



UNIVERSITÀ DEGLI STUDI  
DI MILANO  
DIPARTIMENTO DI SCIENZE  
DELLA TERRA "ARDITO DESIO"

COSP  
CENTRO FUNZIONALE PER  
L'ORIENTAMENTO ALLO  
STUDIO E ALLE PROFESSIONI



**Aperitivi scientifici coi piedi per Terra!**

**Che Terra è mai questa?**



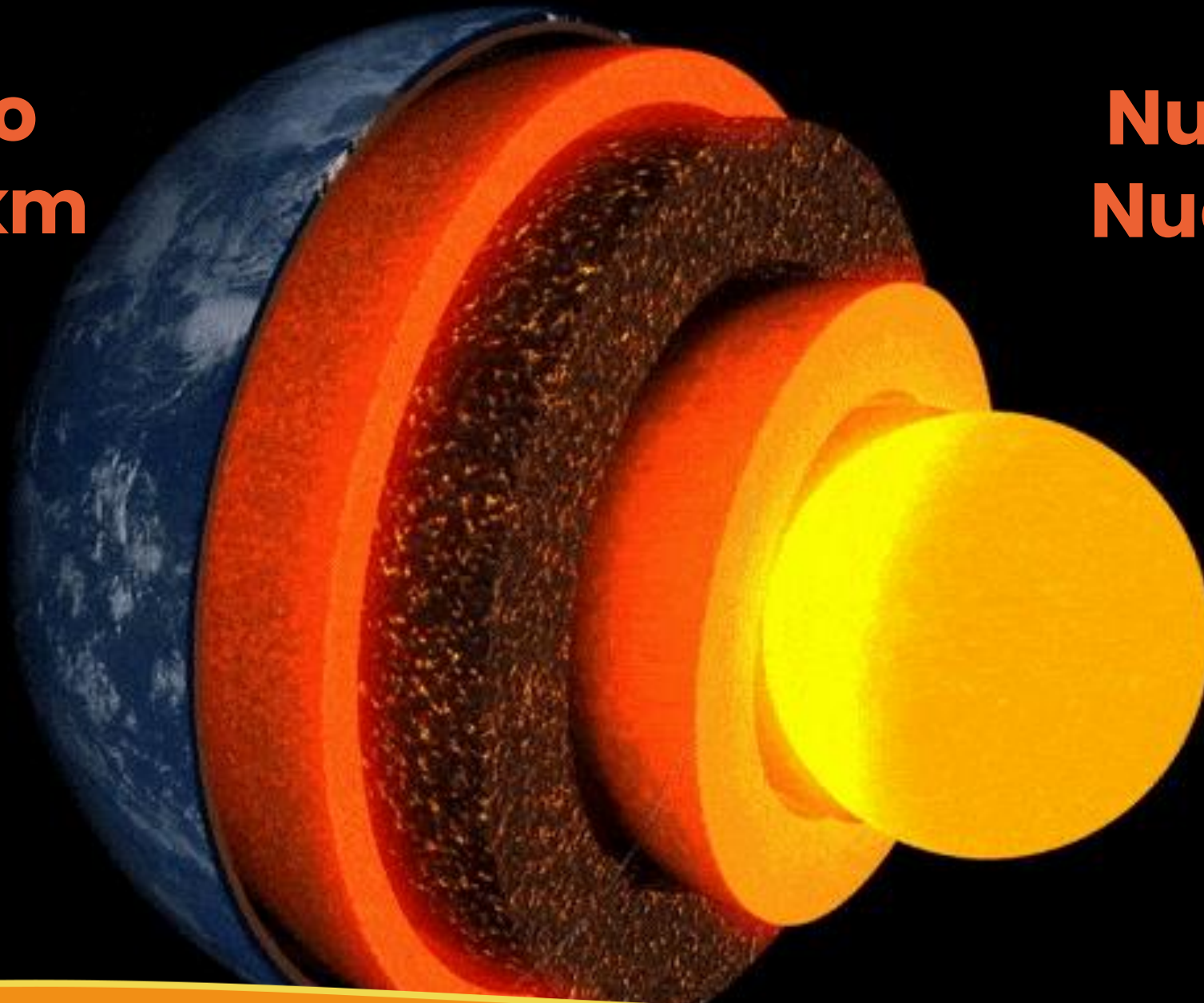
**Patrizia  
Fumagalli**





# La Terra

**Raggio  
6378 km**



**Nucleo interno  
Nucleo esterno  
Mantello  
Crosta**





# L'Interno della Terra





# **La Terra**

## **Percezioni del tempo e della forma**



Tempo «quotidiano»



# Percezione del movimento

**Tempo «quotidiano»**



# Percezione del movimento



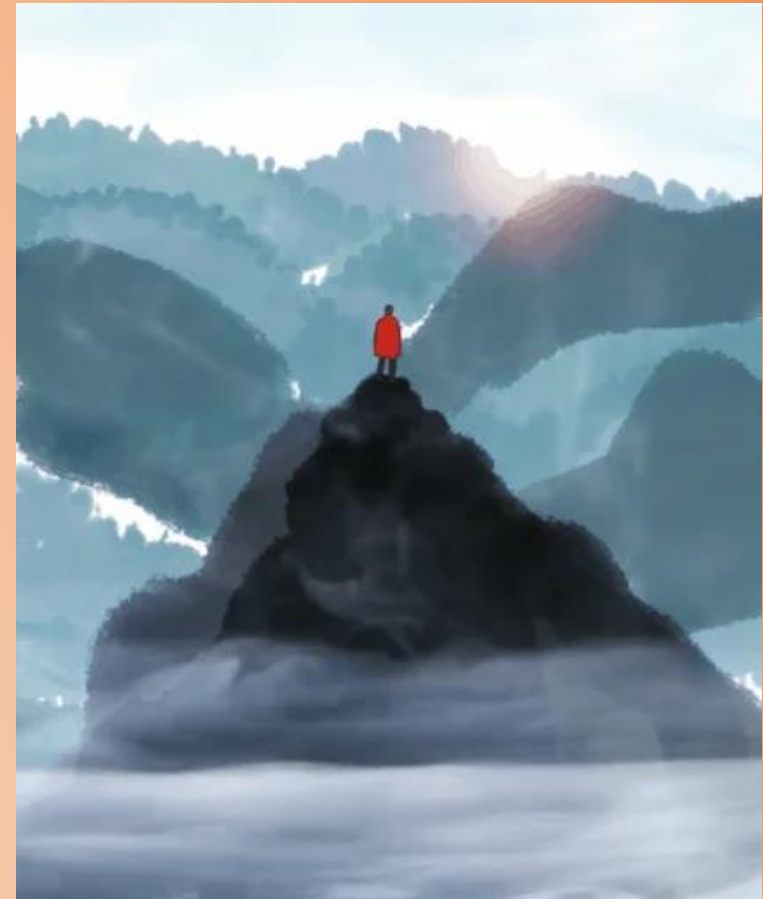
**Tempo accelerato – «time lapse»**

**Tempo «quotidiano»**



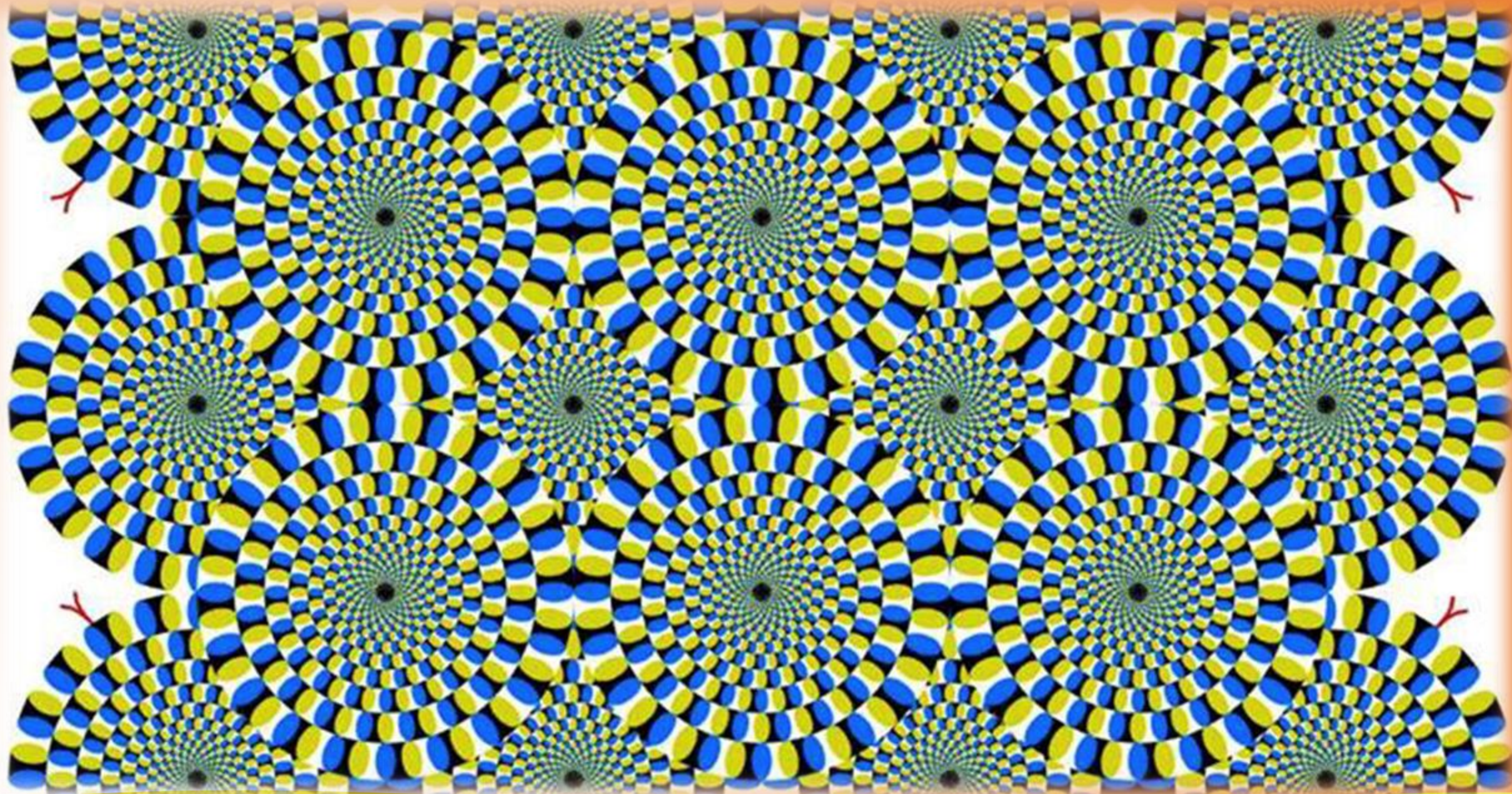
**Tempo accelerato – «time lapse»**

# **Percezione del movimento**



**Senza tempo «immobile»**











«Un oggetto a riposo»  
Seth Boyden  
[vimeo.com/126177413](https://vimeo.com/126177413)





# Movimento a velocità diverse





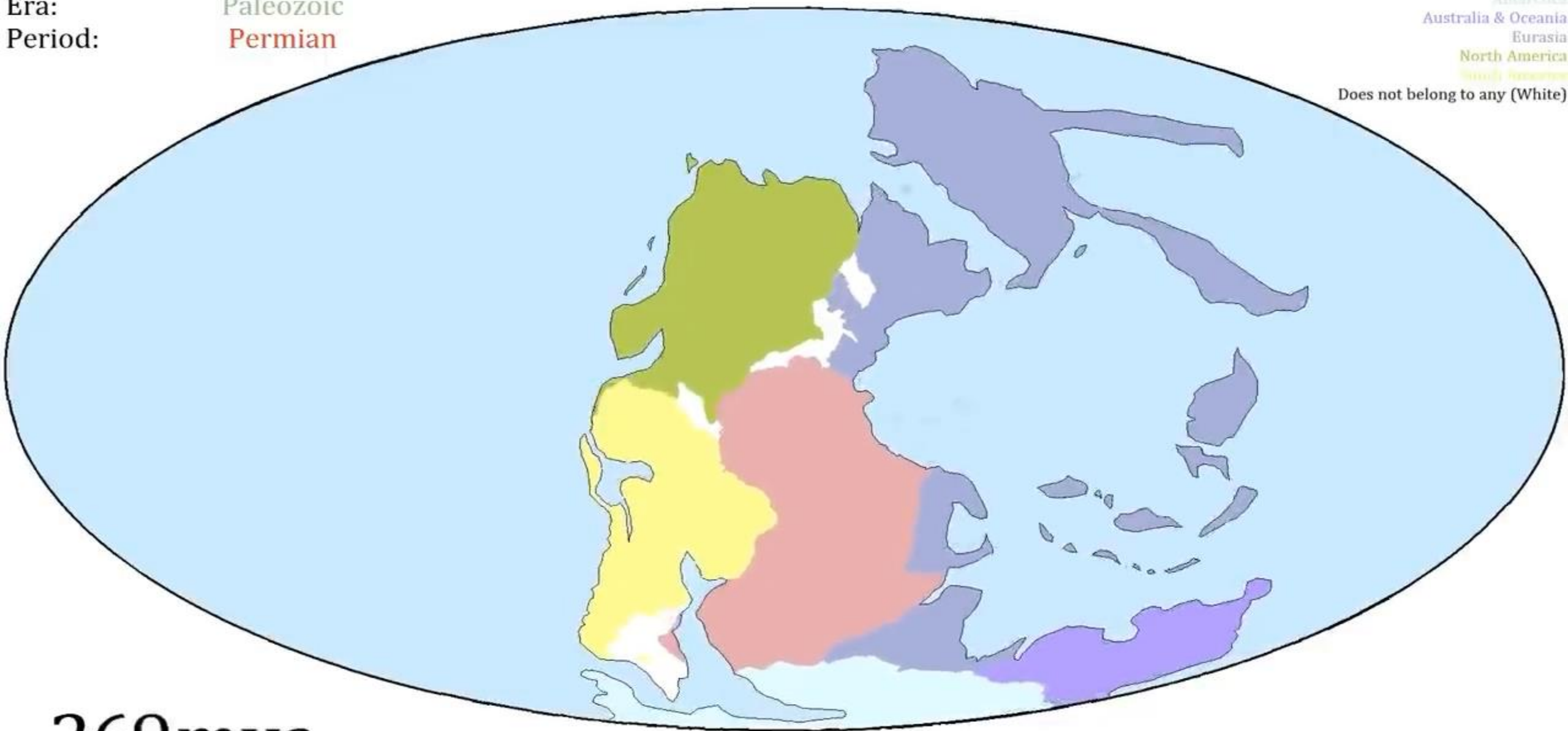
Era:

Paleozoic

Period:

Permian

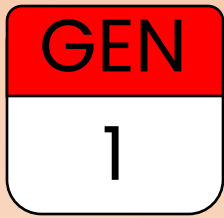
Australia & Oceania  
Eurasia  
North America  
Does not belong to any (White)



269mya

Supercontinent:

Pangaea

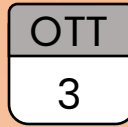


# Età della Terra

4500 milioni di anni



**Primi batteri**  
3500 milioni di anni



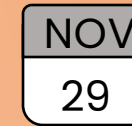
**Comparsa di  
ossigeno libero**  
1100 milioni di anni  
**Supercontinente  
Rodinia**



**Primi animali  
con guscio**  
540 milioni di anni



**Prime piante  
su terre emerse**  
420 milioni di anni

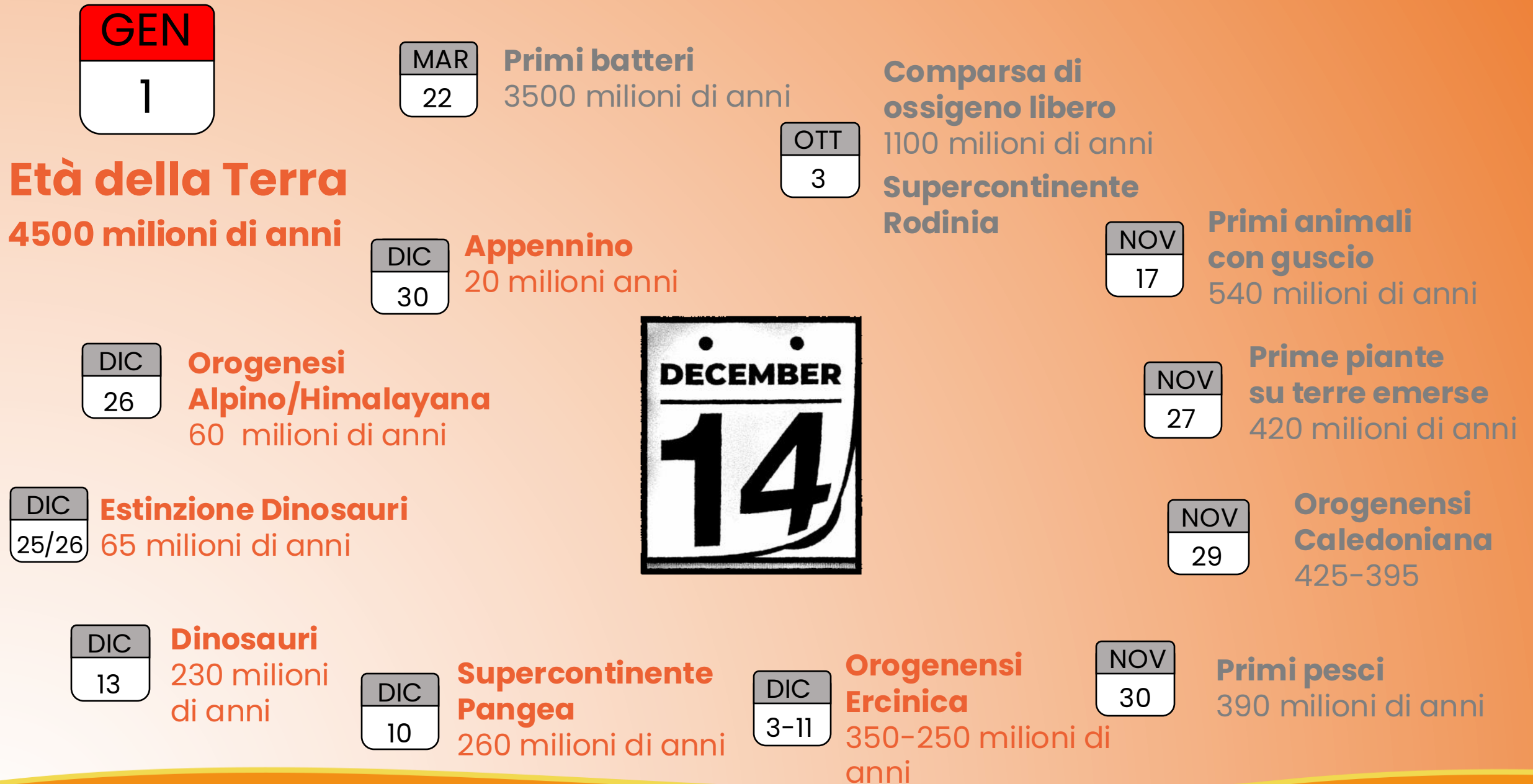


**Orogenesi  
Caledoniana**  
425-395 milioni  
di anni



**Primi pesci**  
390 milioni di anni







# Australopitecus

4 milioni di anni





# Il tempo profondo



Indù – v sec a.C.

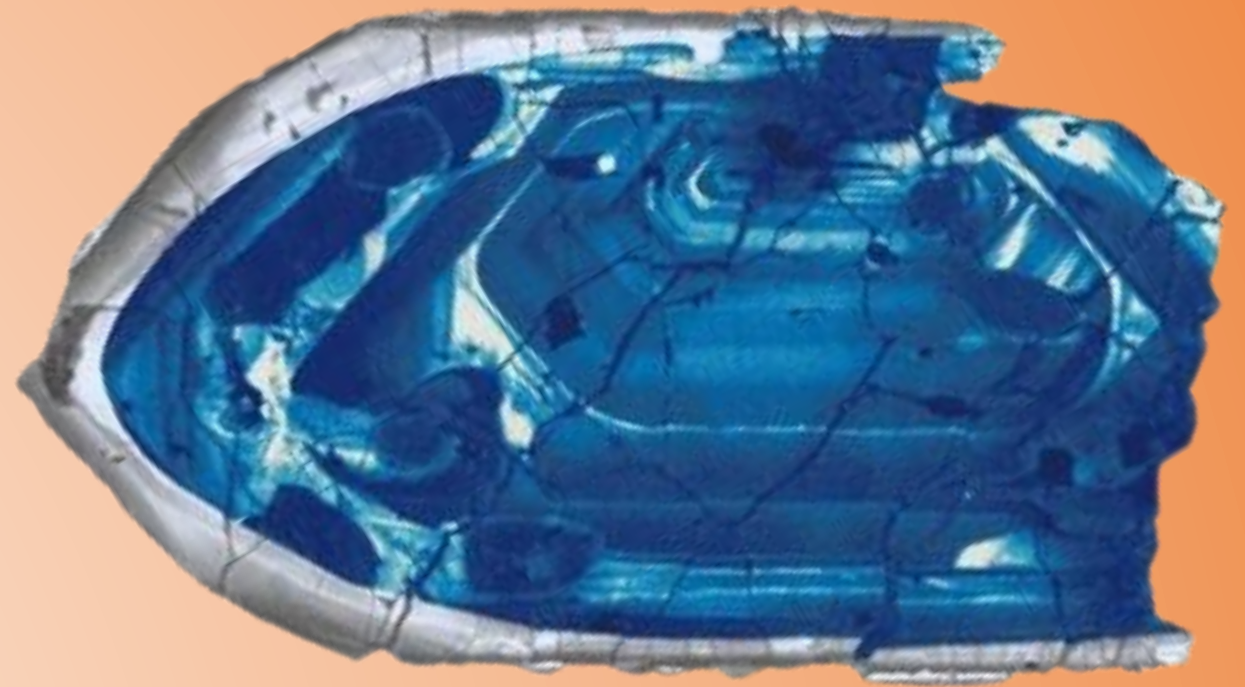
Guillaume Duprat, 2014  
«Il libro delle Terre Immaginate»



# Età della Terra geocronologia

**Zircone**  
**Jack-Hills, Australia**

**4,4 miliardi di anni**  
**geochimica U/Pb**

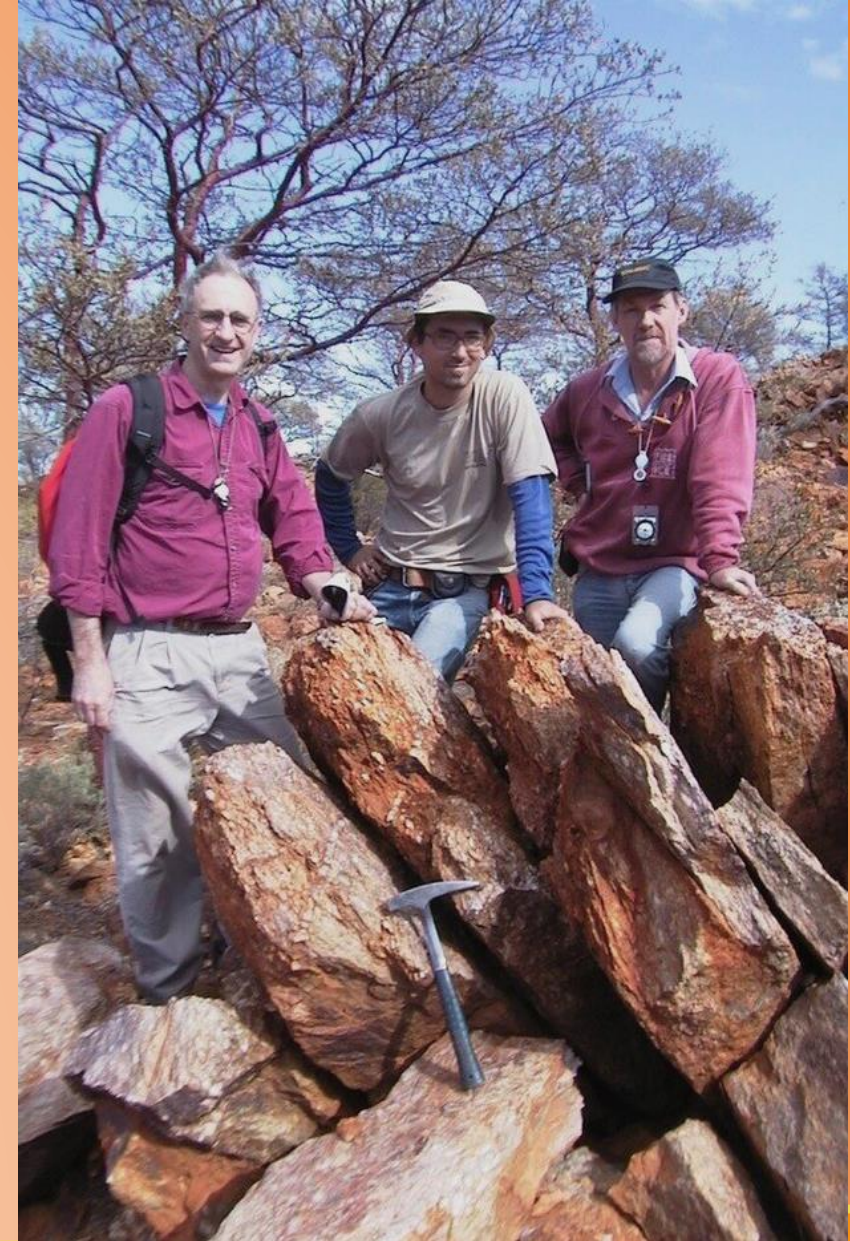


200  $\mu\text{m}$

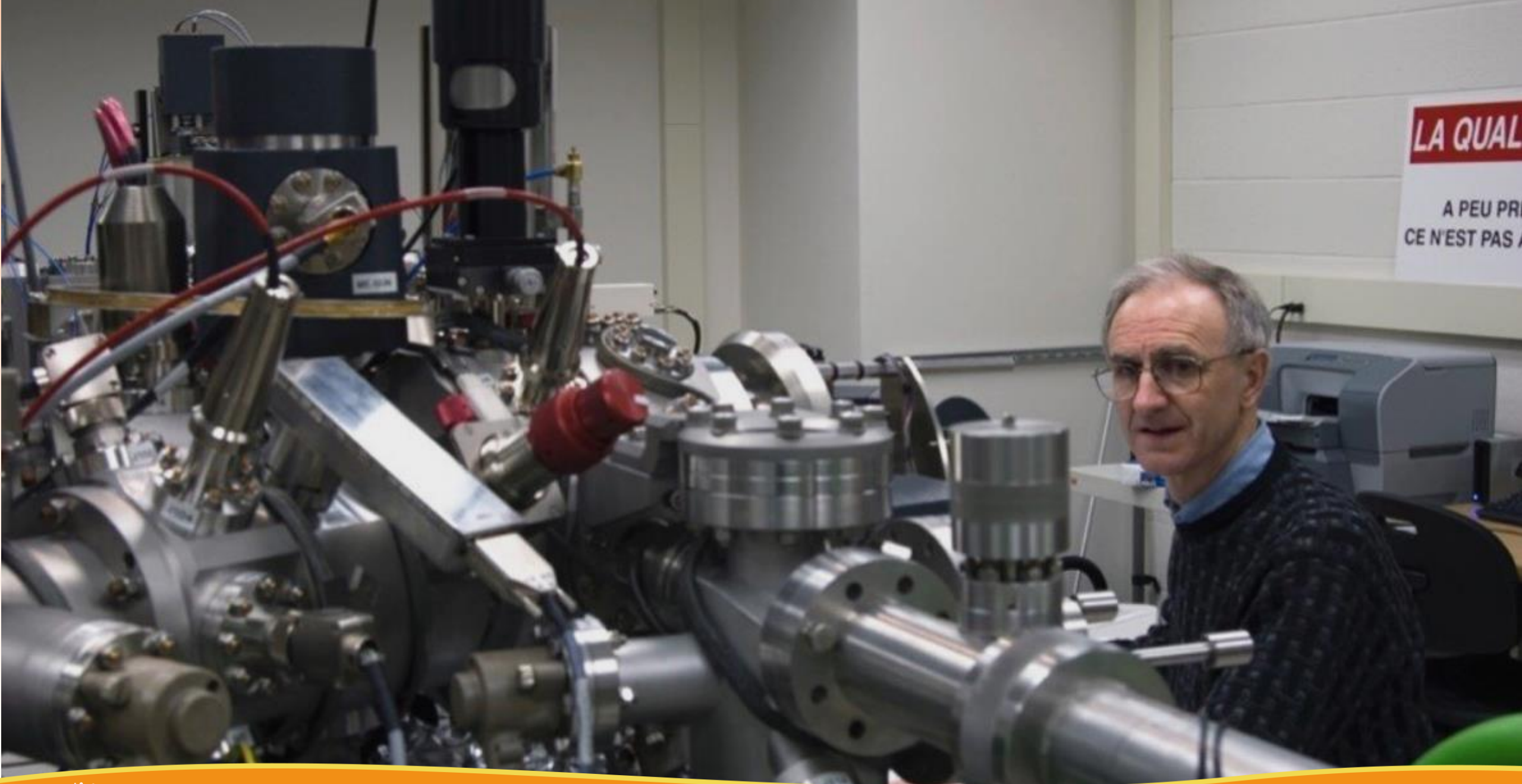


# Jack Hills, Australia

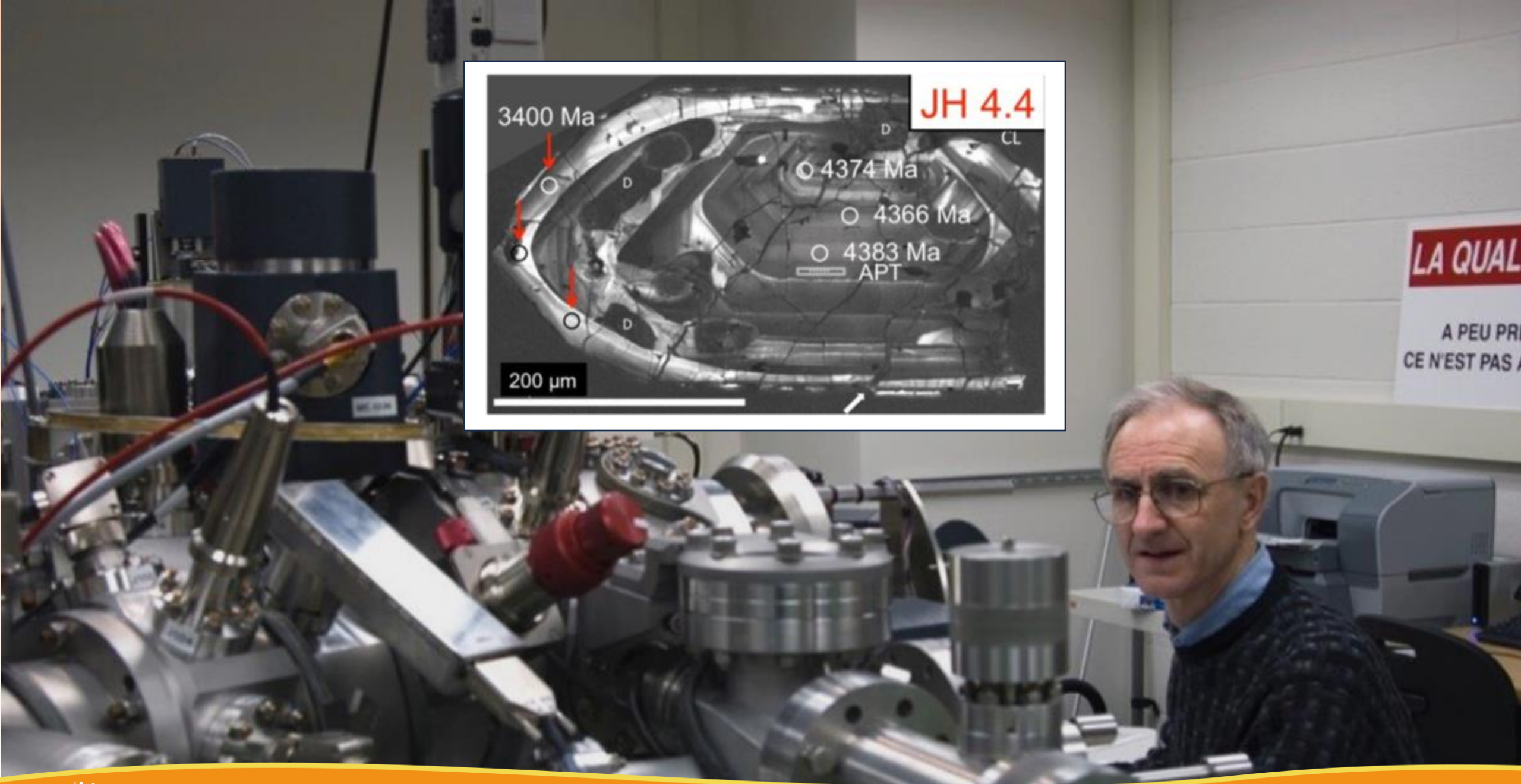
John Valley →







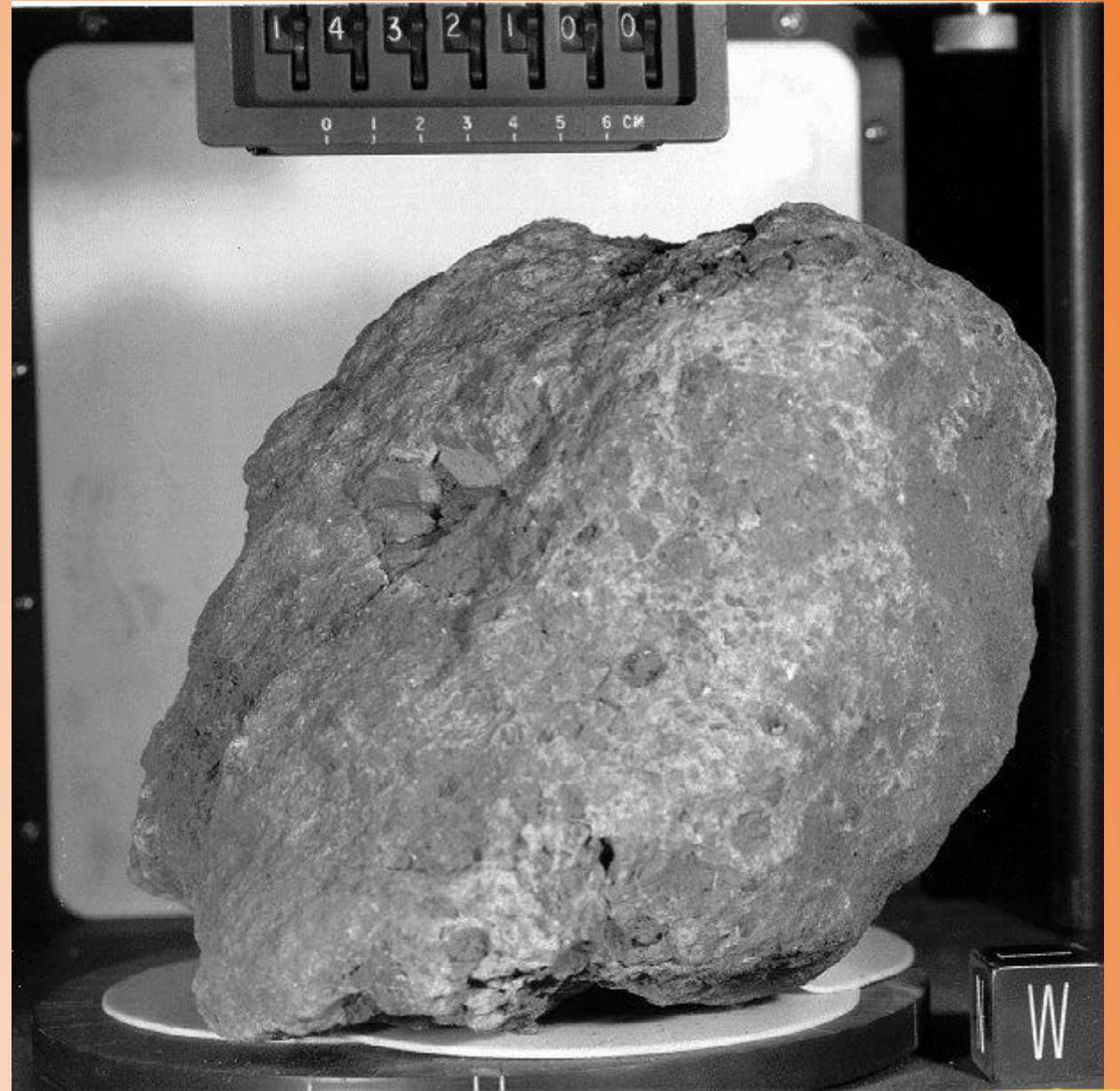




# Età della Terra «Big Bertha»

Tra le rocce terrestri più  
antiche  
mai ritrovate  
9 kg – campione 14321

4 miliardi di anni

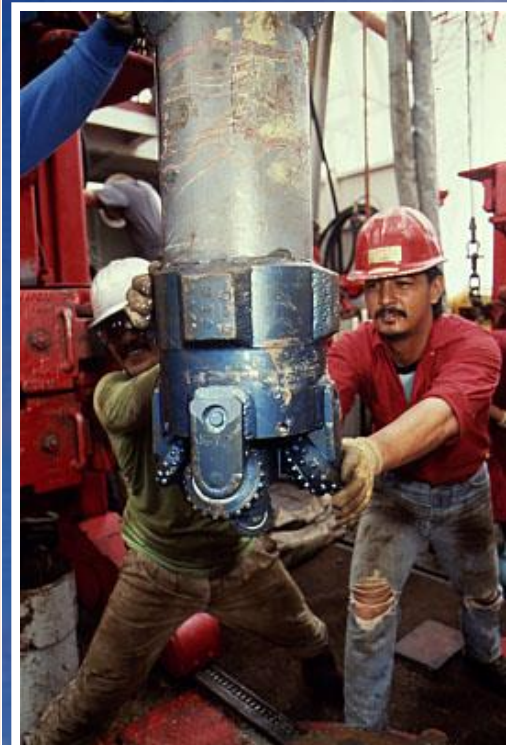




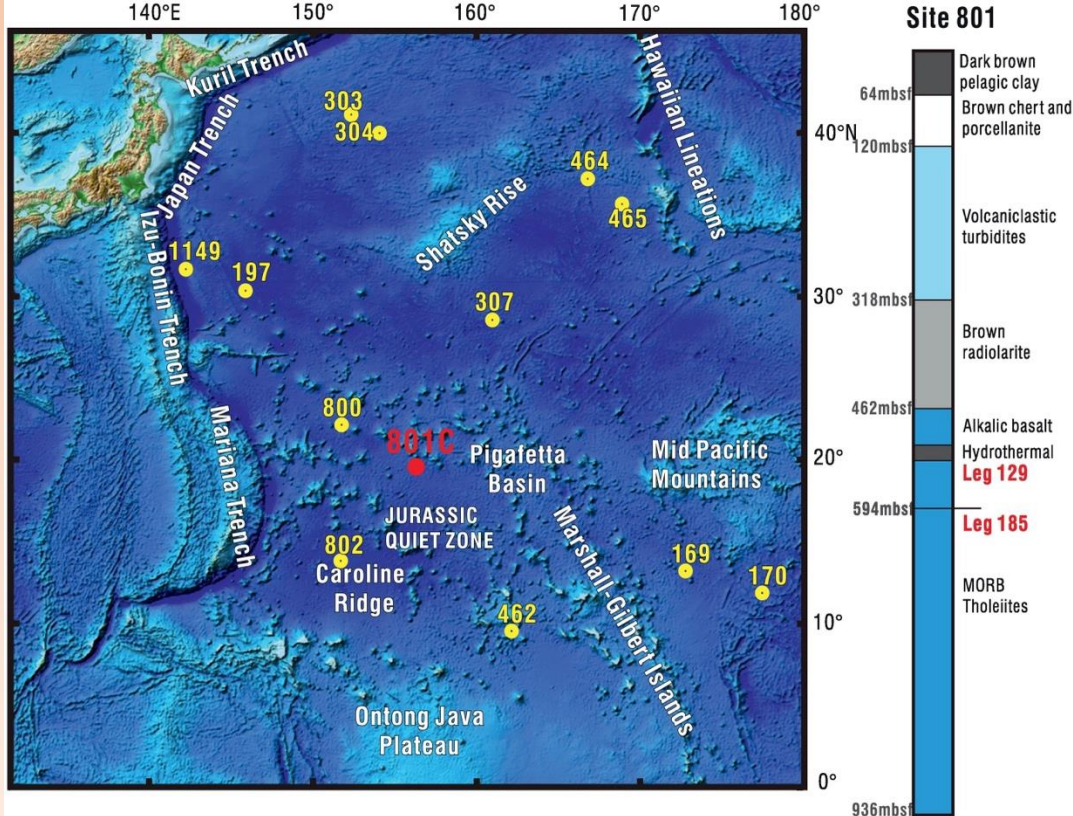
# «Big Bertha» Meteorite terrestre











**I più antichi basalti recuperati da  
spedizioni oceanografiche  
Courtesy of E. Erba**

**171 milioni di anni**

**«Drilled core» ODP Hole 801C  
Oceano Pacifico 1989–1999**





**Ma com'è  
questa  
Terra???**





# Prima mappa urbanistica

7000 anni fa  
Neolitico

Turchia - Çatalhöyük

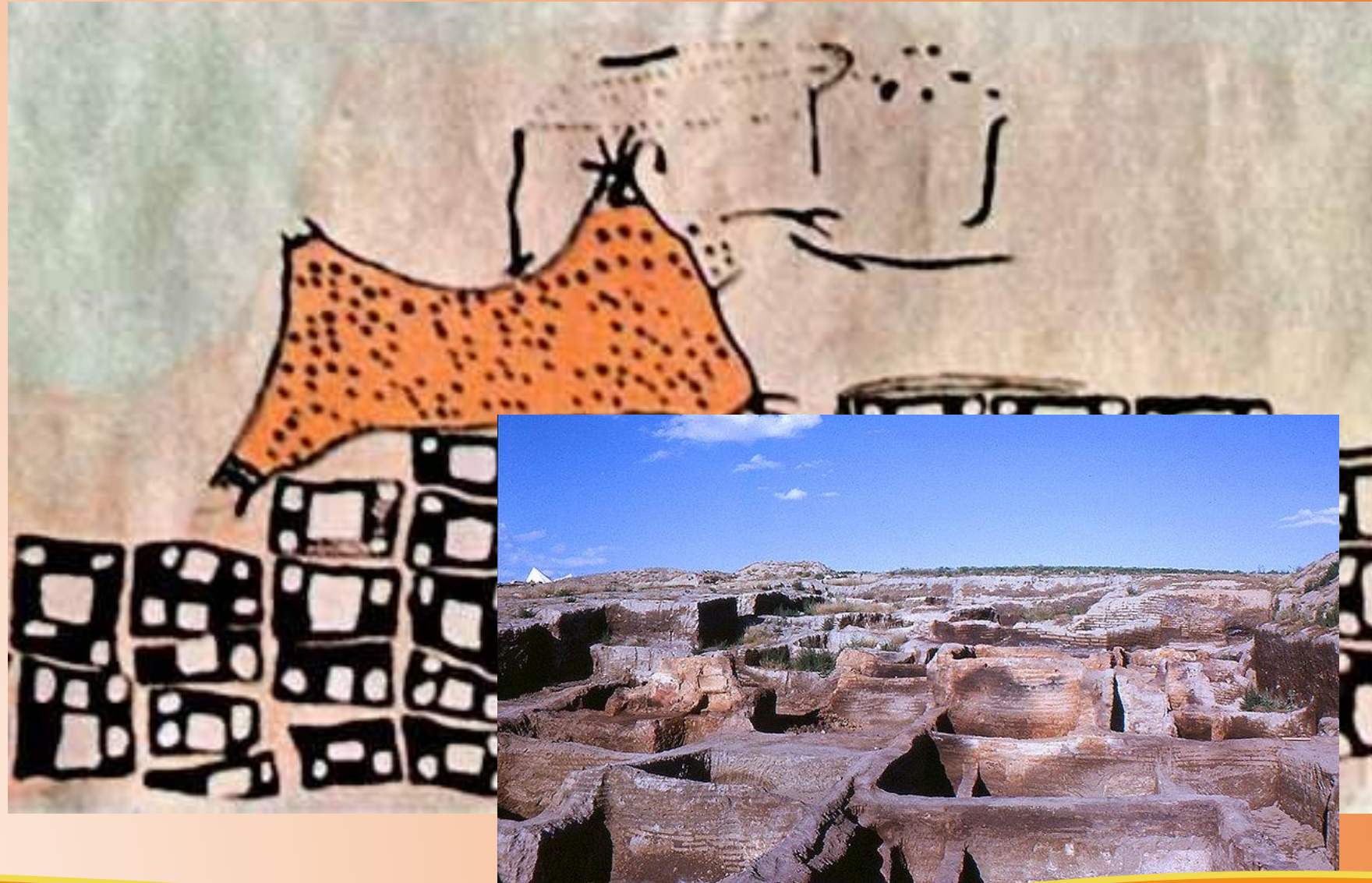




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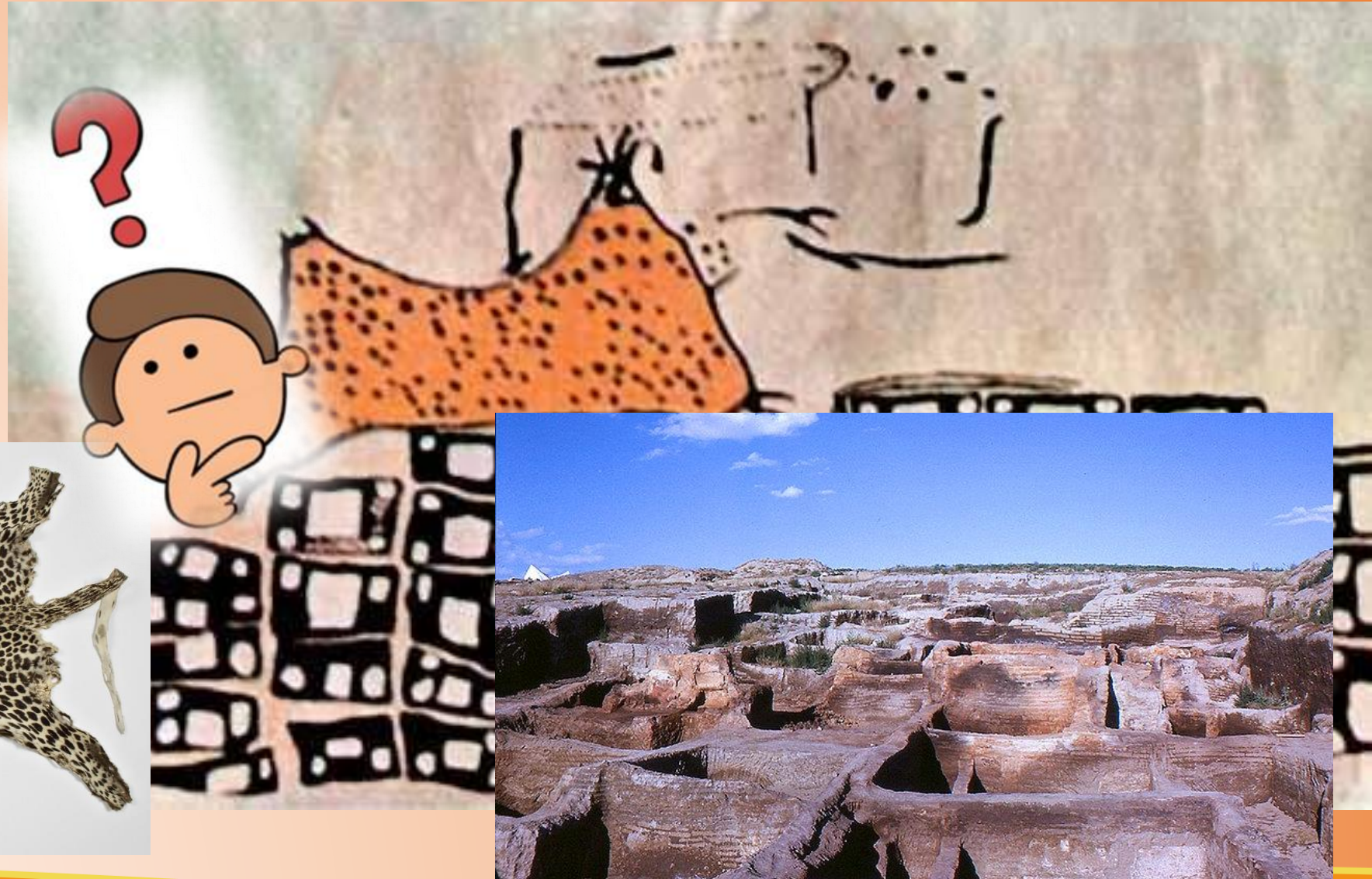




# Prima mappa urbanistica

7000 anni fa  
Neolitico

Turchia - Çatalhöyük





# Vulcano Hasan Dag



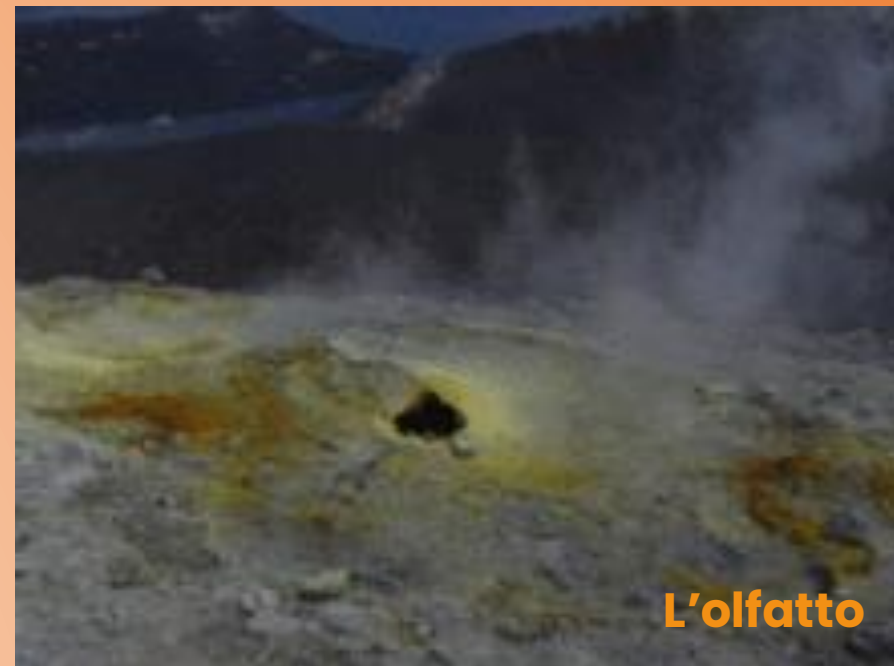


# Vulcano Hasan Dag



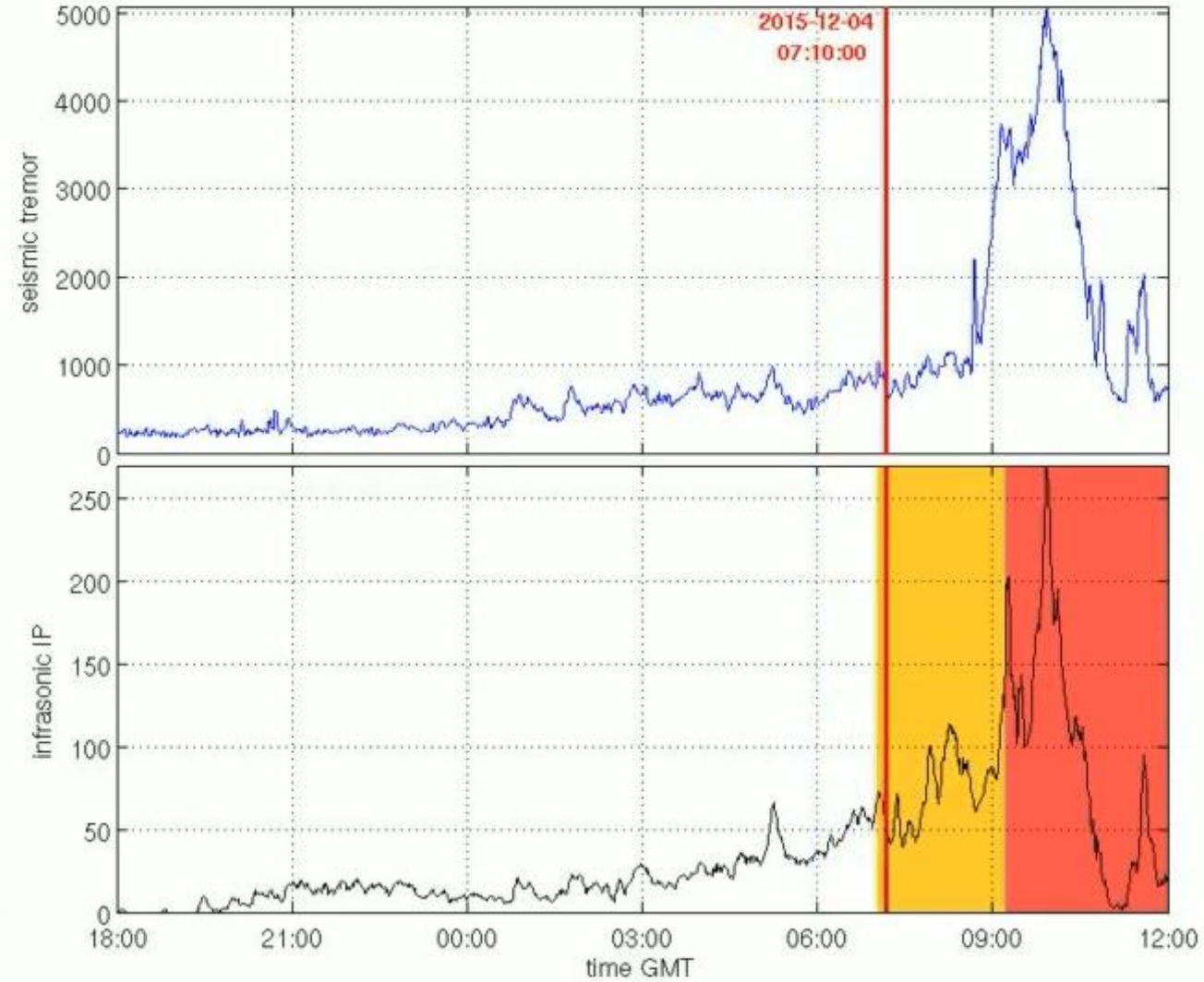
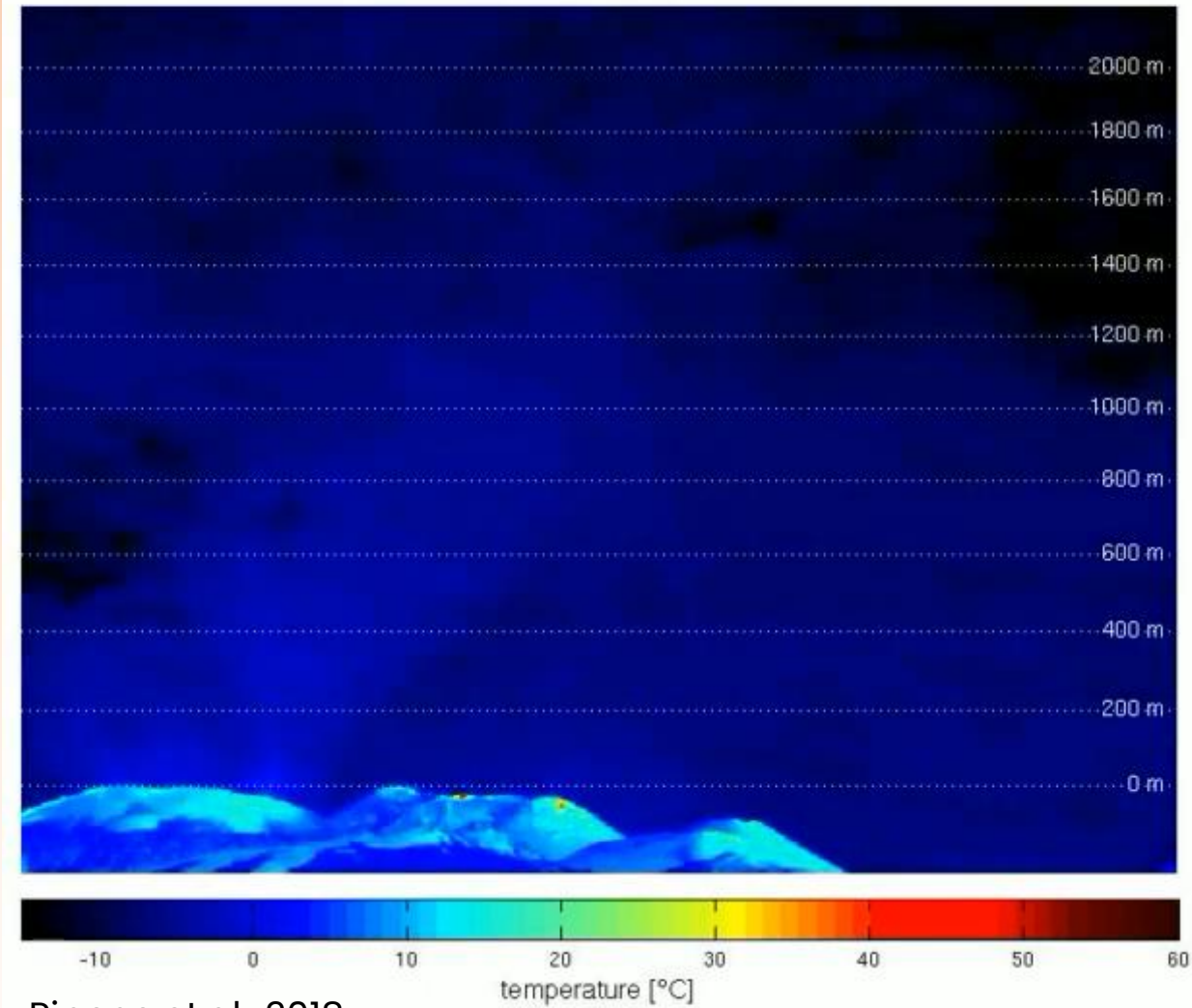


# I vulcani: uno sguardo verso l'interno della Terra





2015-12-04 07:10:00



Ripepe et al., 2018





**Etna**





# Etna

## Efesto e i suoi aiutanti Ciclopi

### Dalla percezione al mito



## Lago di Paterno, Rieti «Sinkhole»






## Lago di Paterno, Rieti «Sinkhole»



**Dis Pater, Ade  
Dio dell'Oltretomba**





A landscape photograph showing a windmill on the left side of the frame, silhouetted against a bright orange and yellow sunset sky. The sun is low on the horizon to the right, casting a warm glow over the scene. The sky is filled with scattered clouds that catch the low light of the setting sun. The foreground is dark and silhouetted, showing some low-lying vegetation.

# **Percezioni antiche Dall'osservazione del paesaggio l'idea della Terra**



Australia – XX sec  
Dieri

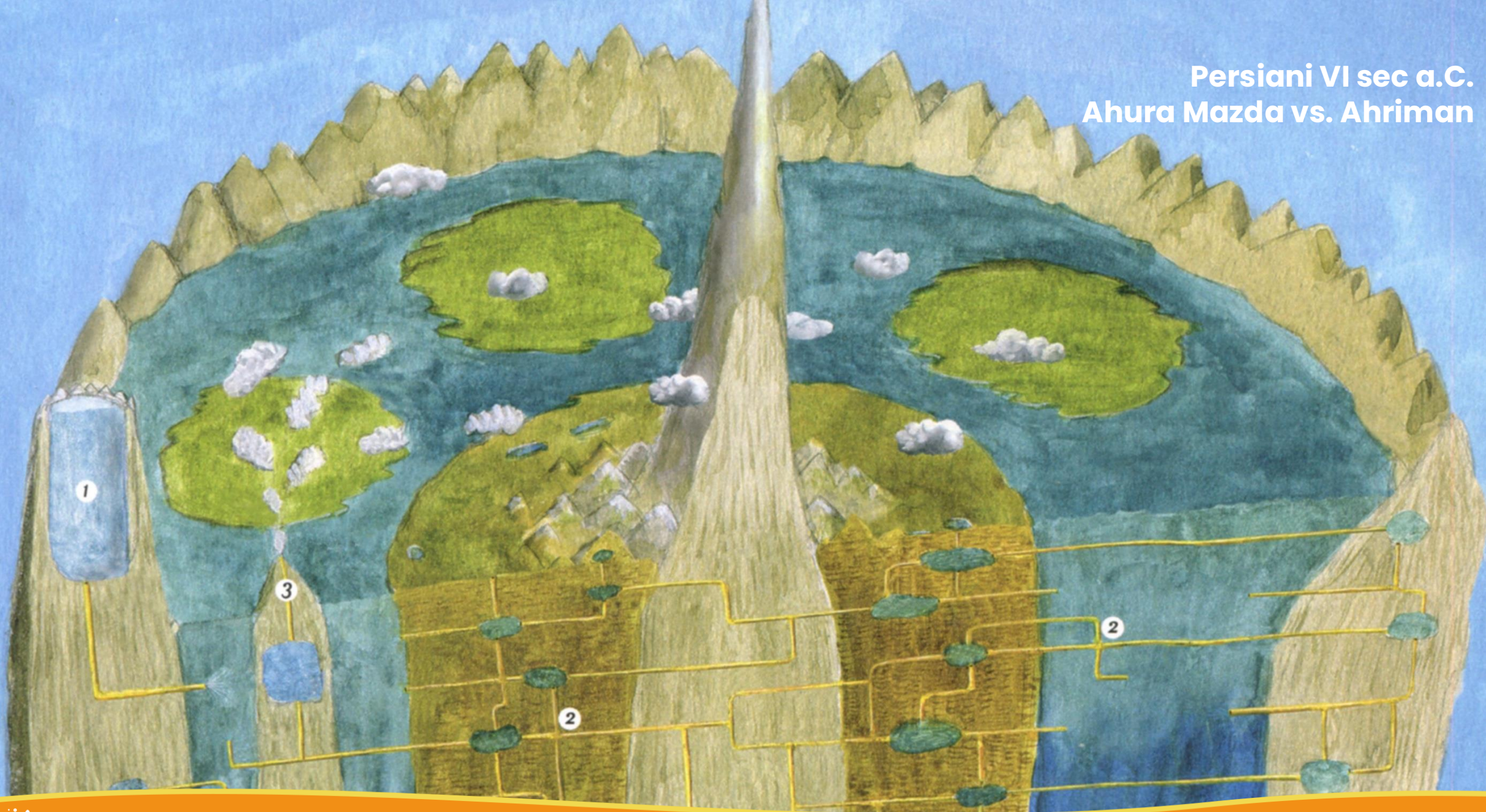


**Percezioni antiche  
Dall'osservazione del paesaggio  
l'idea della Terra**





Persiani VI sec a.C.  
Ahura Mazda vs. Ahriman



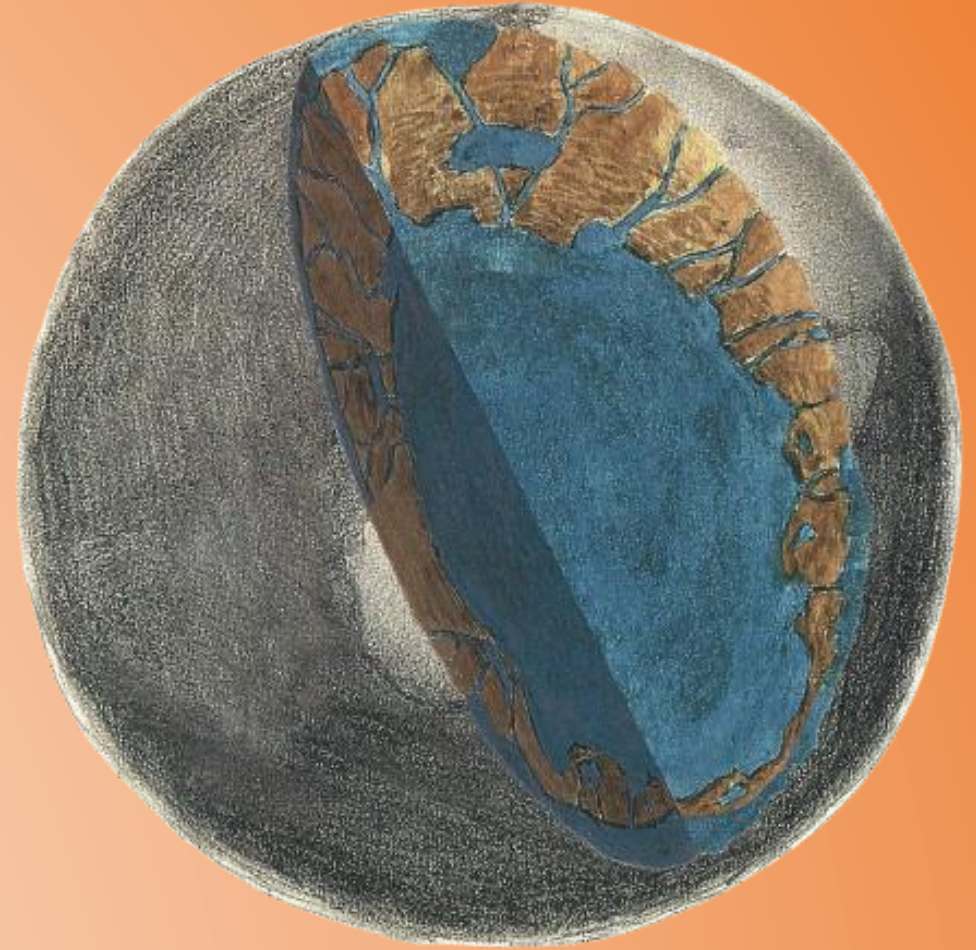


**Guillaume Duprat, 2014**  
**«Il libro delle Terre Immaginate»**





# Dentro alla Terra



**Leonardo da Vinci**  
**XV sec**



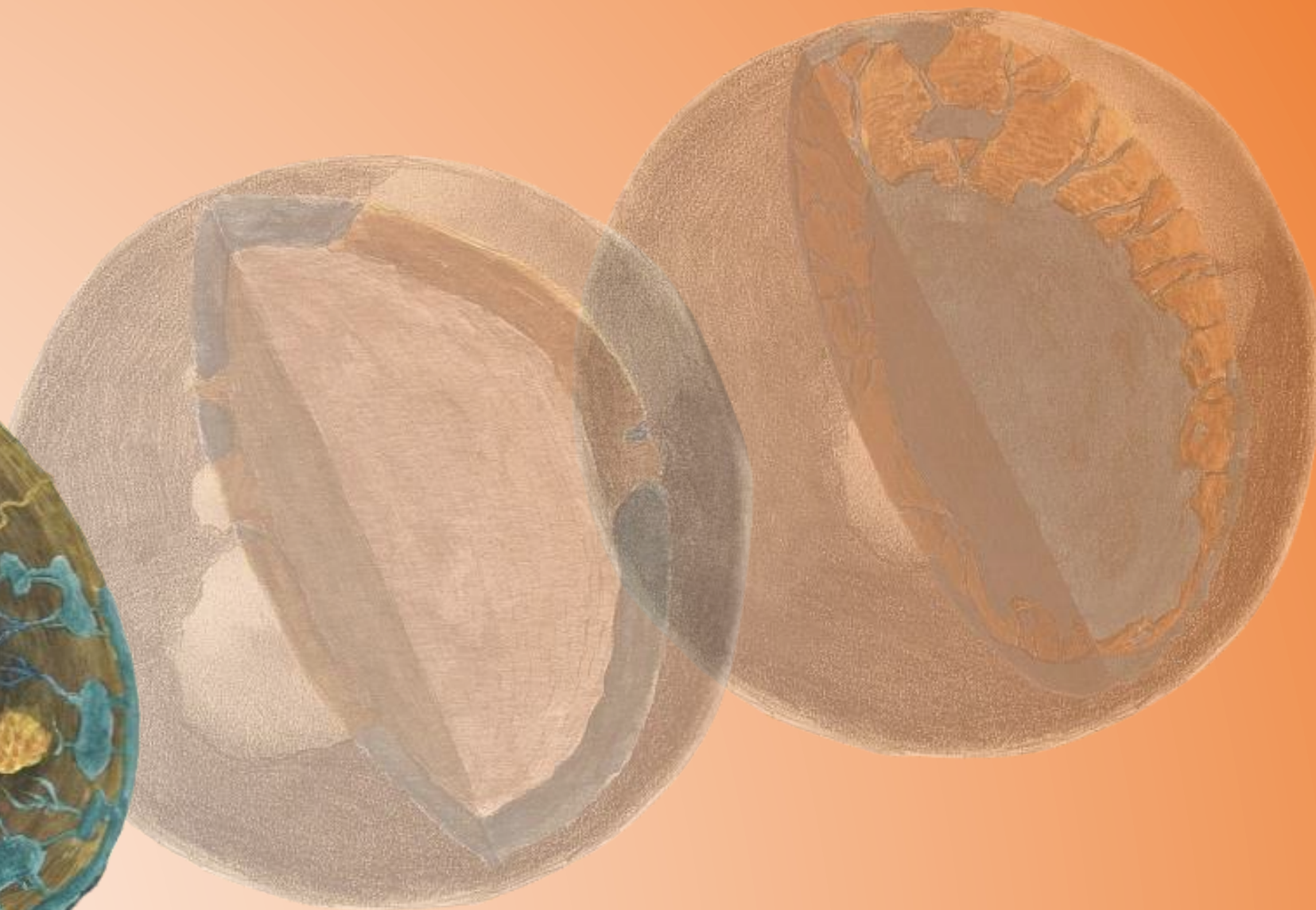
# Dentro alla Terra



**Galileo Galilei XVII sec**



## Dentro alla Terra

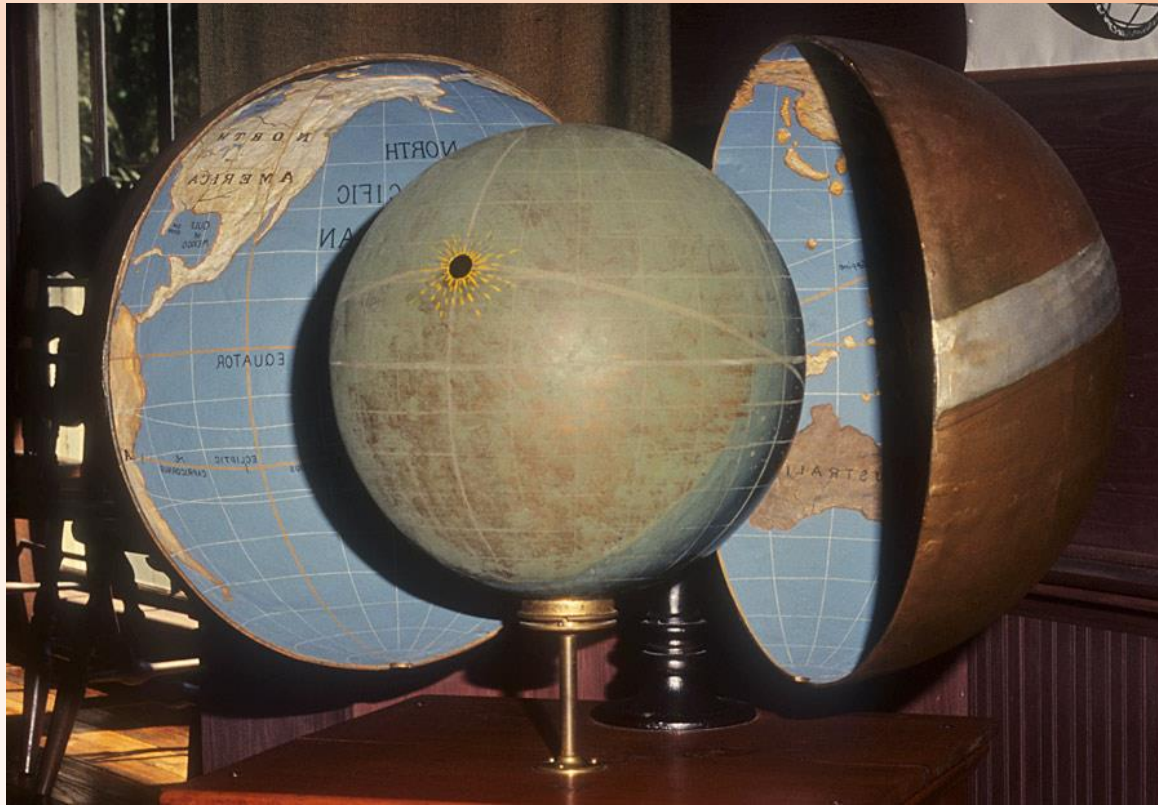


**Athanasius Kircher XVII sec**

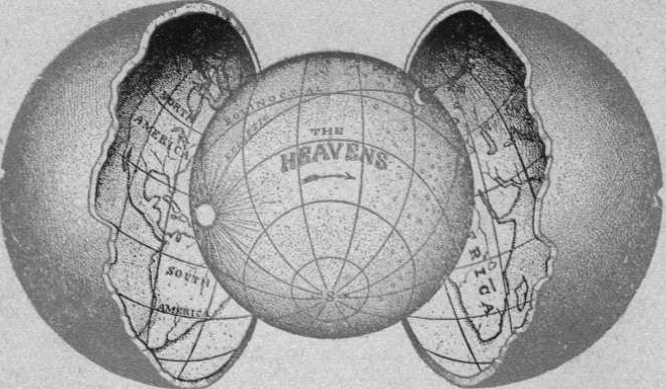


# Cyrus R. Teed (1839–1908)

## "Koreshanity"



**WE LIVE INSIDE!**

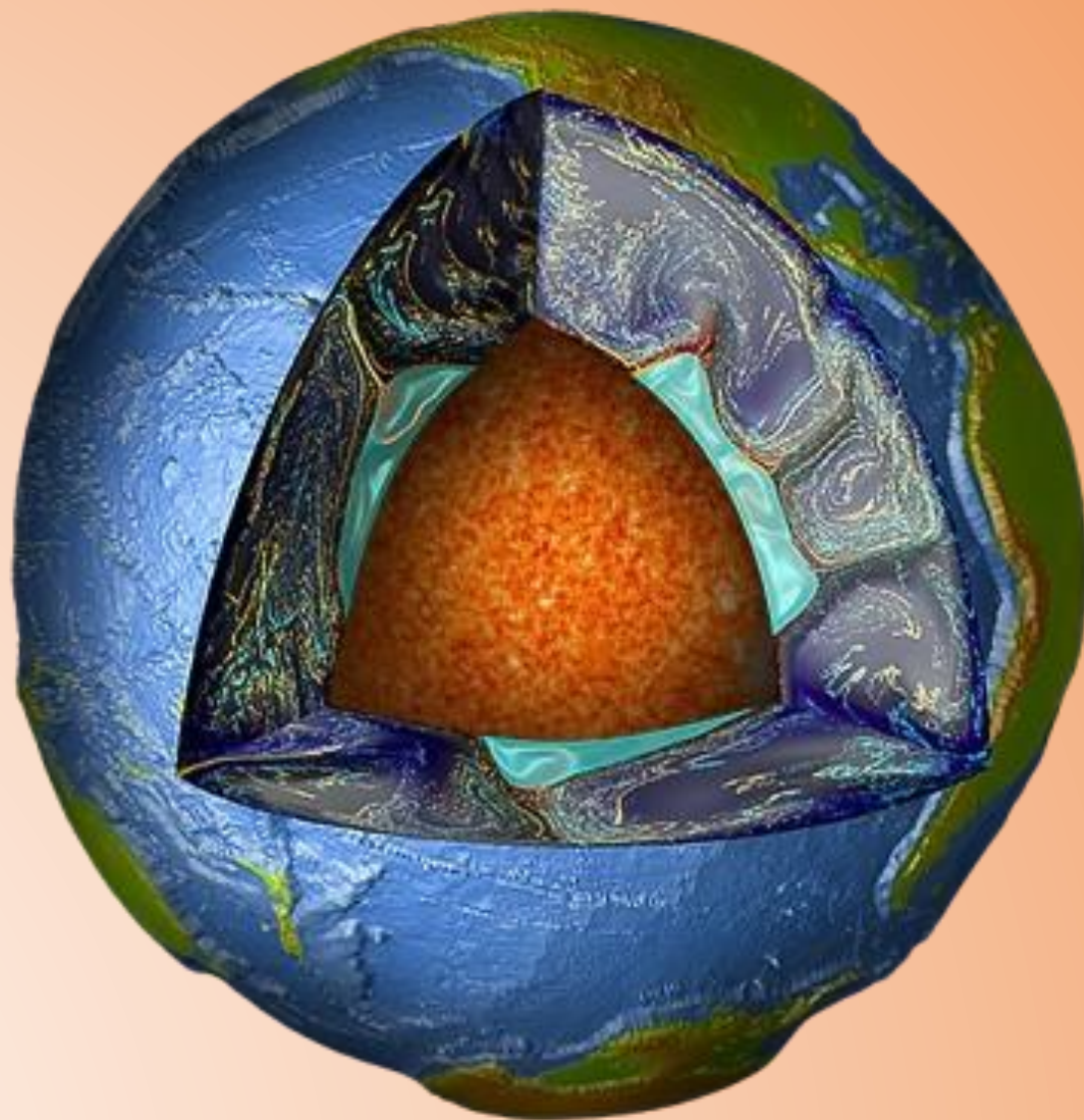


**DROP IN AND SEE US.**

General Offices of The Koreshan System  
313-317 Englewood Avenue, CHICAGO.  
PHONE NORMAL 382.

**OUR LITERATURE**  
May be Obtained at Hall Sunday Evenings.  
The Flaming Sword, A 16-page Weekly Publication.



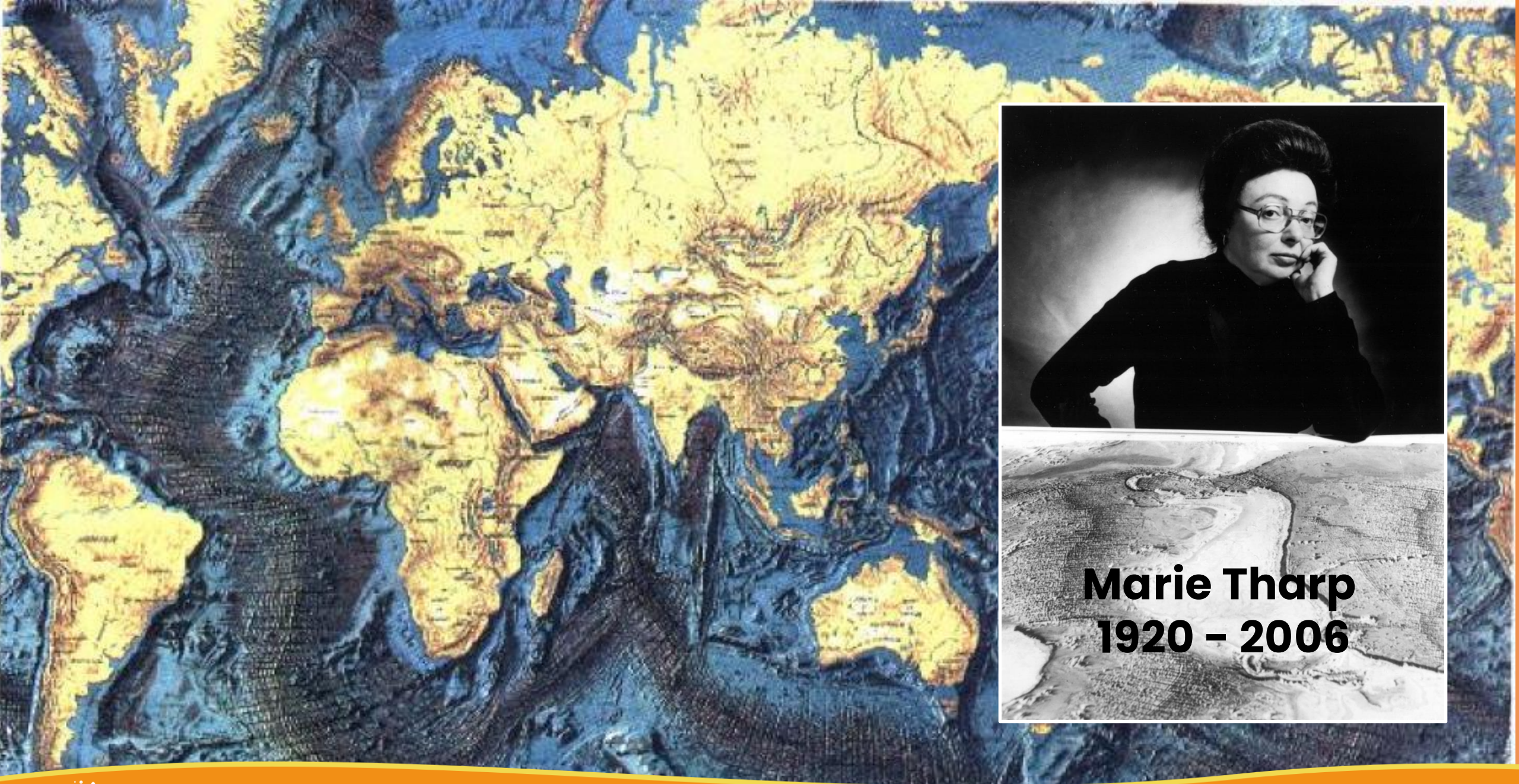




## Alfred Wegener 1880 – 1930

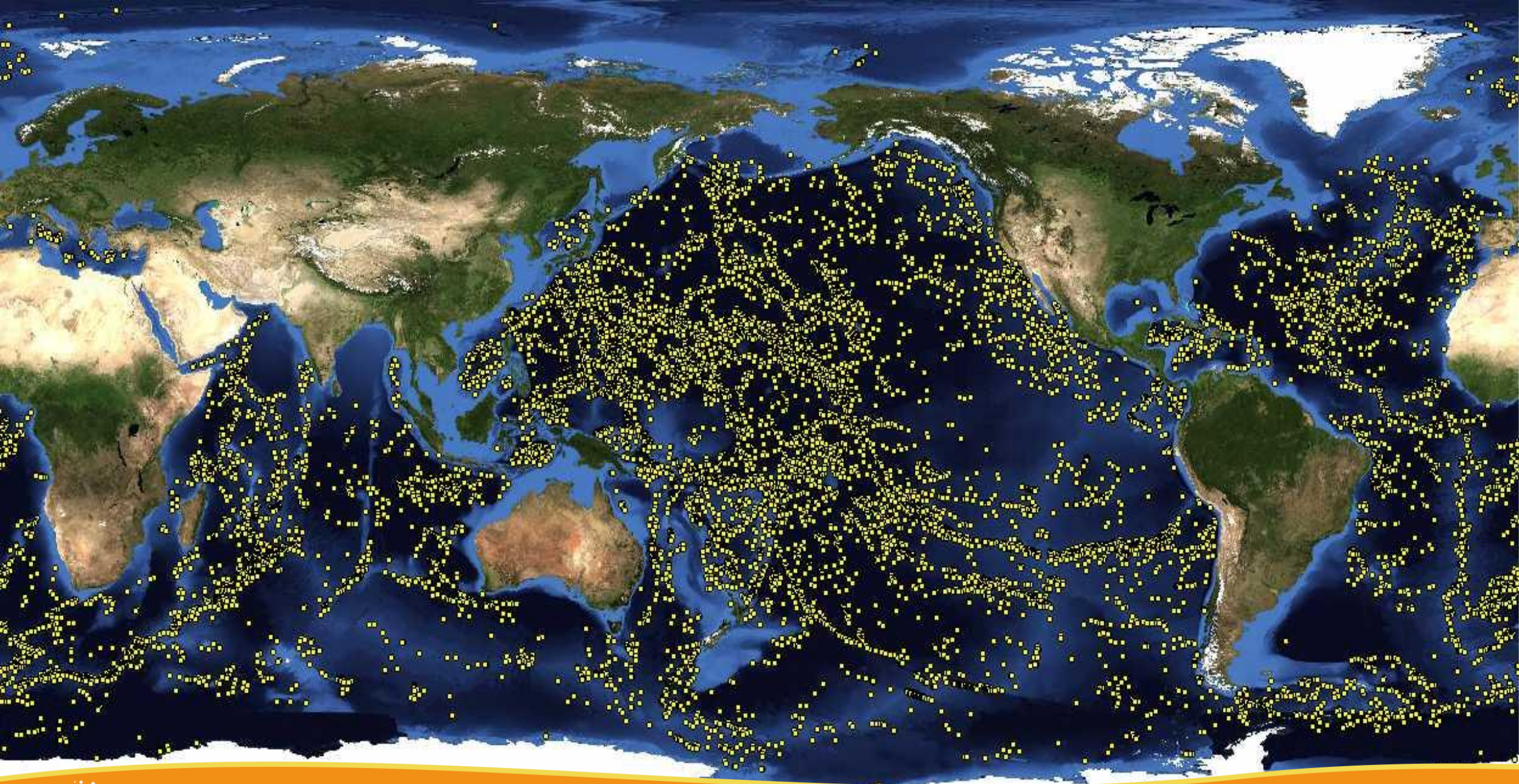






**Marie Tharp**  
**1920 - 2006**









# Geologia

Studia il substrato  
immobile del pianeta  
Terra (rocce e minerali)



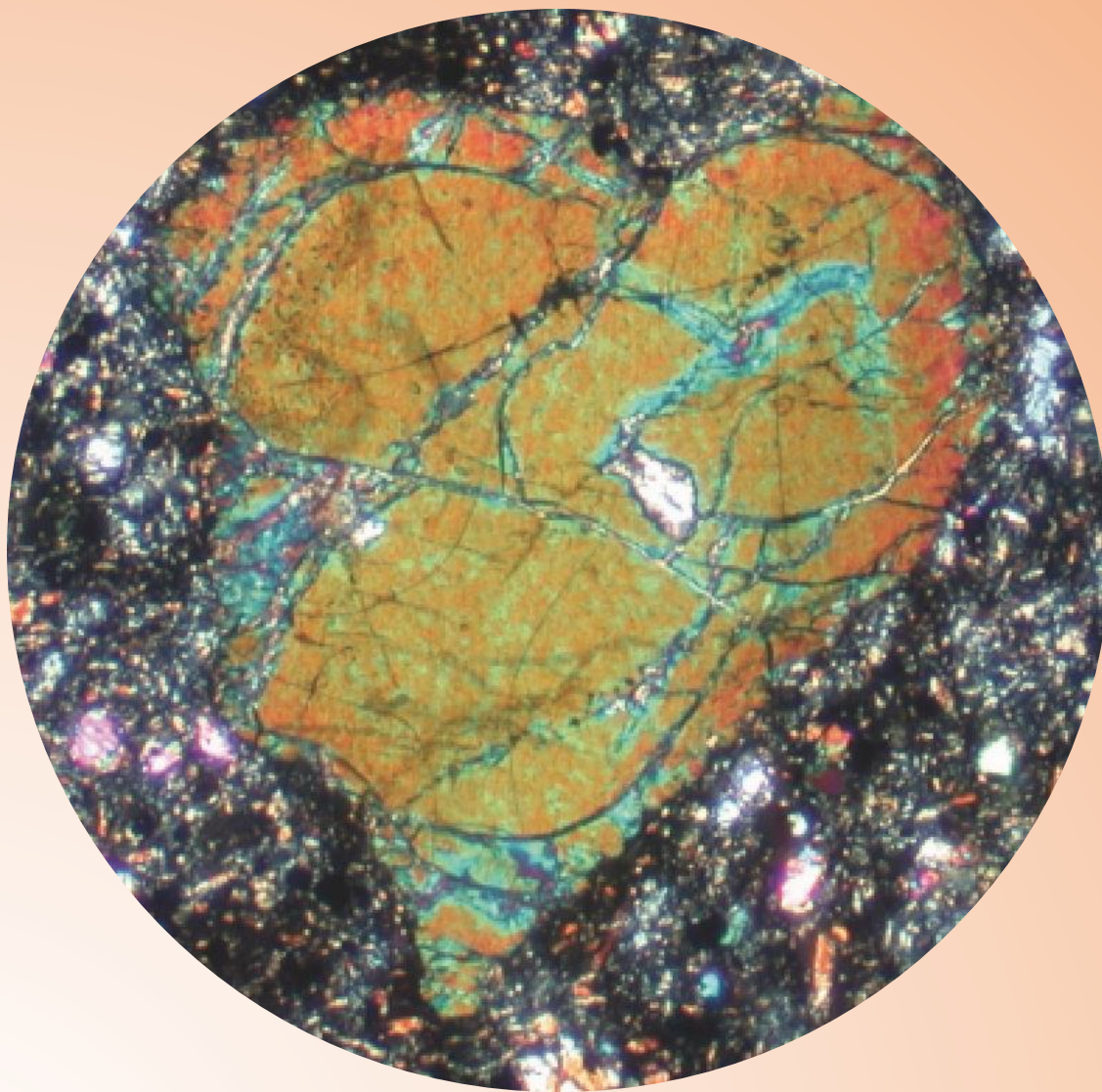


## Geologia

~~Studia il substrato  
immobile del pianeta  
Terra (rocce e minerali)~~

La scienza del tempo e  
del cambiamento





# **La Terra**

## **Un cuore che batte!**