

## Reading Passage

The book, *Worlds in Collision*, asserted that around 3,500 years ago the planet Venus was somehow ejected from the planet Jupiter as a comet. Comet Venus then started wandering through the solar system. Its gravitational field pushed other planets out of their orbits or changed their rotation.

Velikovsky attributed many of the disasters recorded in ancient times to this strange interaction the Earth had with Venus. Material that fell from Venus's comet tail into Earth's atmosphere caused the plagues visited upon Egypt as recorded in the Bible. "Plague is throughout the land. Blood is everywhere," cried the Egyptian Ipuwer. "Men shrink from tasting, human beings thirst after water..." According to Velikovsky's thinking, a fine rusty ferruginous dust from the comet's tail filtered down on the globe turning everything red.

As Earth went deeper into the comet's tail the dust turned to small stones and a hail of gravel pelted the Earth: "...there was hail, and fire mingled in with hail, very grievous, such as there was none like it in all the land of Egypt since it became a nation," the Bible reads.

Velikovsky also credits the manna that nourished the nation of Israel during their forty-year wandering through the desert in Exodus to carbohydrates that fell to Earth from comet Venus's tail.

As Venus grew closer, the gravity of the planet caused the Earth to rock on its axis or stop and start its rotation. Earthquakes broke out and vital waves engulfed mountain ranges. Velikovsky speculates that this was maybe when the legendary city of [Atlantis](#) sunk beneath the waves.

The changes in rotation, according to Velikovsky, caused a prolonged darkness over the Earth. His research discovered that in Iran scholars recorded a night lasting three days followed by a day lasting three days. The Chinese recorded the same phenomena. The Bible speaks of a day when the sun stood still to allow Joshua to finish a battle.

In what way does the information in the lecture contradict the information in the reading passage?

## Lecture

**Carl Sagan**, one of Velikovsky's most ardent critics, argued that if Venus had been ejected out of Jupiter, the required amount of energy would have heated Venus so much the planet/comet would have vaporized.

Sagan also argued that if Venus had been on an extremely eccentric orbit as Velikovsky suggests, it would be highly unlikely that it could have changed its orbit so radically in the few thousand years to the nearly circular orbit that the planet enjoys today.

(In fact Venus is much too massive with too strong a gravity to ever have had a visible tail as Velikovsky claims).

Venusian geology doesn't seem to support a young Venus, either.

Even in the realm of anthropology there seems to be problems with the Velikovsky theories. According to *Worlds in Collision* Venus did not exist before about 1,500 B.C.. In his book Velikovsky says that neither the Hindus or the Babylonians recorded the planet Venus. However **Peter Huber**, from the Edgennossische Technische Hochschule, Zurich, reports that in Cuneiform texts stretching as far back as 3,000 B.C., Venus is mentioned as the star connected with the rising and setting sun. Clear evidence that it occupied an orbit in between the Earth and the sun as it does today. Also in records from 1580 to 1560 B.C. observations were made of Venus that clearly puts it in an orbit identical with the planet's current orbit.

Isaac Asimov, who referred to Velikovsky's theories as a type of "exoheresy" wrote: "For one thing Velikfovskianism, and indeed, any exoheretical view that becomes prominent enough to force itself on science, acts to puncture scientific complacency-and that is good. An exoheresy may cause scientists to bestir themselves for the purpose of reexamining the bases of their beliefs, even if only to gather firm and logical reasons for the rejection of the exoheresy-and that is good too. An exoheresy may cause scientific activity which, in a serendipitous fashion, may uncover something worthwhile that has nothing to do with the exoheresy-and that is very good, if it happens."

When Velikovsky first wrote *Worlds in Collision*, many scientists rejected it not only because of reasoned arguments, but because the idea that the solar system could change or that events in space could have a profound effect on life on Earth was unsettling. Since that time science has accepted that asteroid impacts have led to massive extinctions on Earth (just ask the dinosaurs).