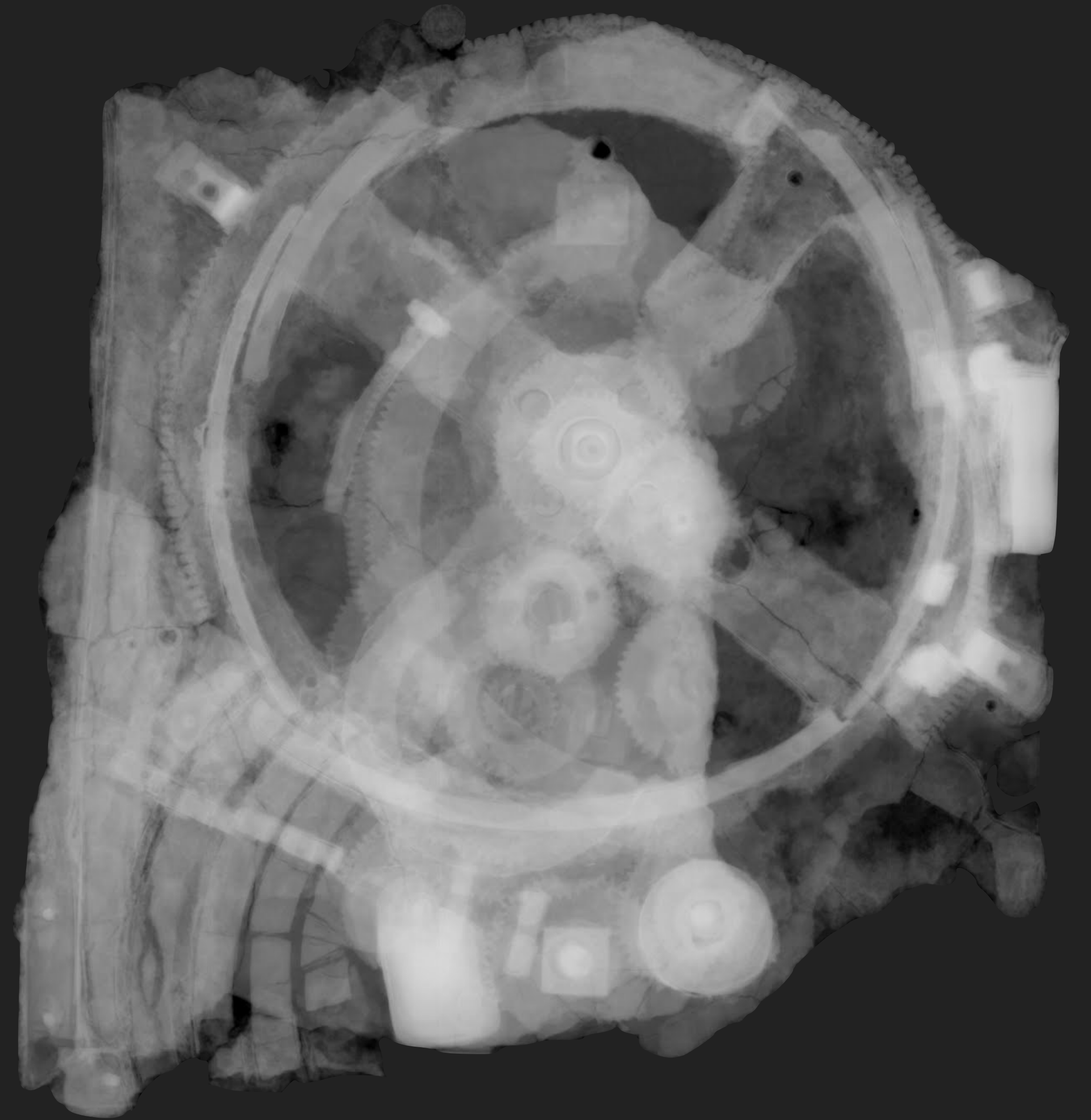


NOW:

---

**TIME**

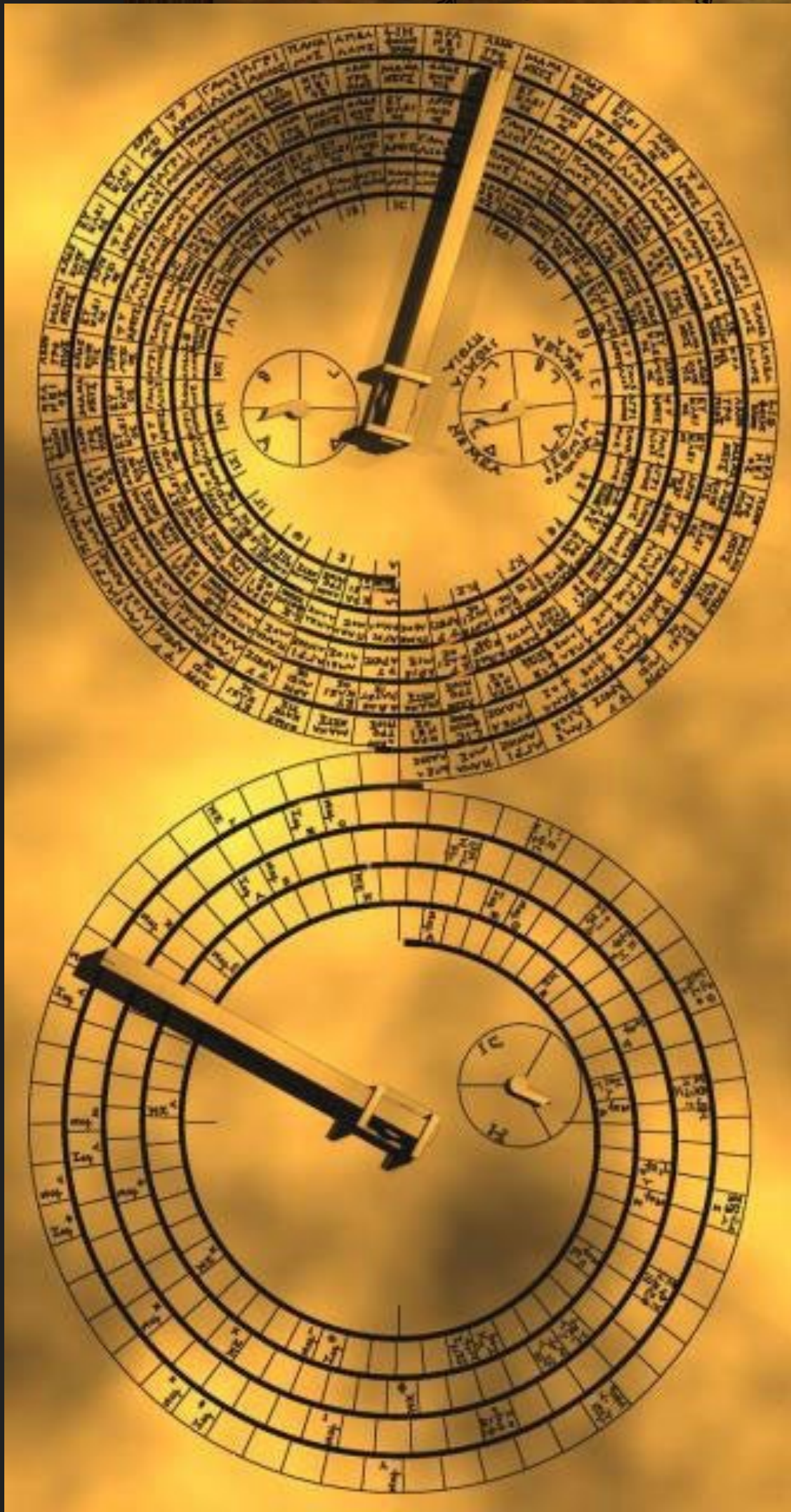




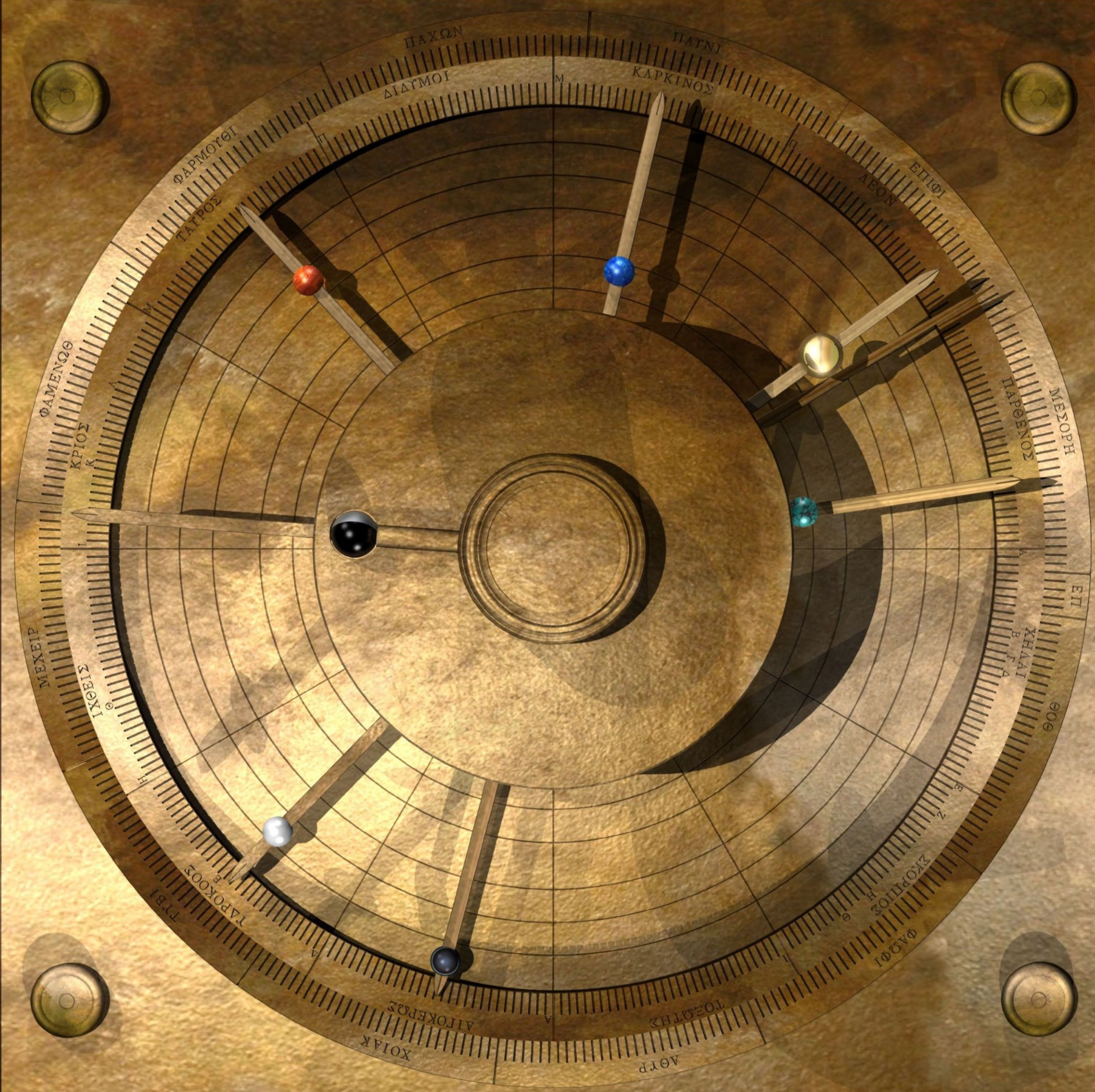
<https://en.wikipedia.org/>

# ANTIKYTHERA MECHANISM

~ 100 BCE



ΣΑΡΚΤΟ ΥΡΟΣ ΔΥΝΕΙ ΕΣΙΟΣ

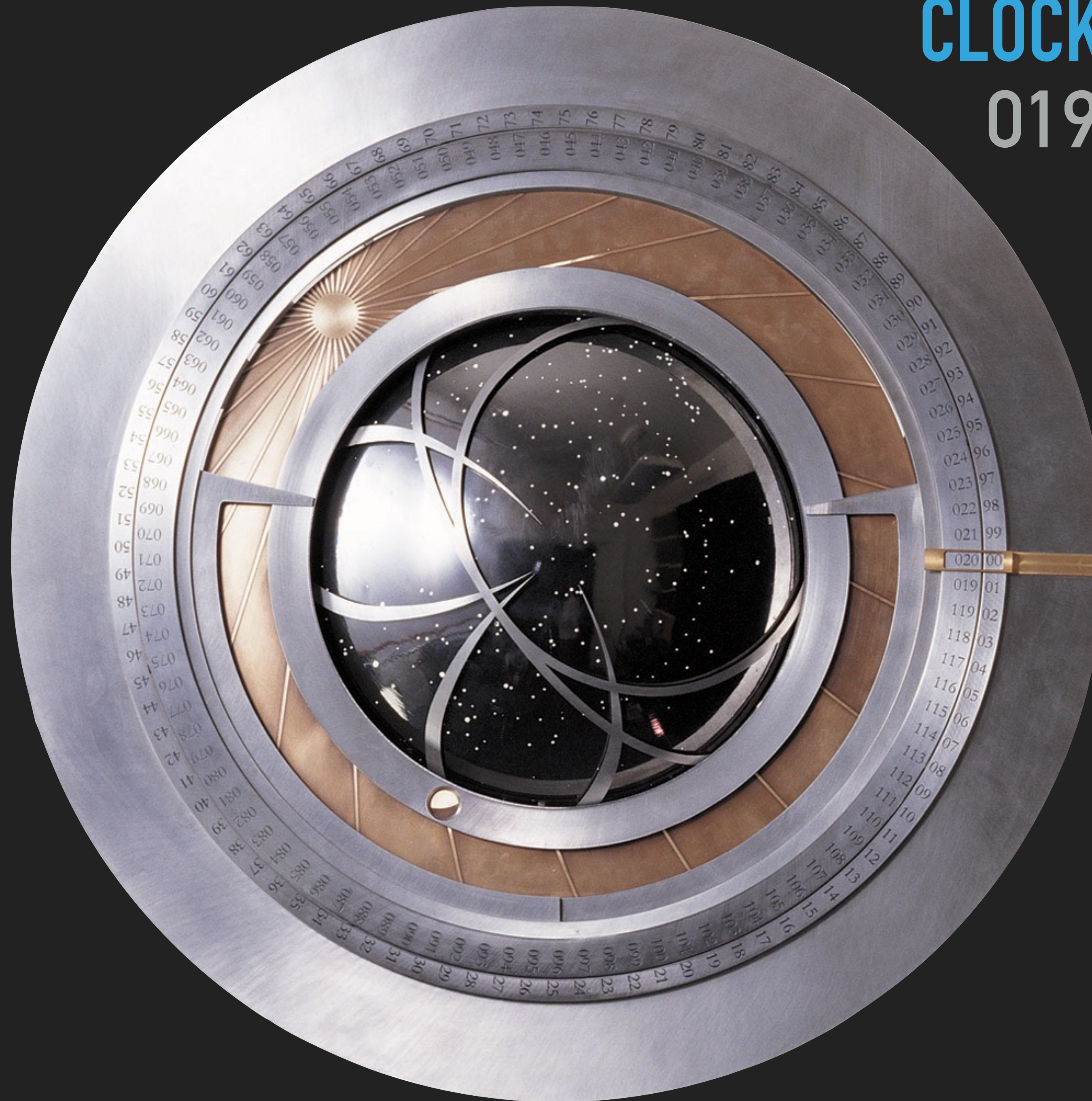


Α ΧΗΛΙΑΡΧΟΝΤΑΙ ΕΠΙΤΕΛΛΕΙΝ Α Μ ΚΑΡΚΙΝΟΣ ΑΡΧΕΤΑΙ  
 Β ΣΜΕΡΙΑ ΦΙΝΟΤΣΡ Ι Ν Η Α ΤΡΟΤΑΙ ΟΕΡΙΝΑΙ  
 Γ ΑΝΑΤΕΜΟΥΣΙΝ ΕΣΤΕΡΙΟΜΙΑΝ ΣΡΙΣΝΑΝΤΕΛΛΕΙΕΣΙΟΣ  
 Δ ΑΝΑΤΕΛΛΕΙ ΕΣΤΕΡΙΑΙΑ Η Ξ ΥΩΝΑΝΤΕΛΛΕΙΕΣΙΟΣ  
 Ε ΤΕΜΕΙΣ Ο ΑΕ ΤΟΣ ΔΥΝΕΙΕΣΙΟΣ  
 Η ΣΚΟΡΤΙΟΣ ΑΡΧΕΤΑΙΑΝΑΤΕΛΛΕΙΝ Α Τ ΛΕΩΝΑΡΧΕΤΑΙ ΕΠΙΤΕΛΛΕΙΝ  
 Θ Ρ Σ Τ Ι Υ Φ Χ  
 Ι ΤΟΣ Θ ΤΗΣ ΑΡΧΕΤΑΙ ΕΠΙΤΕΛΛΕΙΝ Α Υ Φ Χ

BACK

# CLOCK of the LONG NOW

01997, ONGOING



A Story That Lasts 10,000 Years (featuring Neil Gaiman)

X  
LONG NOW



WHY TIME AT ITP?

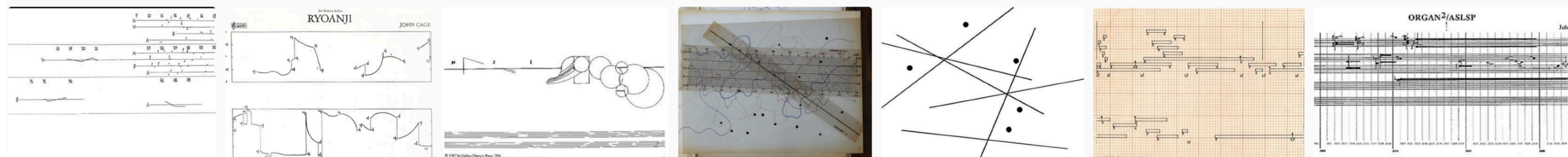
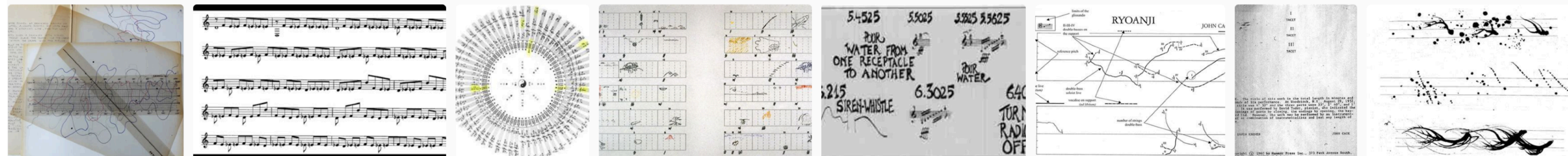
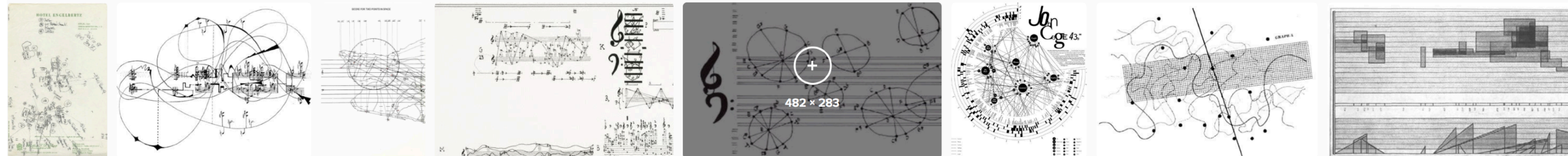
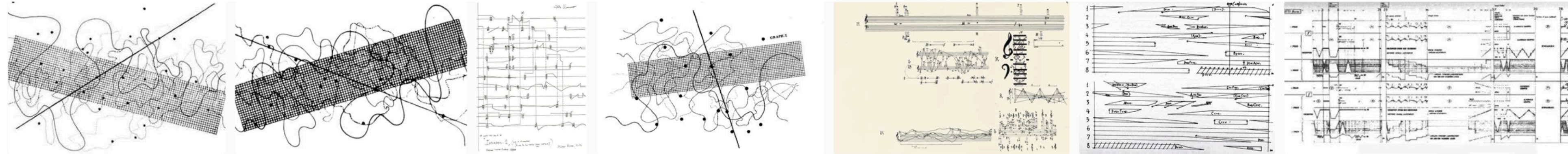
**PHILOSOPHY**

Language, history, politics, life...

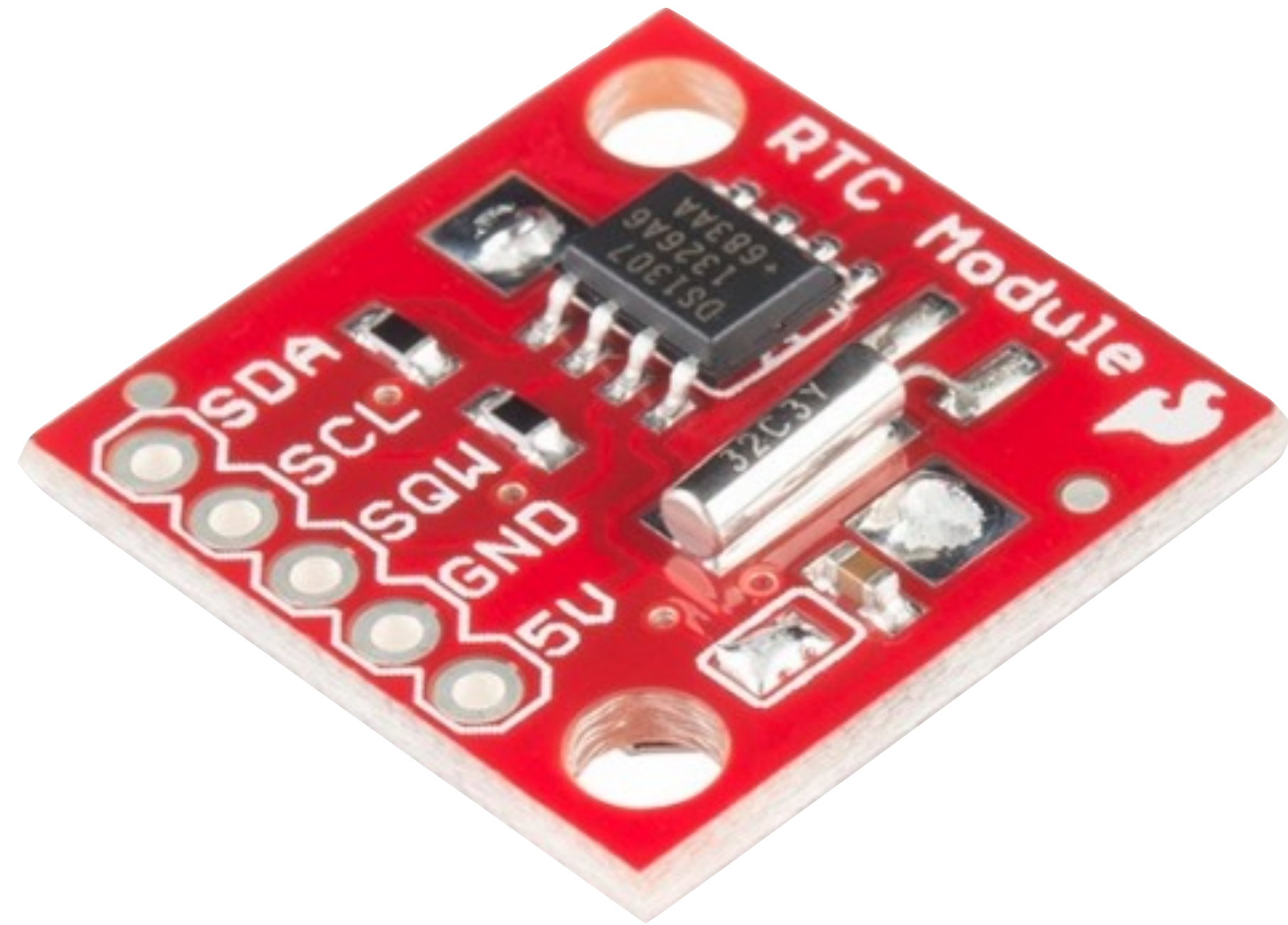
**+**

**SCIENCE**

Modeling nature, engineering, code, design...







Sparkfun RTC Breakout boards

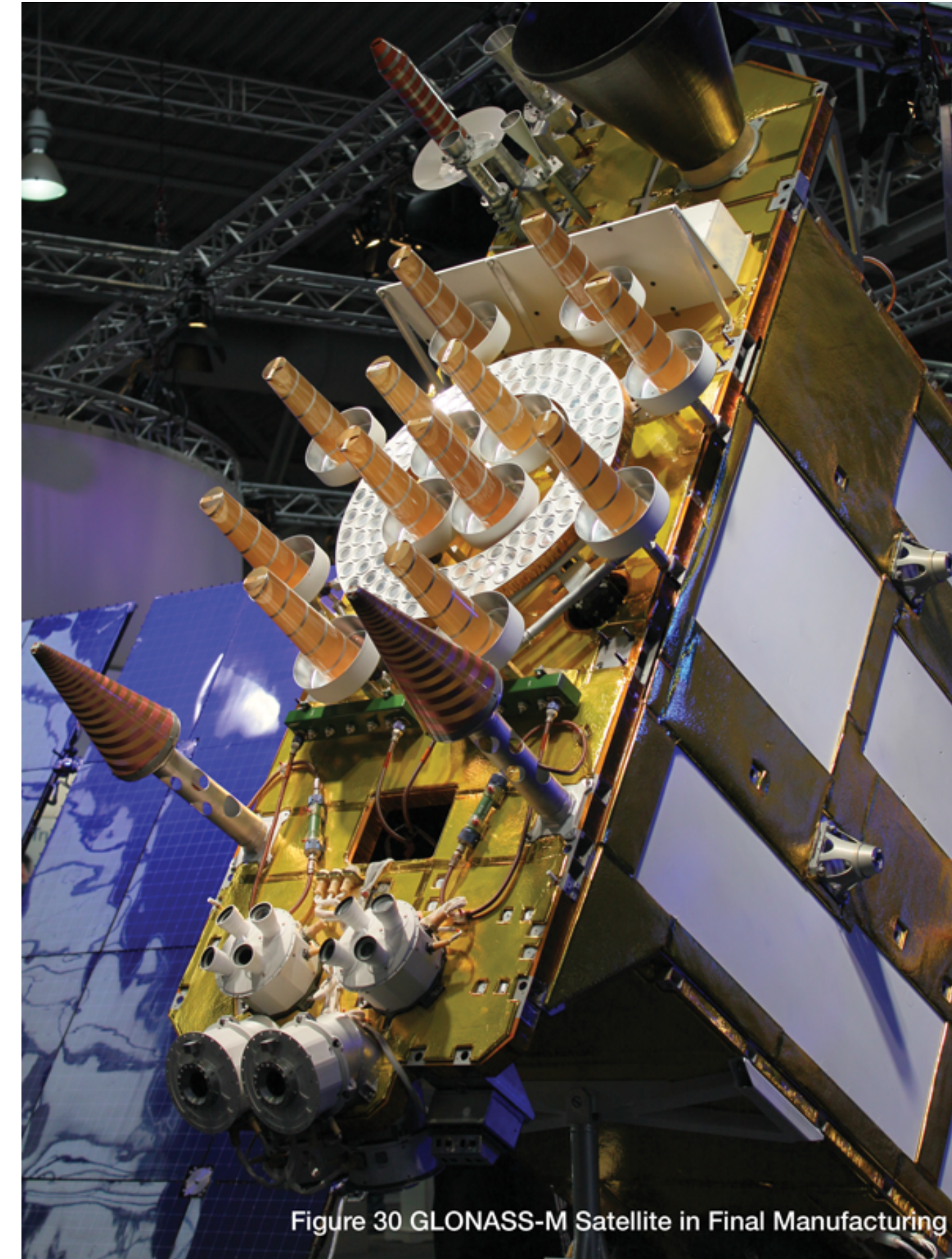


Figure 30 GLONASS-M Satellite in Final Manufacturing

Russian GLONASS satellite with atomic clock



**gnomon** (n.)

"vertical shaft that tells time by the shadow it casts" ... from Latin *gnomon*, from Greek *gnōmōn* "indicator (of a sundial), carpenter's rule" ... "one that discerns or examines, interpreter, expert," from *gignōskein* "to come to know," **from Proto-Indo-European root \*gno- "to know."**

**ARJUNA**

**“As rivers flow into the ocean, all the warriors of this world are passing into your fiery jaws; all creatures rush to their destruction like moths to a flame. You lap the worlds into your burning mouths and swallow them... Tell me who you are, O Lord of terrible form. I bow before you; have mercy! I want to know who you are, you who existed before all creation. Your nature and workings confound me.”**

**KRISHNA**

**"I AM TIME, DESTROYER OF ALL."**

**BHAGAVAD GITA**

# TAOSI GNOMON

Xiangfen 襄汾, Shanxi Province

2300 - 1900 BCE

Oldest gnomon, oldest observatory

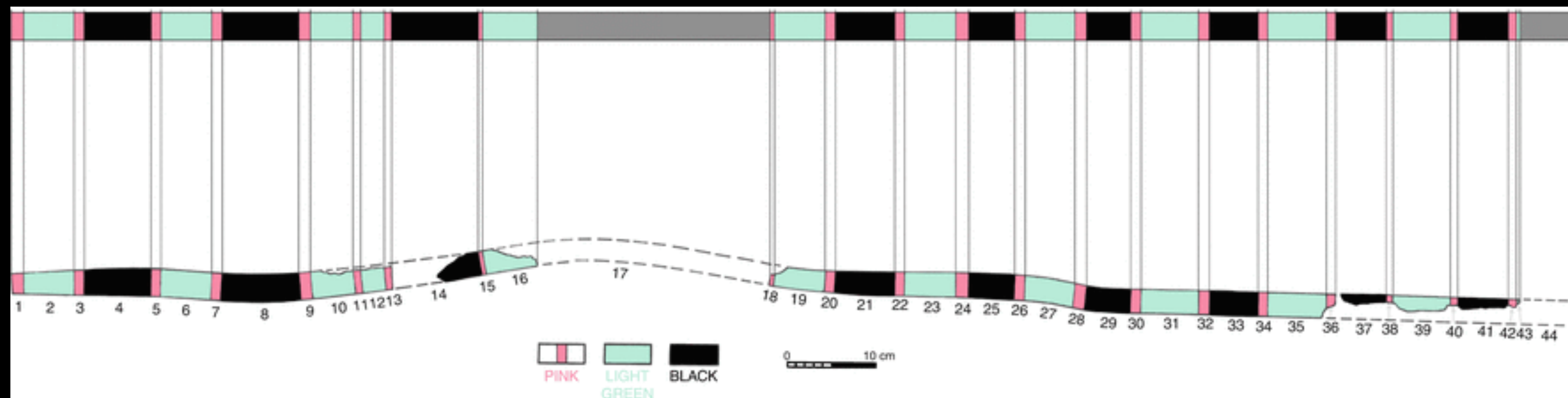


# TAOSI GNOMON

Xiangfen 襄汾, Shanxi Province

2300 - 1900 BCE

Oldest gnomon, oldest observatory



# TAOSI GNOMON

Xiangfen 襄汾, Shanxi Province

2300 - 1900 BCE

Oldest gnomon, oldest observatory





# EGYPTIAN SUNDIAL

13th century BCE  
"temporary hours"







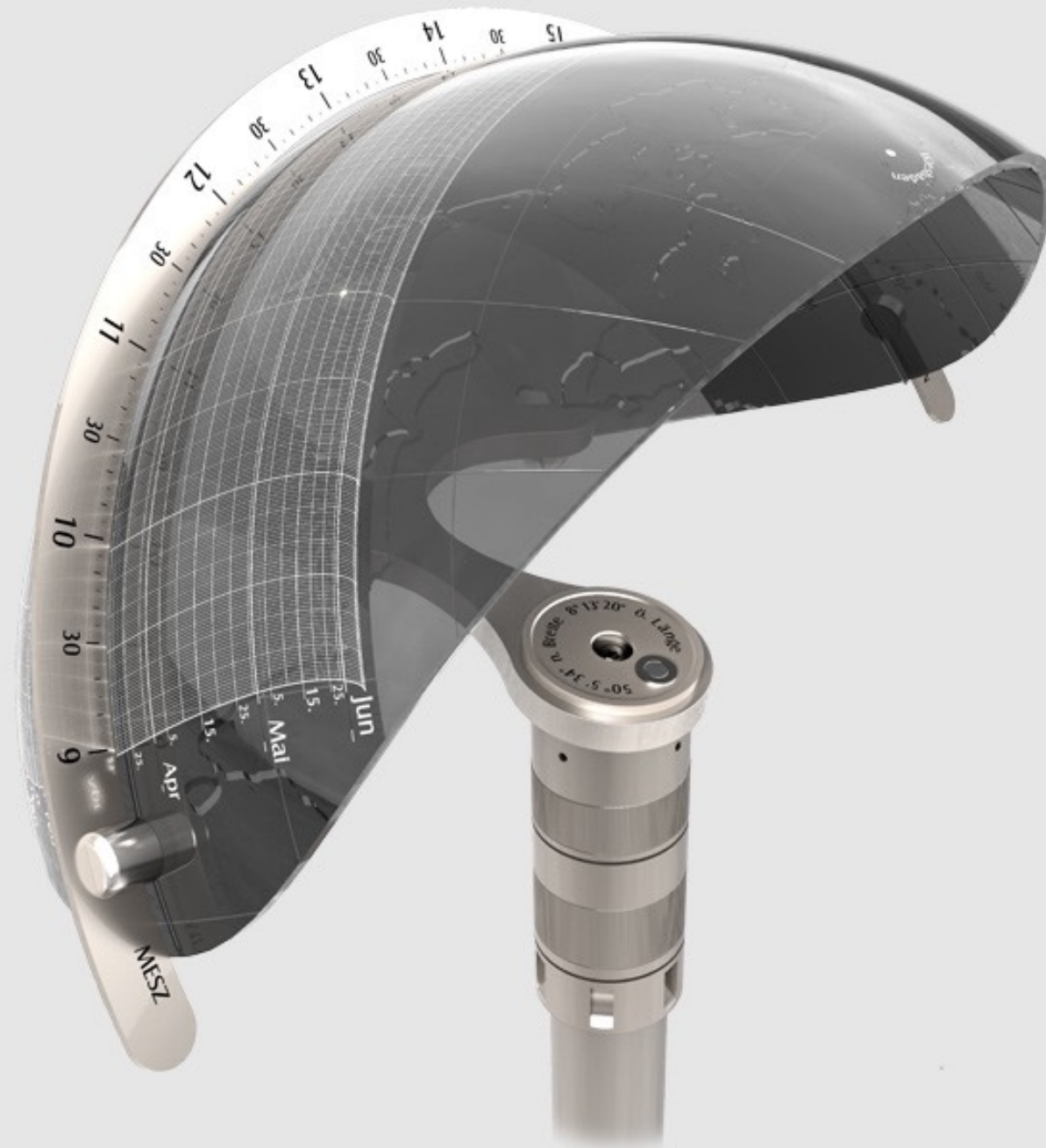


# JANTAR MANTAR, JAIPUR



**JANTAR MANTAR, JAIPUR**

**HELIOS Subsolaris**  
lichtpunktgenau



**SOLAR RING**  
400 year success story



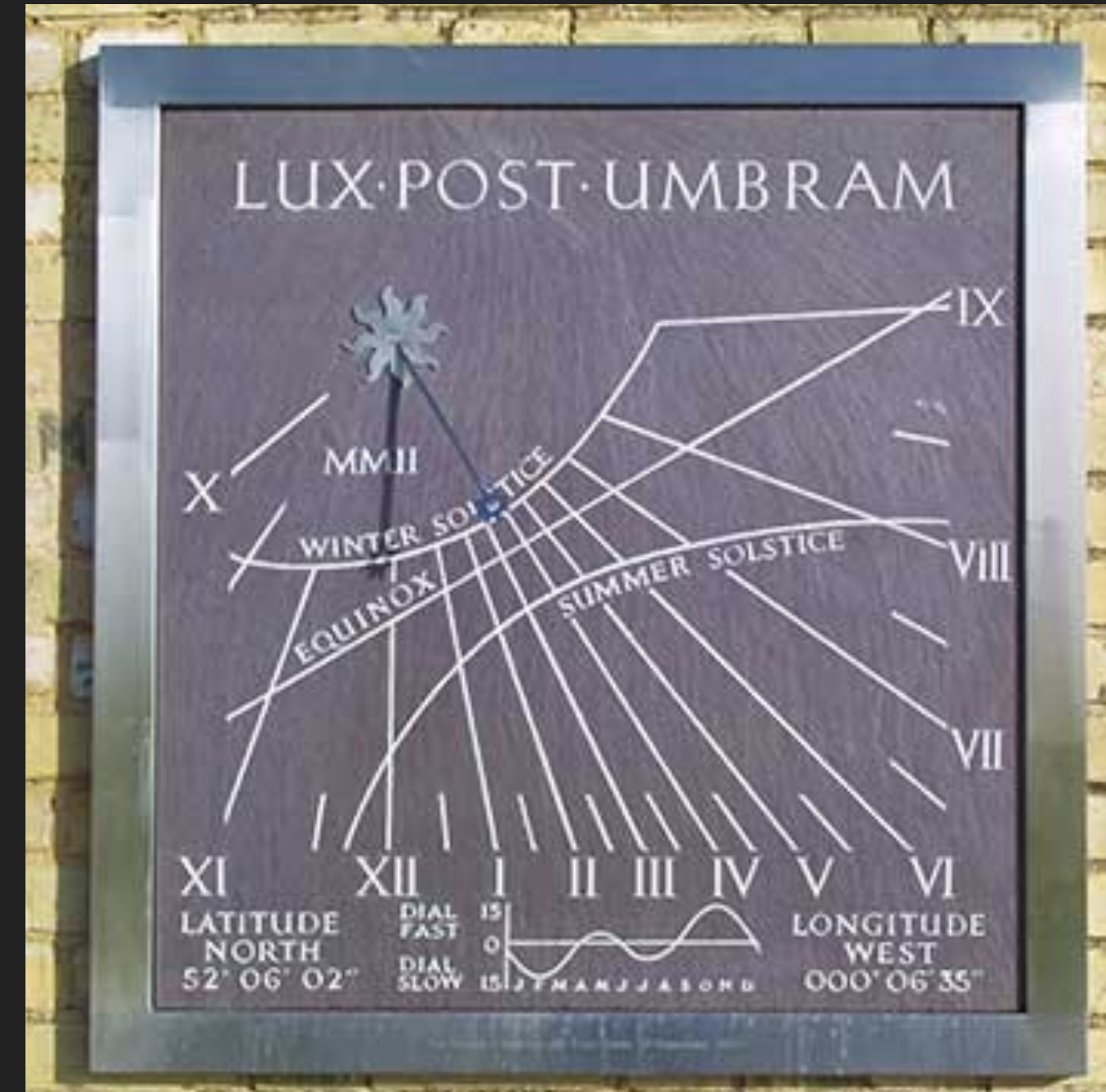
<https://www.helios-sonnenuhren.de/en/helios-subsolaris>  
<https://www.helios-sonnenuhren.de/en/helios-solar-ring>

# HORIZONTAL



[sundialsoc.org.uk](http://sundialsoc.org.uk)

# VERTICAL



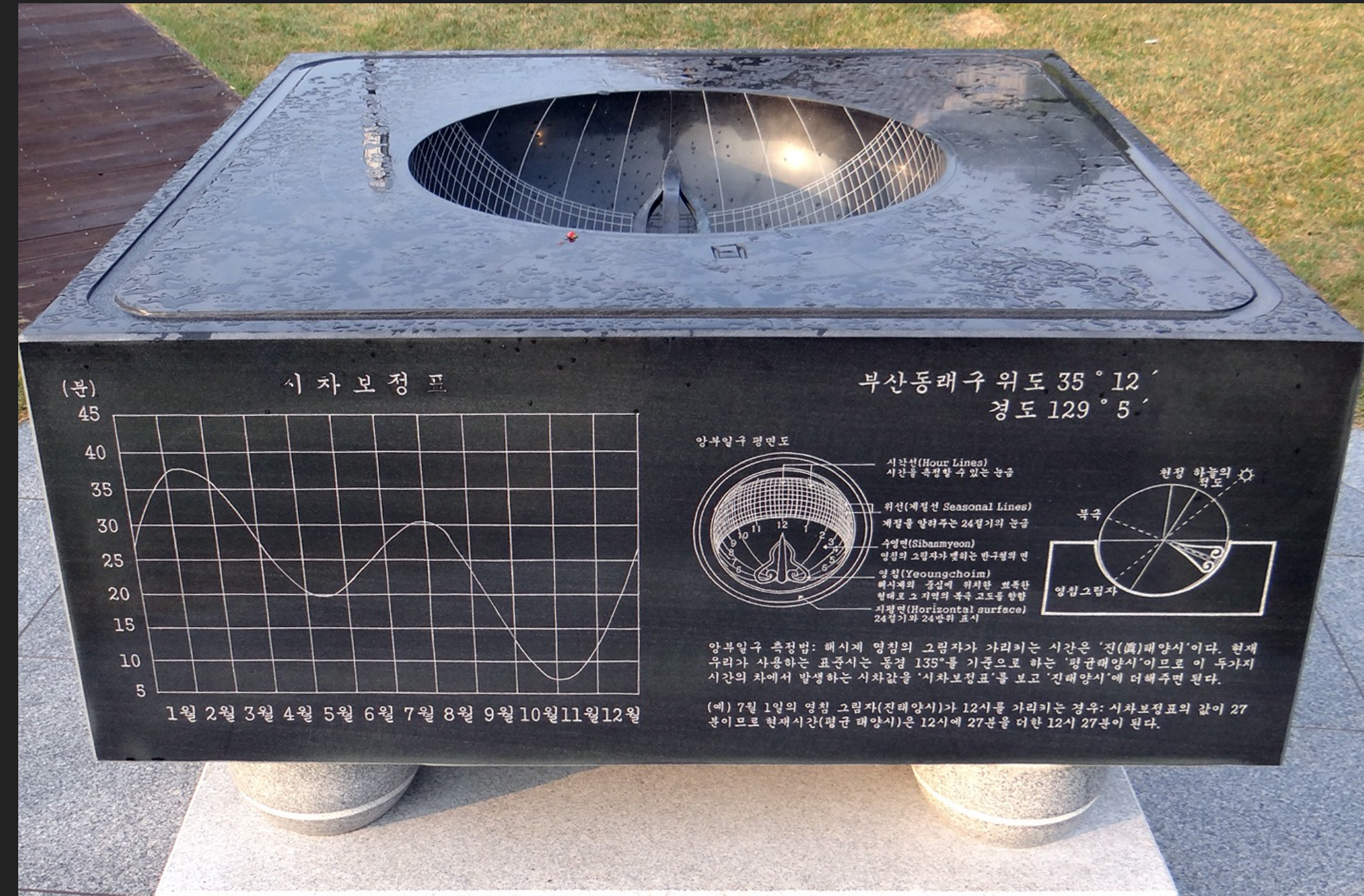
<https://www.davidharber.co.uk/>

# EQUITORIAL



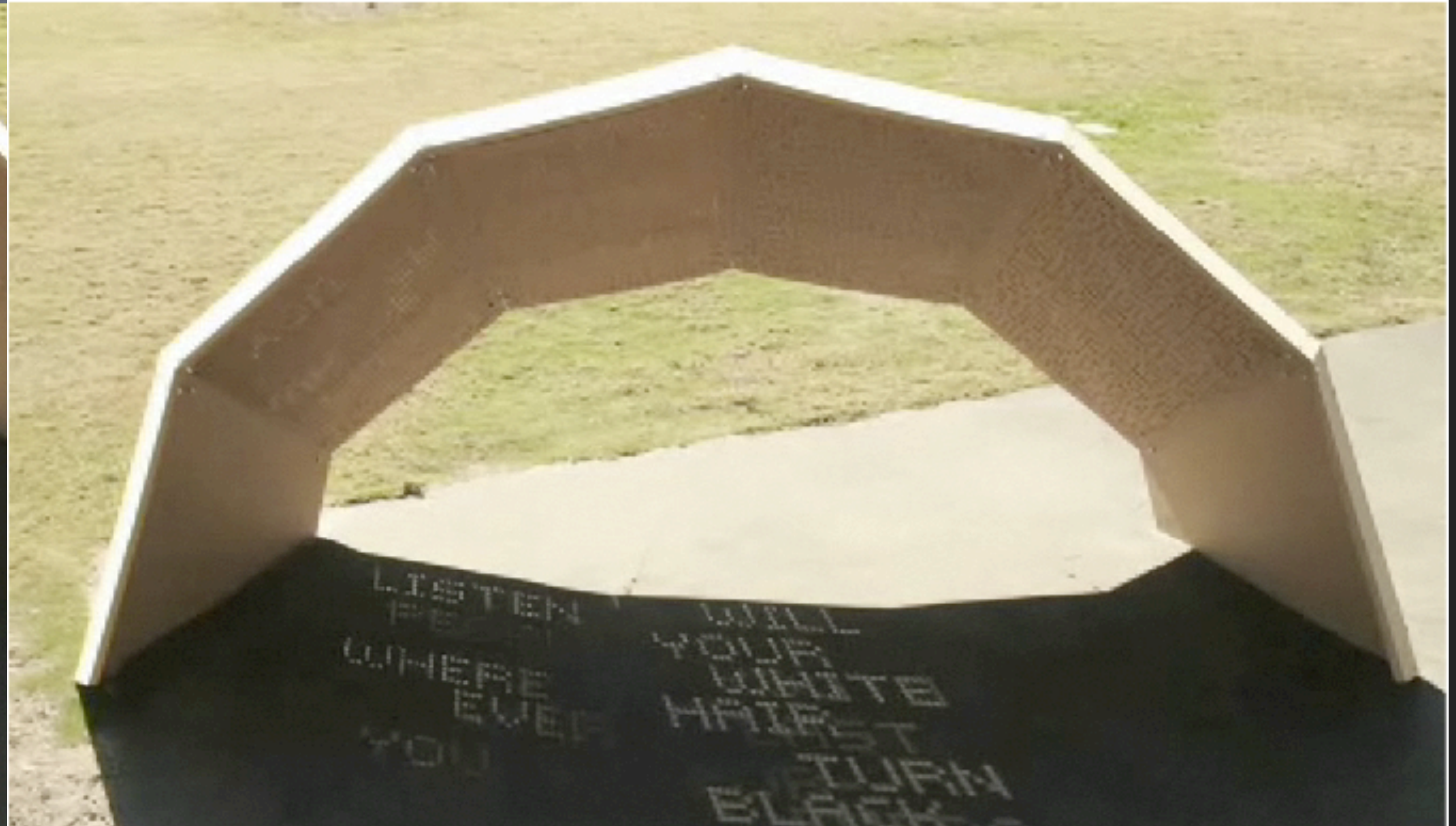
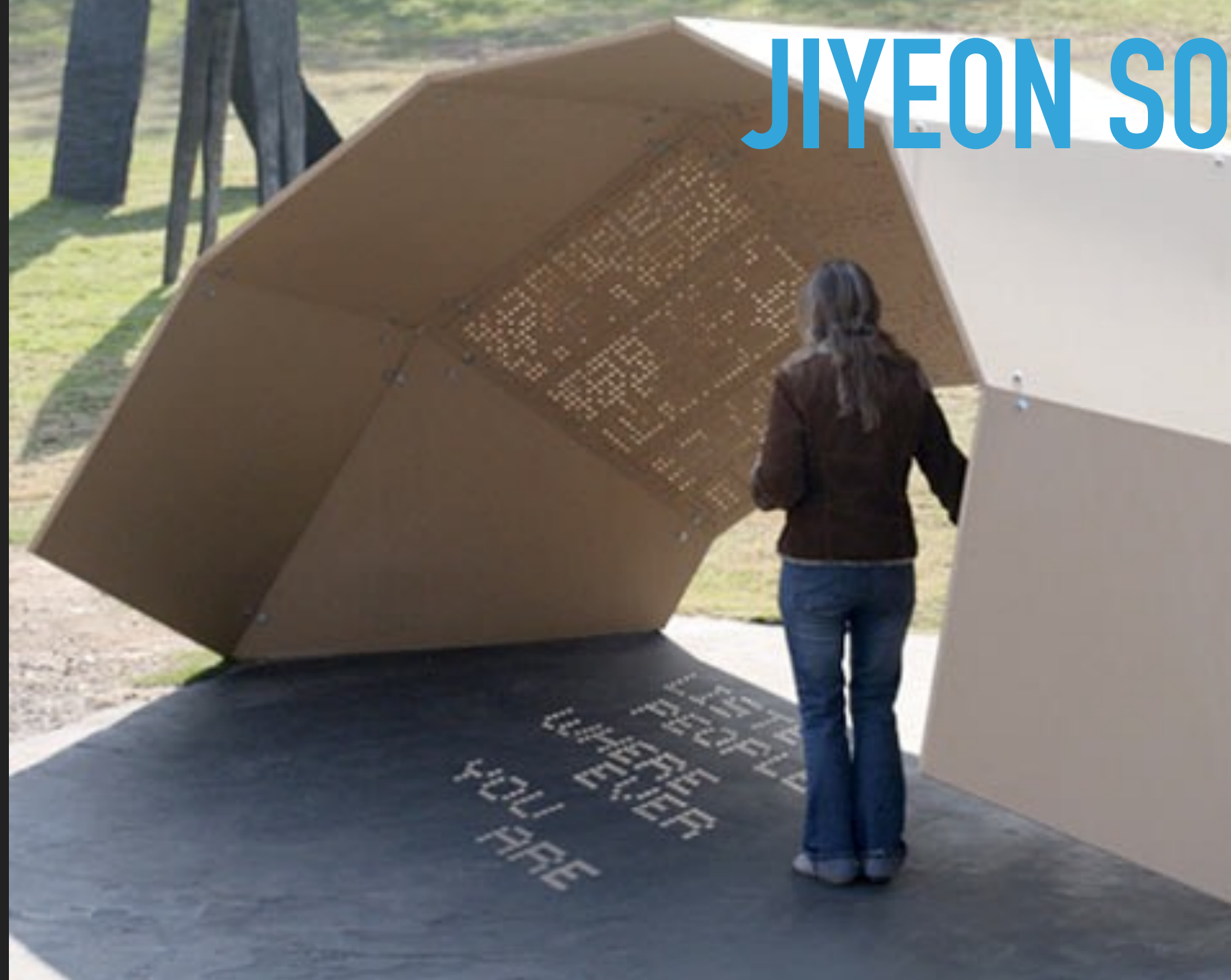
[ebay.com](http://ebay.com)

# CONCAVE



[Jang Yeong-sil Science Garden](http://Jang Yeong-sil Science Garden)

# JIYEON SONG, ONE DAY POEM PAVILION





<https://www.thingiverse.com/thing:1068443>





[https://www.youtube.com/watch?v=\\_E3lqHq2tNU](https://www.youtube.com/watch?v=_E3lqHq2tNU)







Computation path of the sun for:

11201-1832 New York, USA

04.Sep.2019 12:00 UTC-4 >|<

Solar data for the selected location

Dawn: 05:57:42  
 Sunrise: 06:25:20  
 Culmination: 12:55:00  
 Sunset: 19:23:57  
 Dusk: 19:51:30  
 Daylight duration: 12h58m37s  
 Distance [km]: 150.869.998  
 Altitude: 54.26°  
 Azimuth: 156.18°  
 Shadow length [m]: 0.72  
 at an object level [m]:

Geodata for the selected location

Height: 37m   
 Lat: N 40°41'34.86" 40.69302°  
 Lng: W 73°59'14.96" -73.98749°  
 UTM: 18T 585548 4505173  
 TZ: America/New\_York DST EDT

More solar data


Print

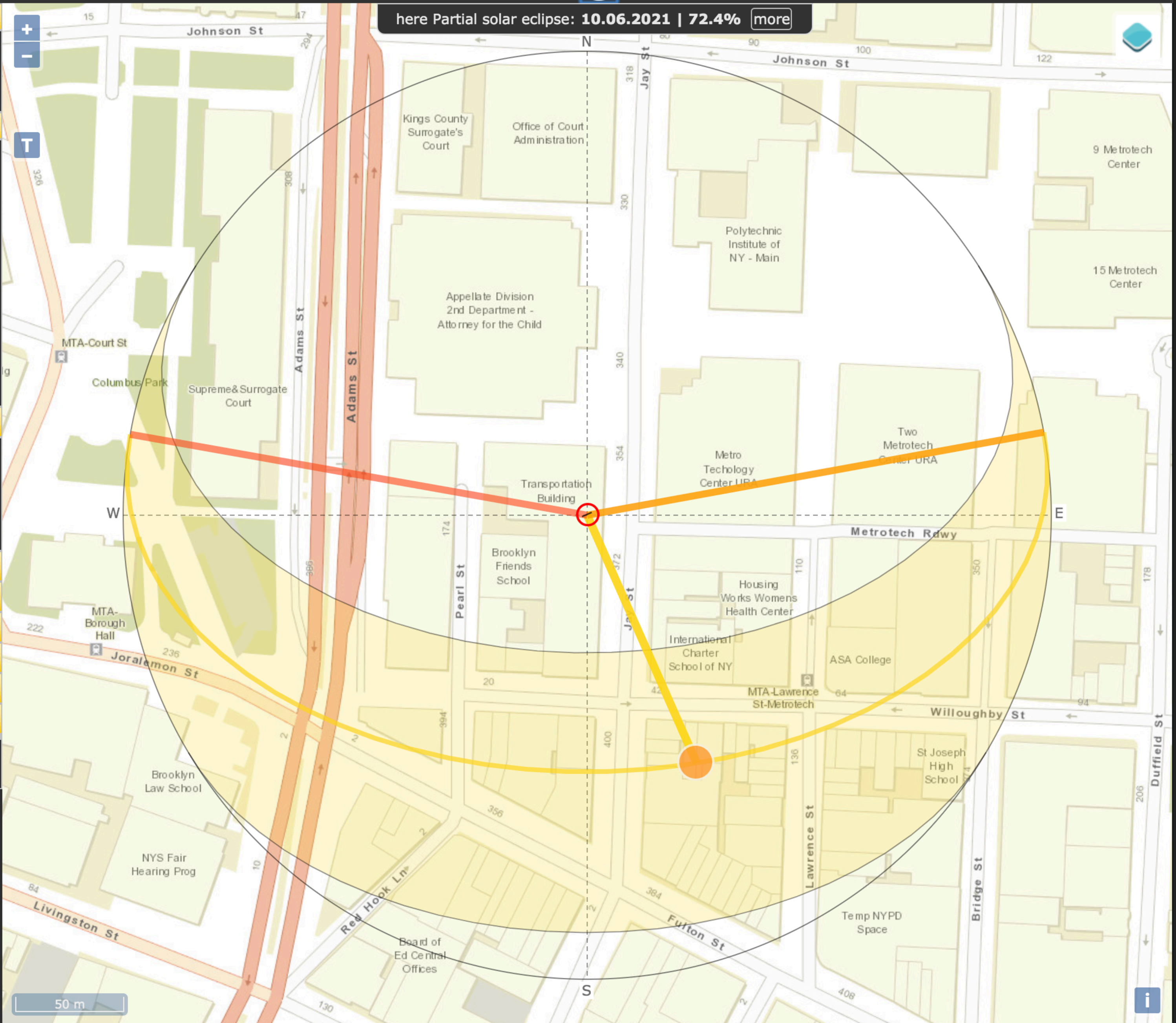
Contact

Help & API

The same for the Moon

Legal Disclosure / Privacy Policy

This website in German language   
 sonnenverlauf.de



Computation path of the sun for:

11201-1832 New York, USA

04.Sep.2019 14:54 UTC-4 >|<

Solar data for the selected location

Dawn: 05:57:42  
 Sunrise: 06:25:20  
 Culmination: 12:55:00  
 Sunset: 19:23:57  
 Dusk: 19:51:30

Daylight duration: 12h58m37s  
 Distance [km]: 150.865.563

Altitude: 47.20°  
 Azimuth: 226.44°

Shadow length [m]: 0.93  
 at an object level [m]: 1

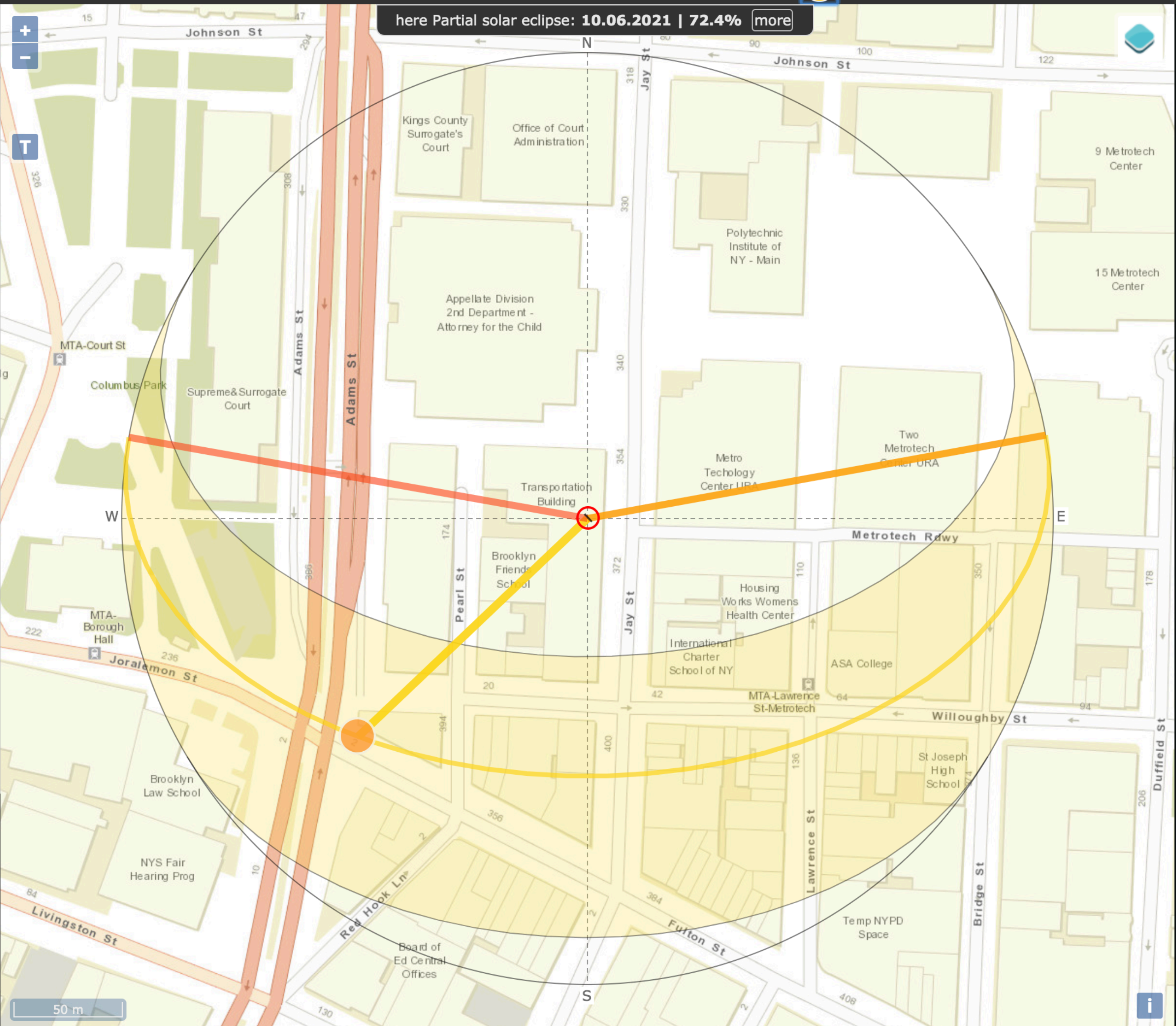
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This website in German language  
 sonnenverlauf.de







Strausborg Astronomical Clock [Atlas Obscura](#)

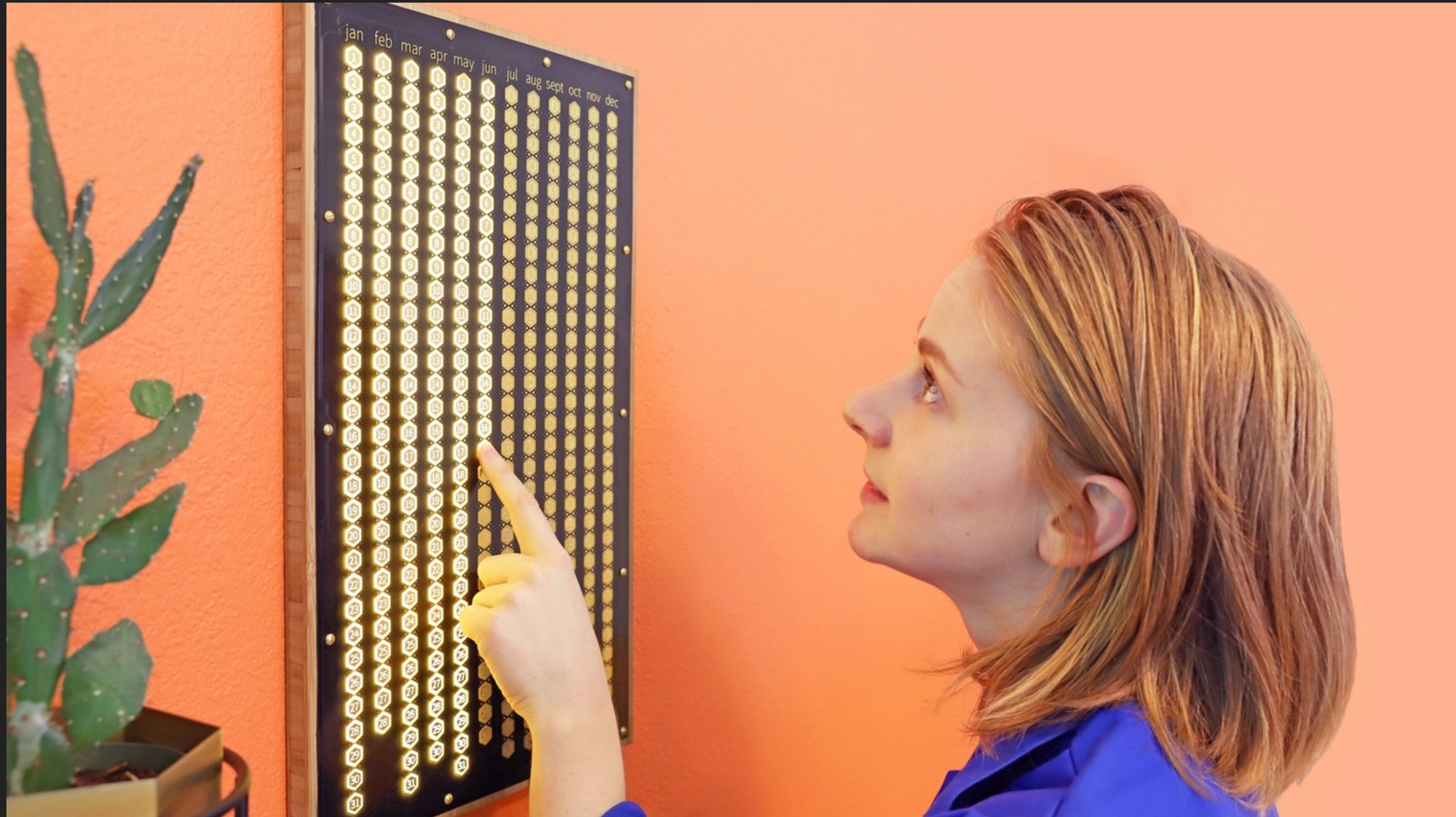




[Ferrofluid Clock](#)



[Scott Thrift 1-year and 1-day clock](#)



[Simone Giertz Every Day Calendar](#)