30.01666667	0.016666667		
2	18-01-2020	31.53333333	4681.533333	4681.516667	224.6964
3	18-01-2028	33.08333333	9363.083333	4681.55	224.6948
4	18-01-2036	34.61666667	14044.61667	4681.533333	224.6956
5	18-01-2044	36.15	18726.15	4681.533333	224.6956
6	18-01-2052	37.68333333	23407.68333	4681.533333	224.6956
7	18-01-2060	39.21666667	28089.21667	4681.533333	224.6956
8	18-01-2068	40.76666667	32770.76667	4681.55	224.6948
9	18-01-2076	42.28333333	37452.28333	4681.516667	224.6964
				Average Days	**224.6956**

Orbital period of Venus is 224.6956 days

Data Sources:
1. www.astro.com
2. https://en.wikipedia.org

I hereby deeply regret & apologize for Posting of incorrect data in 1st version of this Paper named "**Study of the Orbit of Planet Venus"** submitted on 08th March 2026.