



Università
degli Studi
di Ferrara



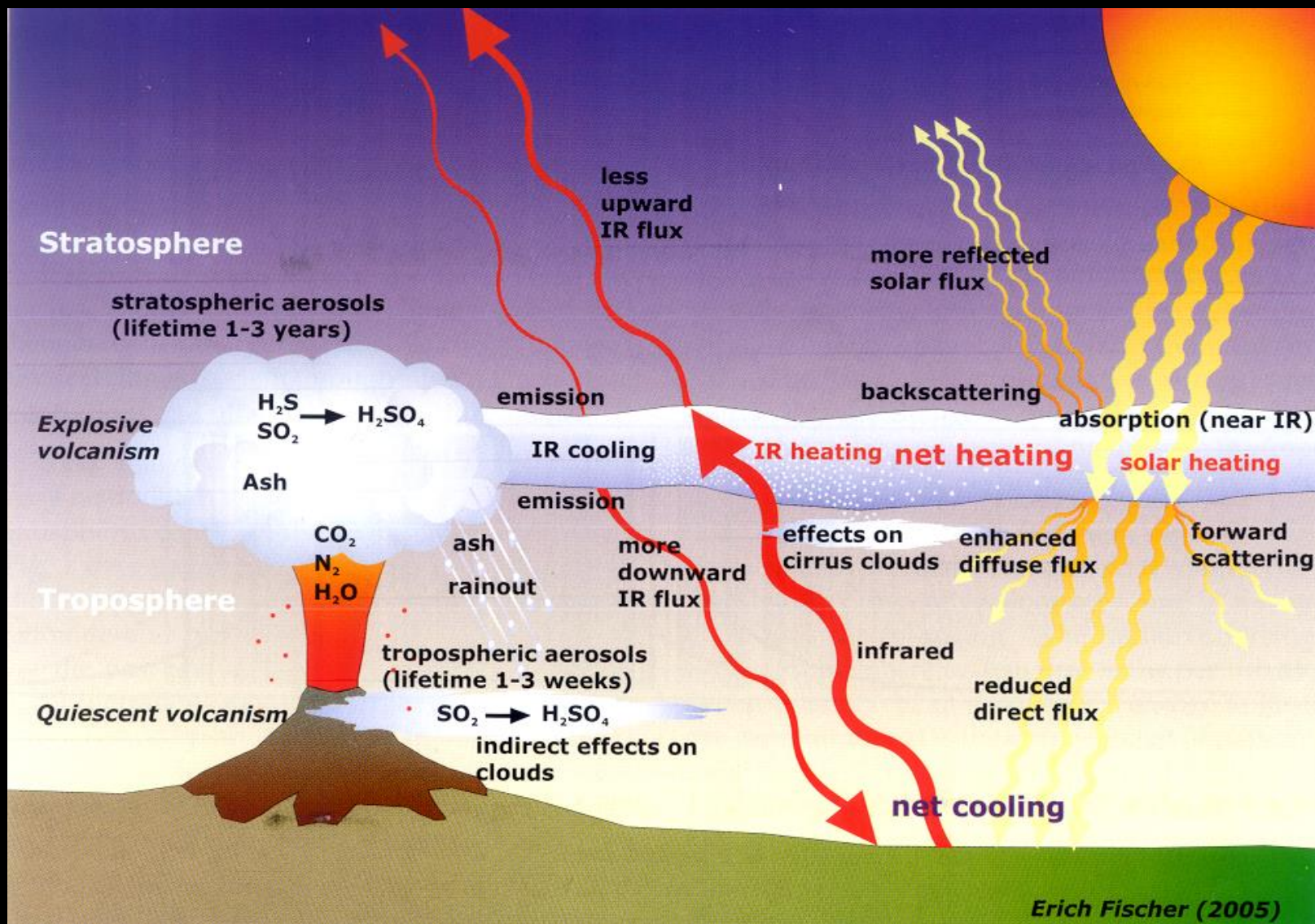
Ecologia Preistorica

Prof. Marco Peresani
A.A. 2021-2022

Lezione 8 – Cineriti vulcaniche (Tephra) e
tephrostratigrafia



Effetti del tephra sul clima



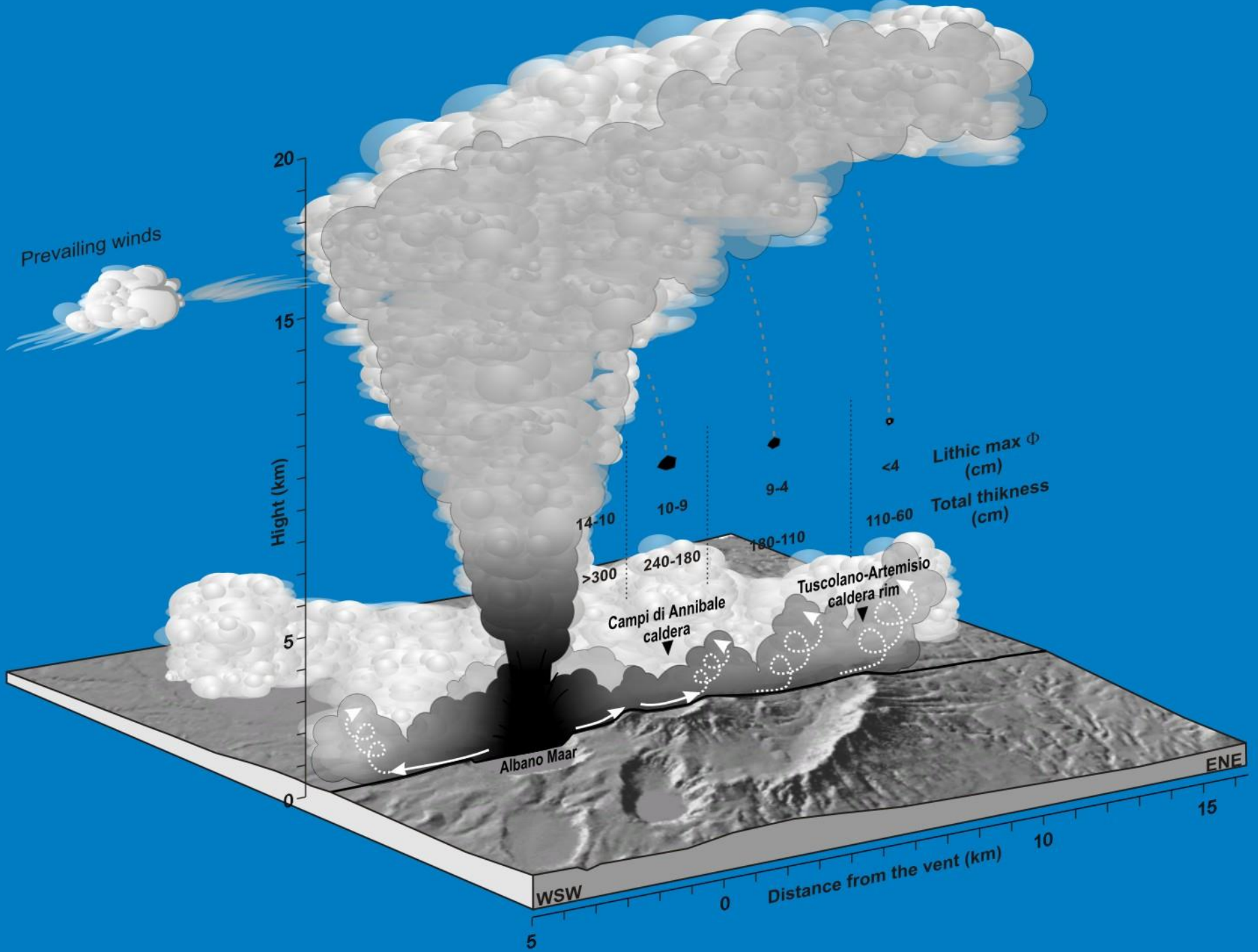
MATERIALI PIROCLASTICI

Bombe oltre i 64 mm di diametro

Lapilli tra i 2 e i 64 mm di diametro

Ceneri sotto i 2 mm di diametro





Prevailing winds

20
15
5
0
Height (km)

5
0
WSW

0 10 15
Distance from the vent (km)

ENE

Albano Maar

Campi di Annibale caldera

Tuscolano-Artemisio caldera rim

Lithic max Φ (cm)
Total thickness (cm)

14-10

10-9

9-4

<4

>300

240-180

180-110

110-60

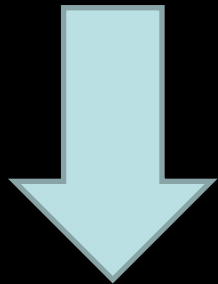


Granulo 40 μ



TEPHRA COME MARKER

Carotaggi a livello
continentale,
glaciale e marino



Depositi che
permettono una
datazione precisa



Sedimentary archives

Continental

Marine

Subaerial

Lacustrine

Archaeological

Tephra

Events/Processes

morpho-
pedo-
sedimentary

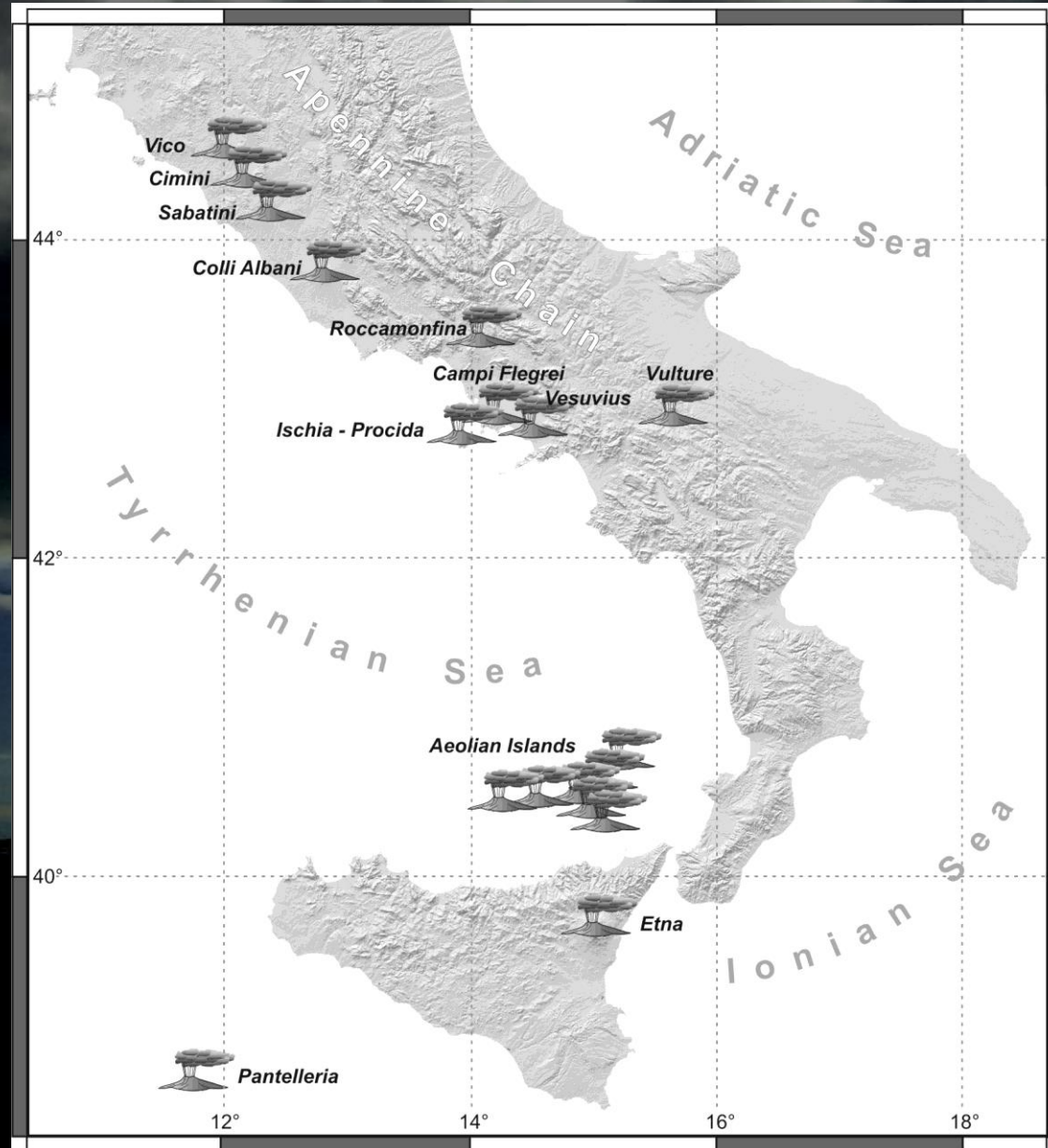
Climatic-
environmental

cultural

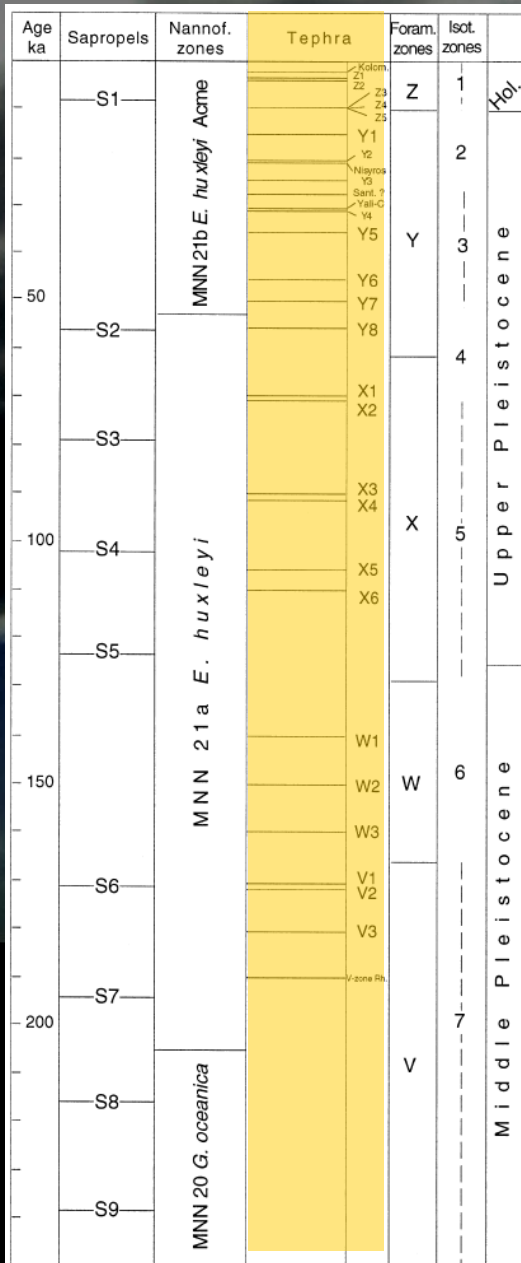
Climatic-
environmental

The simultaneous deposition of the tephra layers in different sedimentary settings, allows to precisely synchronise a number of events and processes recorded in the natural and archaeological archive, with significant implication in terms of evaluation of their potential interdependence.

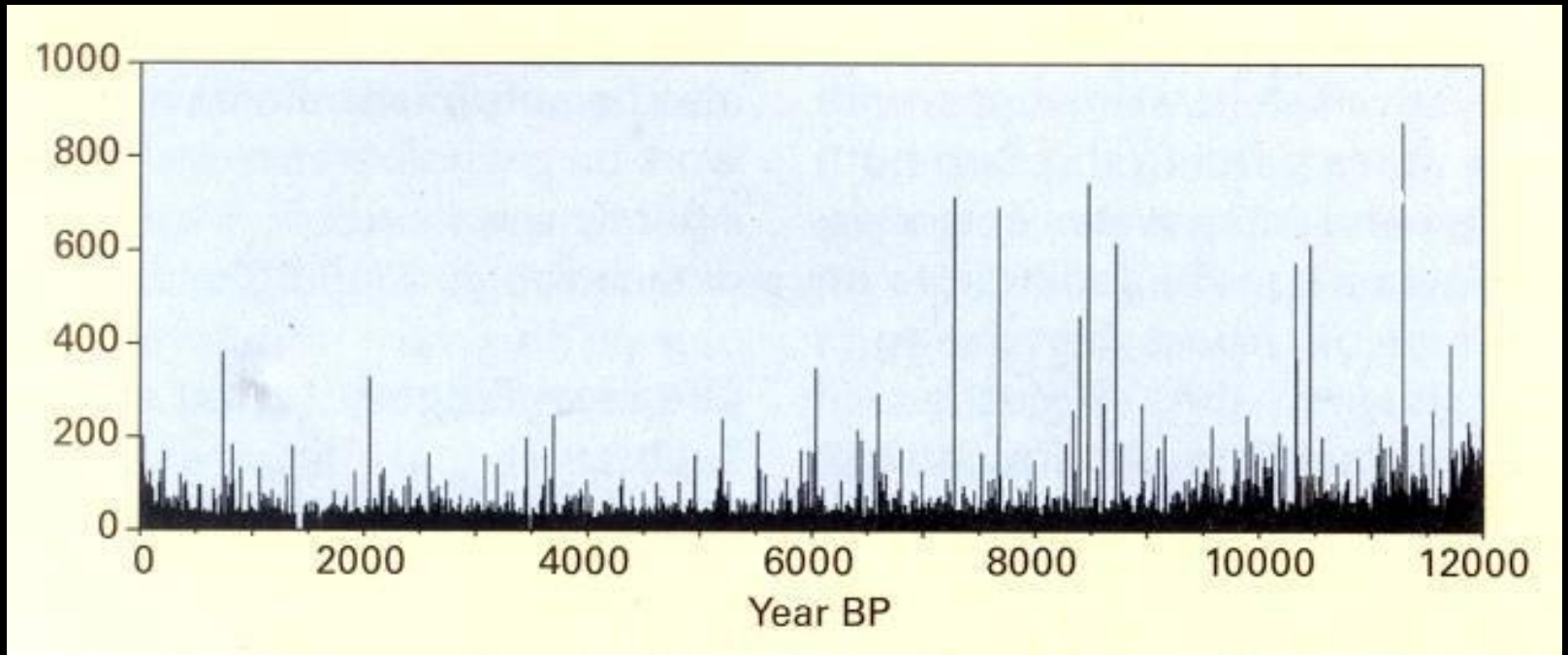
Quaternary active volcanoes in central Mediterranean area



Quaternary active volcanoes in central Mediterranean area

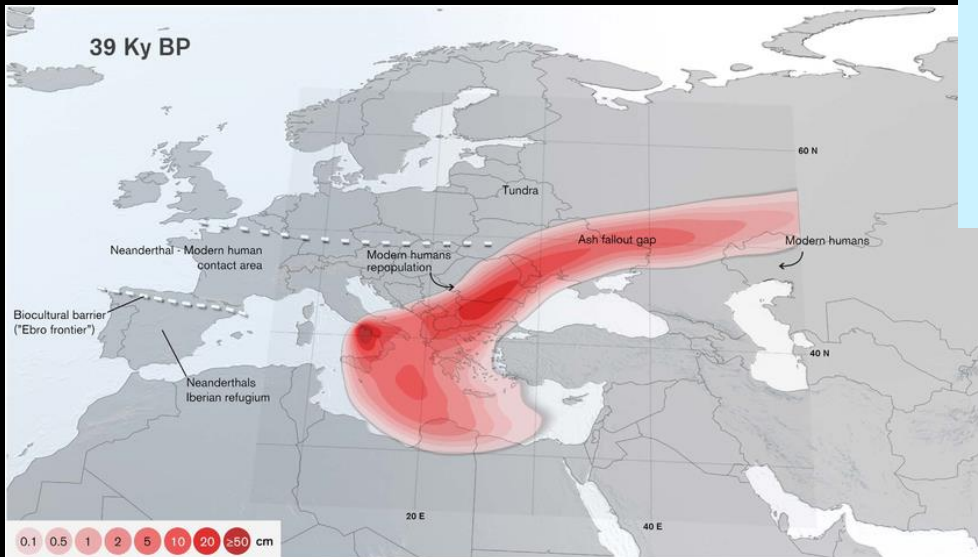


Livelli di Tephra nell'Olocene GISP2

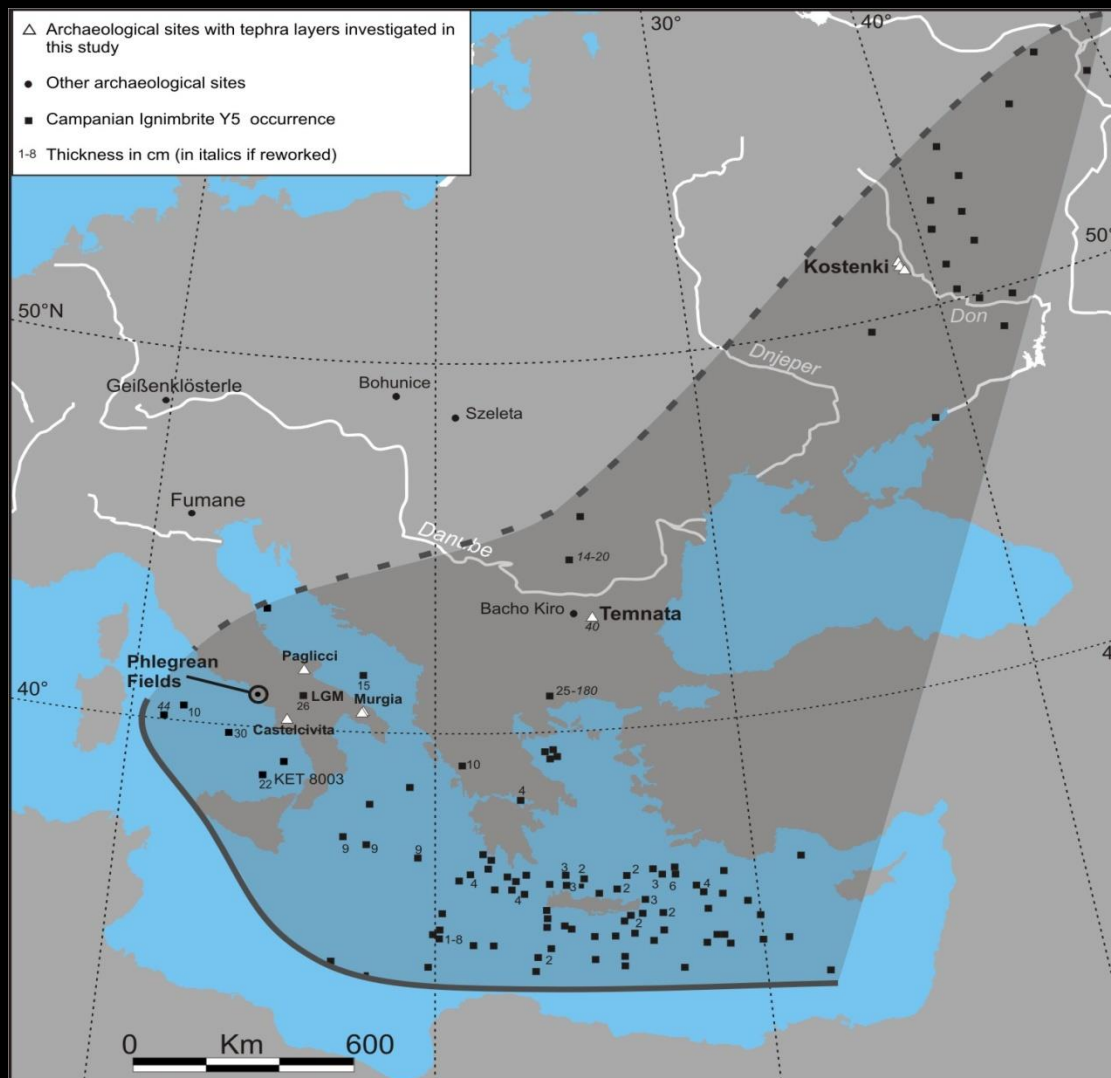


Y5 IGNIBRITE CAMPANA

39300 anni fa le ceneri eruttate coprono un'area che si estese dalla Groenlandia fino all'Ungheria, raggiungendo siti lungo il Don



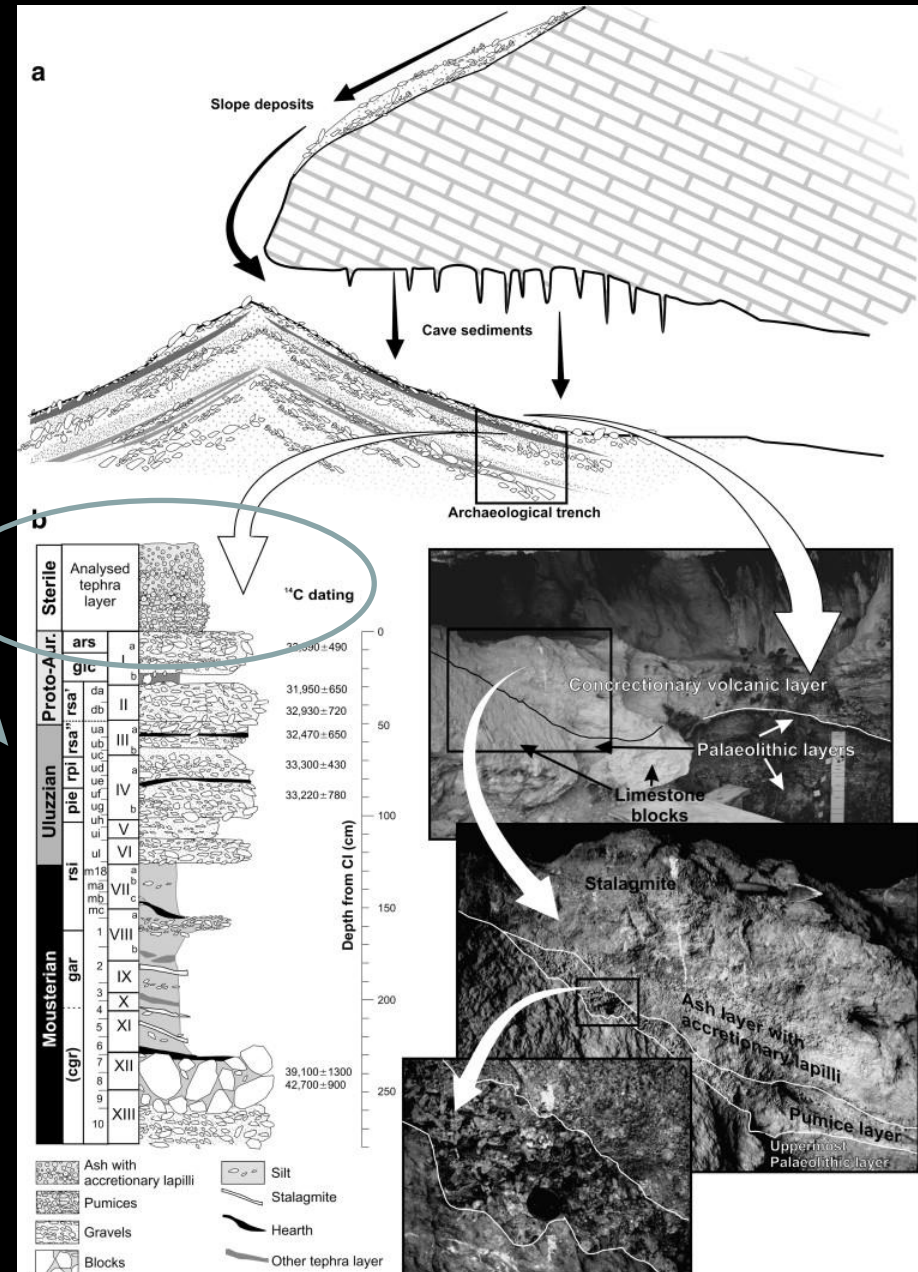
The Campanian Ignimbrite tephra derived from the most powerful eruption of the Mediterranean basin occurred in Campi Flegrei caldera ca. 40 ka.



GROTTA DI CASTELCIVITA

Progressiva estinzione del Neanderthal e sopravvivenza del Sapiens

Record stratigrafico col ritrovamento di un deposito di ignimbrite campana



GROTTA DEL CAVALLO

Inizio degli scavi negli
anni '60

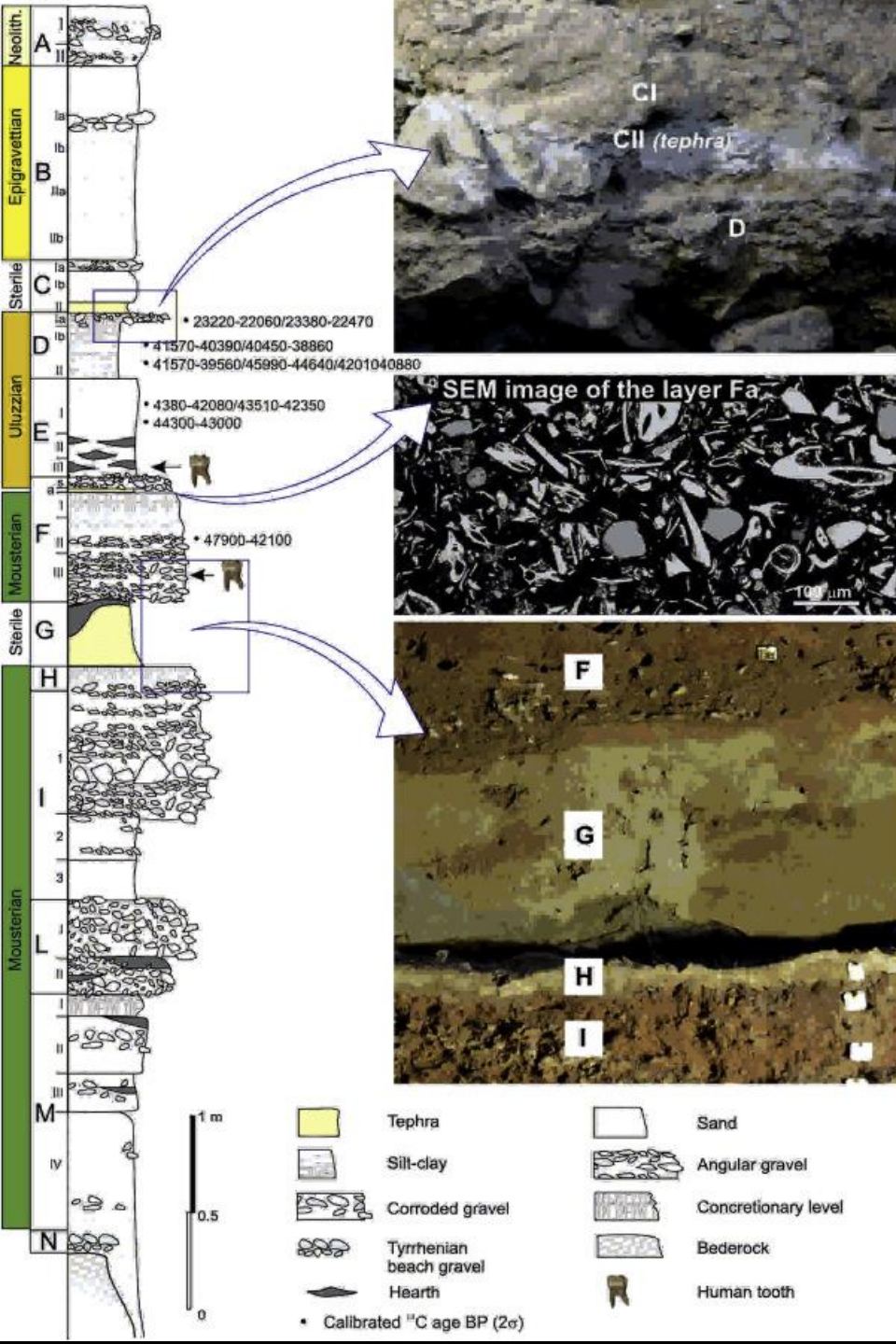
8 metri di profondità,
sette livelli



Tre strati sterili

- C Trachite e Fonolite
- Fa Pantellerite
- G Trachite omogenea + silice

I livelli C e G
presentano
frammenti vitrei
corrispondenti al CI



Posizione cronologica ignimbrite campana

