Rift Valley Sites
dating

Gona site, Ethiopia
Volcanic ash layers

Stratigraphy
- Relative age ("older than X")

Radio-metric Dating
- Potassium-Argon method

Correlations
- Paleomagnetic stratigraphy
- Bio-stratigraphy

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How can we date tuffs?

Radiometric Dating (Images pp 22-23)
- Radioactive isotopic decay
  - Volcanic rocks & ashes (tuffs)
  - Potassium - Argon
  - $K^{40} \rightarrow Ar^{40}$
  - Half-life = 1.3 billion years
    - ratio $K/Ar$ or $Ar^{40}/Ar^{39}$

Gona site, Ethiopia
Volcanic ash layers

K/Ar demo

Gona site, Ethiopia
Volcanic ash layers

Best date for site?
Should we date the lava artifacts?
More dating evidence??
- Paleomagnetic correlations

Gona site
- How does paleomag info help?

Biostratigraphy
- Evolution of species
  - Marker species
- Correlation

Suids

Gona site, Ethiopia
- pigs, zebra, elephant

Olduvai Gorge
Challenge:

- How old is the FLK-Zinj site?