

Exact date of the Fall of Troy: 1190 BCE

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Summary

A combination of historical sources, radiocarbon dates and ice core measurements provide an exact date for the end of the Trojan War, plus two strikes from satellites of Mars that ended the Bronze Age:

1190 \pm 0 BC in late spring, end of Trojan War in Finland

1185 \pm 0 BC in October, strike across the Mediterranean

1179 \pm 0 BC in October, strike at Denmark and Greenland

1185 BC Strike

Shortly after the Trojan War, a cluster of extraterrestrial objects impacted a swath across the Mediterranean Sea from the Middle East to the Po Valley (Figure 1). Anything beneath the strike was incinerated by heat so intense that it melted bricks and fused stone walls into a single mass.

Figure 1: Trail of destruction that ended the Bronze Age.



The date of this strike is 1185 BC based upon the last three correspondences from Cyprus and Ugarit to Carchemish, whose writers all perished in 1185. Estimates from many other sites range from 1190 to 1180 BC (Table 1).

Table 1: Partial list of cities incinerated in 1185 BC.

Carchemish, 1185, destroyed by fire, the last royal letters dated 1185 BC.

Ugarit, 1196-1179, cataclysmic fire, dated by artifacts

Anatolia

Hattusa, 1180, fire, thick layers of charred wood and burnt bricks, in the most fortified city in the Bronze Age

Alaca Hoyuk, fiery catastrophe

Misat, disastrous fire

Fraktin, disastrous fire

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Karaoglan, terrible destruction
Tarsis, destruction by fire
Mersin, destruction by fire
But not every Anatolian city succumbed
Tarhuntassa, south of the Anatolian plateau
Karhoyuk, east of the plateau
Kargarnish, Milid and Aleppo, further east
Troy level VIIa, 1190-1180 by pottery, devastating inferno and earthquake, bodies in the streets. No one survived to migrate anywhere, so this was not Homer's Troy.
Pylos, 1190-1180 by pottery, conflagration of great intensity, walls were fused into shapeless masses, stones converted to lime, clay bricks turned into fine burnt powder.
Mycenae 1190-1185, simultaneous cataclysmic fire, terrace wall melted and turned into a concrete-like mass.
Tiryns, 1190-1185, simultaneous with Mycenae, intense fire
Iolcos, 1190, burned
Po Valley - The entire Terramara community of 150-200,000 people living in over 100 palisaded towns on man-made islands in the Po River and its tributaries were incinerated; all that remained were hills of black earth, hence terra mare. RC date of 1200 \pm 50 deserves a more accurate measurement.

Migration from Troy

Troy, according to Homer and interpreted by Vinci (1995), was in southwest Finland near Toija. After the war, Trojans either migrated or were enslaved. Some built ships, like Aeneas, but most crossed the frozen Baltic to Poland, then worked their way south to Turkey, Greece and Italy.

Aeneas reached the Mediterranean in the December of the sixth year.

In the spring of the seventh year, Aeneas circled Sicily, was blown over to Carthage in a violent storm attributed to Juno, mother of Mars, and returned to Italy in the fall. (Virgil, Aeneid, 1.121-191)

Antenor's ships with Eneti or Heneti reached the Veneto region before Aeneas reached Carthage. (Livy, Ab Urbe Condita, 1.1)

These two histories constrain the Fall of Troy to seven years before the destruction of 1185 BC. Amazingly, there is an historical record tied to a calendar whose account falls within this range.

1190 BC Fall of Troy

A Frisian manuscript called Oera Linda Book states that in the year 1005 of their calendar, Odysseus arrived in Texcel aboard three great ships loaded with plunder from Troy. These great ocean-going vessels had not been seen for twelve years.

The Frisian calendar began 3449 years before 1256 AD, that is, in 2193 BC. In that calamitous year, an impact created the Rio Cuarto craters in Argentina, Doggerland sank in the North Sea, the Netherlands flooded, the Nile dried up, the Hongsan Culture in China collapsed, the Akkadian culture collapsed and the Mohenjo Daro culture collapsed.

Putting these two pieces together:

Troy fell in late spring of 1190 BC (2193-1005+12-10)

Aeneas arrived at Sicily in December of 1184 BC (1190-6), a year after the Mediterranean strike in autumn of 1185 BC.

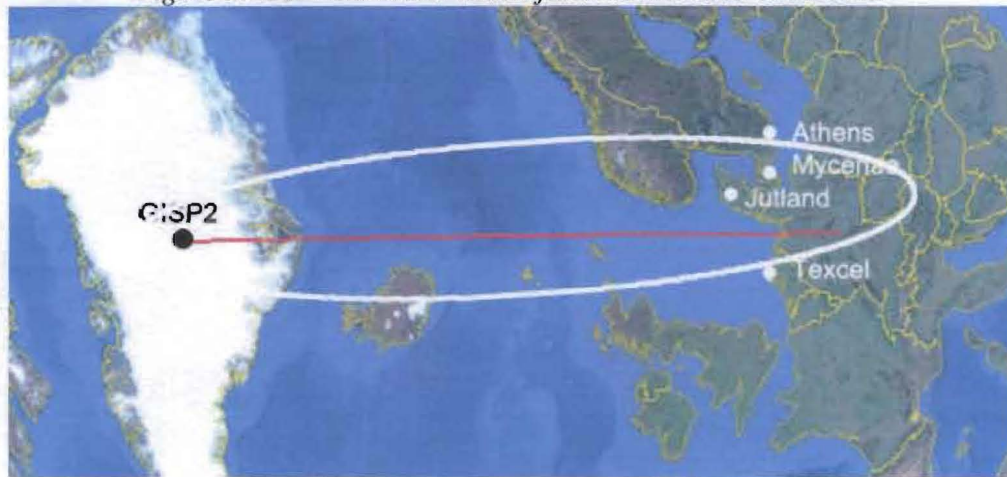
Baltic Strike

The last entry in Oera Linda Boek was written in early spring of 1180 BC, the tenth year after the war. It says Odysseus returned to the Danish Islands bearing a prized lamp from Kaylips, who ruled Zeeland from a great fortified city at Walhalagara (Middelburg). It was prophesized that the lamp would make him king of the Danish Islands, but his boat capsized in a storm and he lost the lamp. Then the book goes silent, not resuming for 500 years, by which time a new language was on the ascendancy, Frisian.

As a consequence of killing the suitors, Ulysses was exiled for ten years, which banishment may have saved his life.

Three years later, in 1177 BC, a confederation of Sea Peoples attacked Ramses III in ocean-going ships without oars. When asked why, a captive replied that their lands had been devastated by fire and flood (Figure 2). Some of their helmets and swords match Bronze Age finds from Denmark. Therefore, a strike in the Baltic occurred between 1180 and 1178 BC.

Figure 2: A second comet struck from Denmark to Greenland.



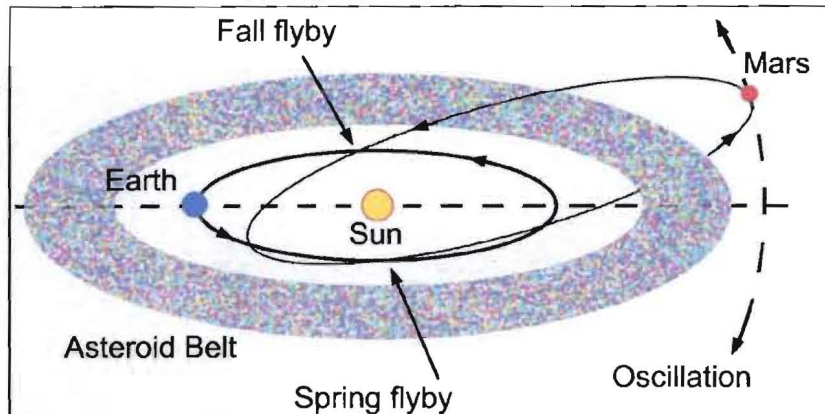
1179 BC strike as a result of a flyby of Mars

David Patten (1990, 1996, 1999) documented a sequence of flybys of Mars that ended in 701 BC. These occurred during odd years in October; then, fifty years later, on even years in March.

Mars had an elliptical, two-year orbit in resonance with Earth and Jupiter. At its furthest extent, Mars passed through the Asteroid Belt, where it acquired asteroids that circled around like little moons (Figure 3). Whenever it passed close to Earth, there was a chance Earth would collide with one or more of these moons. These collisions occurred within ten years of the closest flyby year (Harris 2017).

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Figure 3: Elliptical orbit of Mars passed through the Asteroid Belt, where it picked up satellites with which to bombard Earth.



Since the year 1185 BC is an odd year, then the Baltic strike must also have been an odd year. Only one year is possible, 1179 BC.

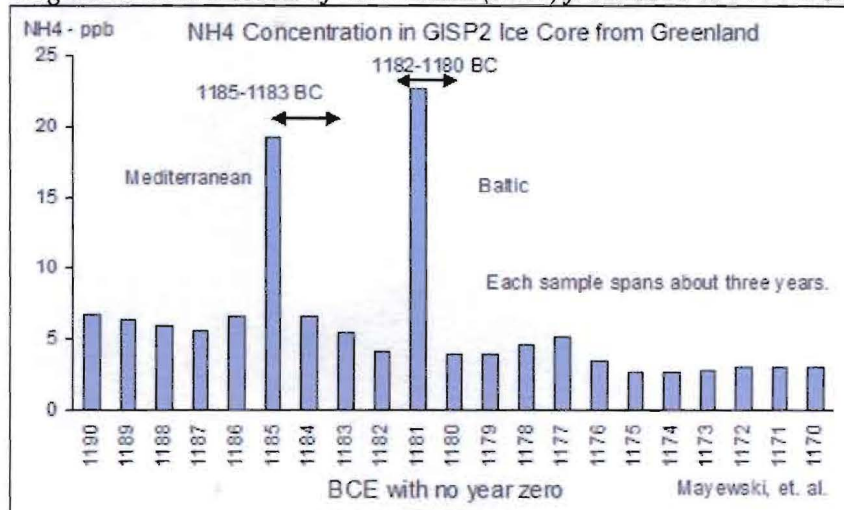
1179 BC, the only odd year between 1180 and 1178 BC.

Greenland Ice Core

Greenland's ice sheet captures trace elements in layers of snow laid down each year. Comet strikes leave a trace element ammonium, NH_4 , first recognized by Mike Baillie (2008).

Dated layers of GISP2 are surprisingly accurate, cross-checked against tree rings at regular intervals. Mayewski (1997) made ion measurements from lengths about 42 cm long that he melted, which typically contained one to three years of compressed snow. A spike is easily recognized by subtracting the background level, but the exact year is concealed. Keeping this range in mind, GISP2 shows two spikes in the region of interest; one spike matches 1185 BC, but the other does not match 1179 BC (Figure 4). Instead of a spike at 1179, it has a spike at 1181. What is wrong?

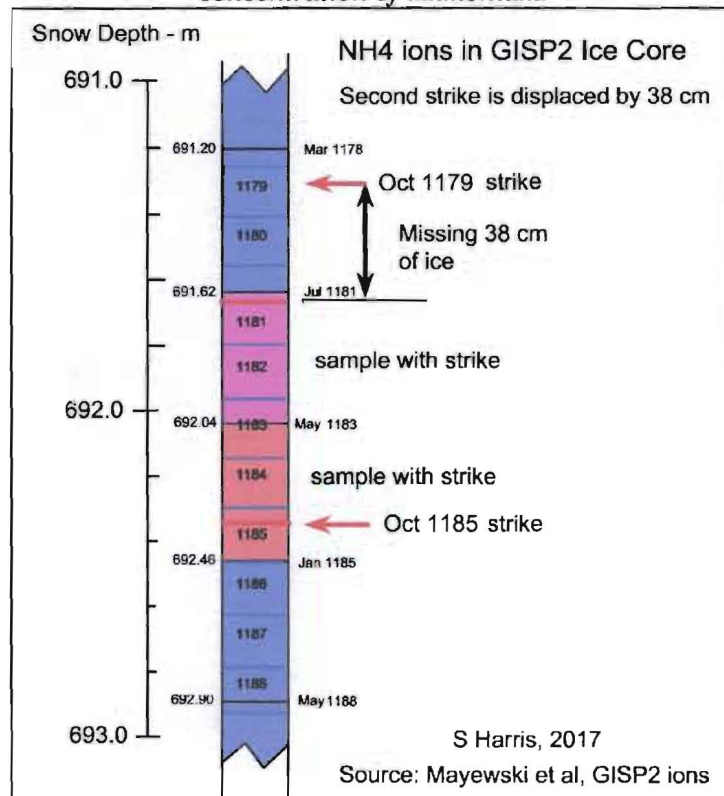
Figure 4: GISP2 levels of ammonium (NH_4) from 1170 to 1190 BC.



A close look at the ice core during this interval offers a possible solution: the ice core lacks 38 cm of ice! Something melted ice from the years 1181-1179, with the result that the sample with an ammonium spike appears to shift backward by two years. Therefore:

- 1190 \pm 0 BC in late spring, end of Trojan War
- 1185 \pm 0 BC in autumn, strike from Mars in the Mediterranean
- 1179 \pm 0 BC in autumn, strike from Mars in the Baltic

Figure 5: GISP2 ice core is missing 38 cm of ice just below the layer of snow with a high concentration of ammonium.



Homer's epitaph to Trojans and Achaeans

This not only solves the problem of an incorrect date for the spike, but offers a mechanism for the great storm that Homer described after the War. Part of the impact struck Greenland and evaporated the ice. The volume of lost ice would be around 45 cubic miles in the form of steam, expanding and rushing high into the stratosphere, an engine to produce a monster hurricane. Any impacts in the North Sea would have added to the storm. Once begun, the hurricane continued for nine days. Homer sung an epitaph to both Trojans and Achaeans, "a race of men who seemed half god, half mortal". Iliad 12.16-40. Translation Robert Fagles.

But once the best of the Trojan captains fell,
and many Achaeans died as well, while some survived,
and Priam's high walls were stormed in the tenth year,
and the Argives set sail for the native land they loved –
then, at last, Poseidon and Lord Apollo launched their plan
to smash the rampart, flinging into it all the rivers' fury.

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All that flow from the crests of Ida down to breaking surf,
the Rhesus and the Heptaporus, Caresus and the Rhodius,
Grenicus and Aesepus, and the shining god Scamander,
and Simois' tides where tons of oxhide shields
and horned helmets tumbled deep in the river silt,
and a race of men who seemed half god, half mortal.

The channels of all those rivers – Apollo swung them round into one mouth and nine days hurled
their flood against the wall,
and Zeus came raining down, cloudburst powering cloudburst,
the faster to wash the rampart out to open sea.
The Earth-shaker himself, trident locked in his grip,
led the way, rocking loose, sweeping up in his breakers
all the bastion's strong supports of logs and stones
the Achaeans prized in place with grueling labor.

He made all smooth along the rip of the Hellespont
and piled the endless beaches deep in sand again,
and once he had leveled the Argives' mighty wall,
he turned the rivers flowing back in their beds again,
where their fresh clear tides had run since time began.

Bibliography

Baillie, Mike (2008), Chemical signature of the Tunguska Event in Greenland Ice, Greenland International Conference: 100 years since Tunguska Phenomenon: past, present and future; Moscow, p. 80. Baillie correlated peak NH₄ with several comet strikes, including the 1918 Tunguska impact in Russia. The peak occurred within a month of the strike.

Carchemish letters in 1185 BC.

Letter from Suppiluliuma II (1207-1185), the last king of Hatti, to Ramses III

Letter RS 20.18 of Eshwarra (1200-1185), prime minister of Cyprus, to Ammurapi II of Ugarit

Letter RS 20.238 of Ammurapi II (1210-1185), the last king of Ugarit, to the Viceroy of Carchemish.

Harris, Stuart (2017); Mars Flybys: 7137-701 BC, published on the web. A proposed sequence of recurring flybys beginning with an initial event in 7137 BC; based upon spikes of ammonium in GISP2 ice core.

Livius, Titus, *Ab Urbe Condita*, 1.1 "Antenor sailed into the furthest part of the Adriatic, accompanied by a number of Eneians who had been driven from Paphlagonia by a revolution; after losing their king Pylaemenes before Troy, they were looking for a settlement and a leader. The combined forces of Eneians and Trojans defeated the Euganei, who dwelt between the sea and the Alps, and occupied their land. The place where they disembarked was called Troy, and the name was extended to the surrounding district; the whole nation was called Veneti."

Mayewski, Paul A. et al (1997); GISP2 Ions, Deep (D) Core; published on line at NOAA site, raw data with years BP.

<ftp://ftp.ncdc.noaa.gov/pub/data/paleo/icecore/greenland/summit/gisp2/chem/iond.txt>

Oera Linda Boek, translated into Dutch by J. C. Ottema, translated into English by William R. Sandbach in 1876. Published on-line at Project Gutenberg. Ulysses appears in the chapter entitled, "In the year one thousand and five after Atland was submerged, this was inscribed on the eastern wall of Fryasburgt."

Patten, Donald W.; 1990; The 108-year cyclicism of ancient catastrophes, Pacific Meridian Publishing Co., Seattle, republished 1994. Patten proposes a 108-year cycle of near collisions between Earth and Mars with many corroborating details that explain much of Velikovsky's 'Worlds in Collision'.

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Patten, Donald; 1999; The periodic cyclicism of ancient catastrophes; Proceedings of the conference New Scenarios on the Evolution of the Solar System and Consequences on History of Earth and Man; Milano and Bergamo, June 7-9, Spedicato and Notarpietro, eds., pp 110-127. This long paper summarizes his book with extended descriptions of 14 catastrophes, and drops his proposed mechanism for pole shifts.

Vinci, Felice (1996), Homer in the Baltic, republished as The Baltic origins of Homer's epic tales (2005). He identified over 100 places in sequence that matched the List of Ships in Book 2 of the Iliad, which circled the Baltic Sea beginning north of Stockholm. Troy was near Toija in southeast Finland.

Virgil, The Aeneid (19 BCE), 121-191. Aeneas sails back and forth in the Baltic, landing at places with identical names as those in the Mediterranean. Early in the seventh year he gives up on the Baltic and sails to the Mediterranean. Just past Sicily the fleet is caught in a terrible storm, which he attributes to Juno, the mother of Mars. The ships are scattered, and he winds up on the African coast with just seven ships, believing the rest are lost. He is guided to Carthage by Venus wrapped in a heavy mist and arrives in the summer of the seventh year. The remainder of the fleet is already there, and after provisioning themselves, they depart for Italy in the fall.

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