

Three giant leaps in the evolution of photosynthesis and atmospheric response

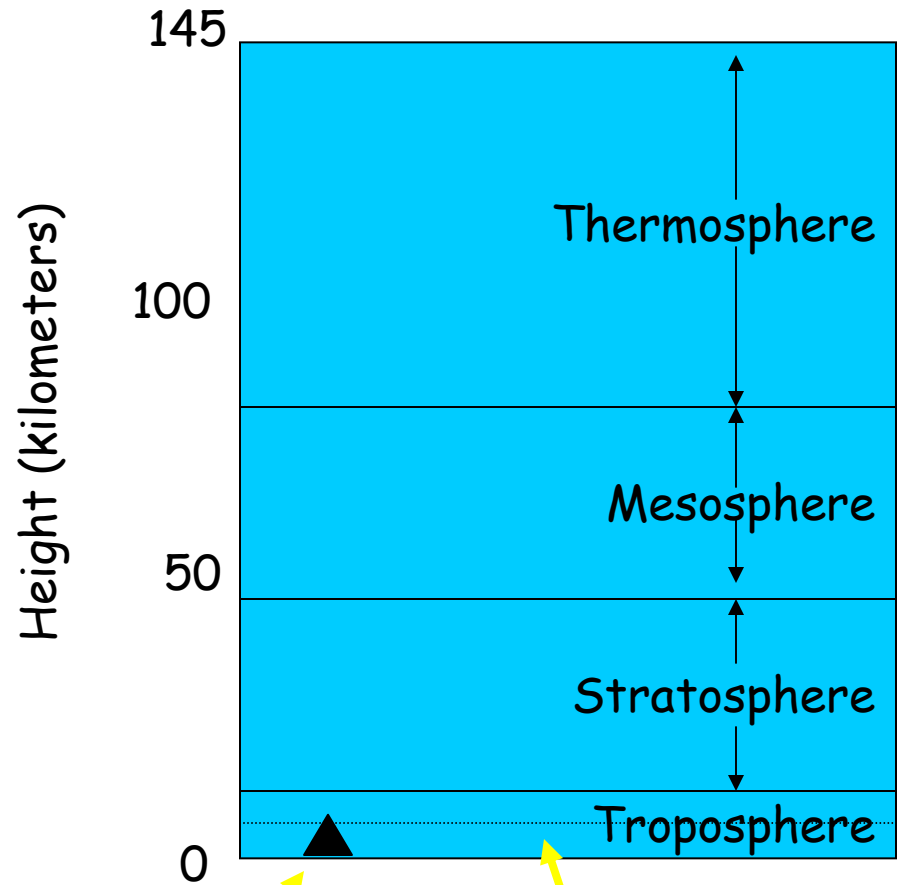
Xiong & Bauer 2002, Science

Where has this oxygen production gone?



Banded iron formations

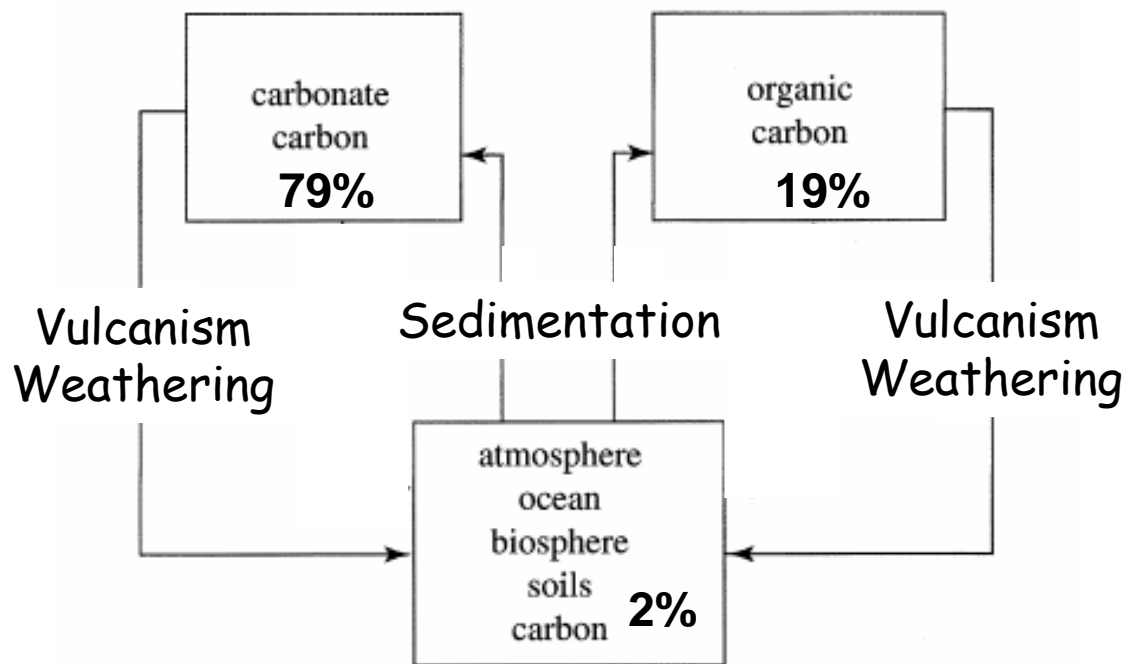
Major sections of the atmosphere



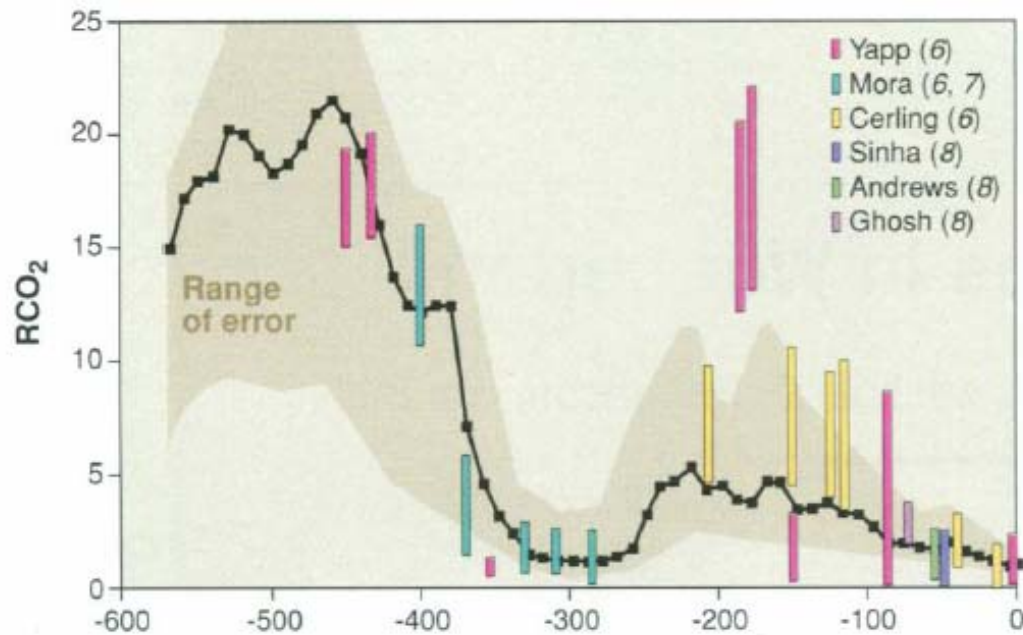
Mt. Everest

Extent of
breathable
atmosphere

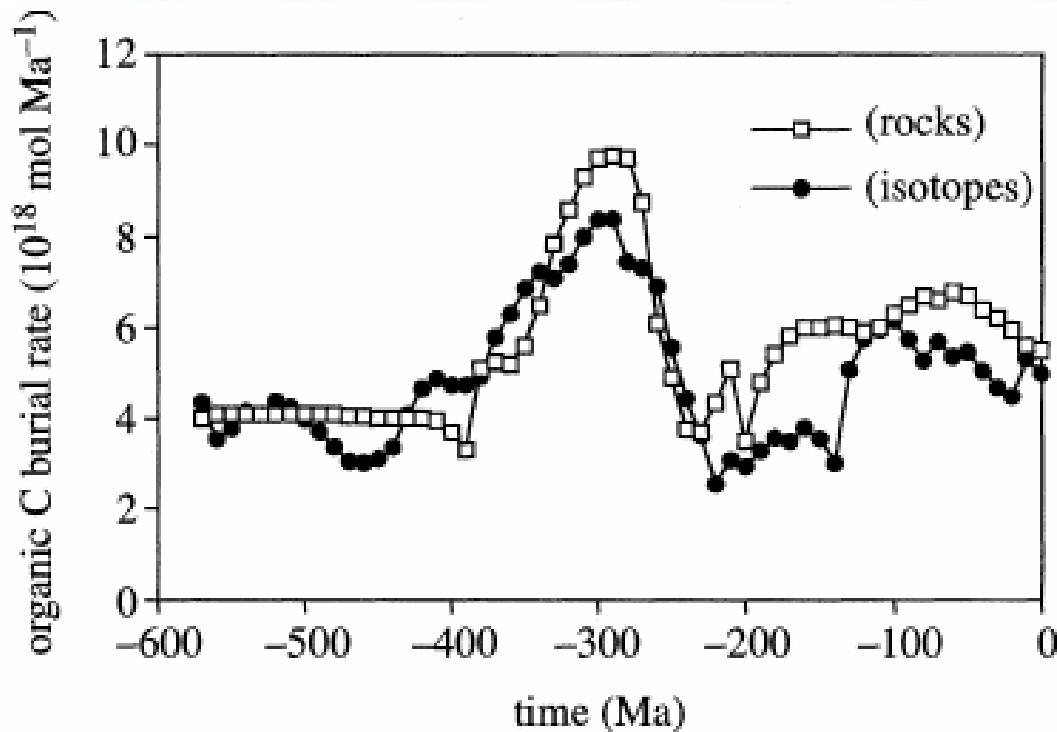
Photosynthesis, carbon and surface, sub-surface transfer



Photosynthesis facilitated the expansion of a geophysical process that changed the Earth



Carbon
sedimentation
rates and CO₂
concentration in
the atmosphere



Berner 1997,
Science; Berner et
al., 1998

Global distribution of photosynthetic production

