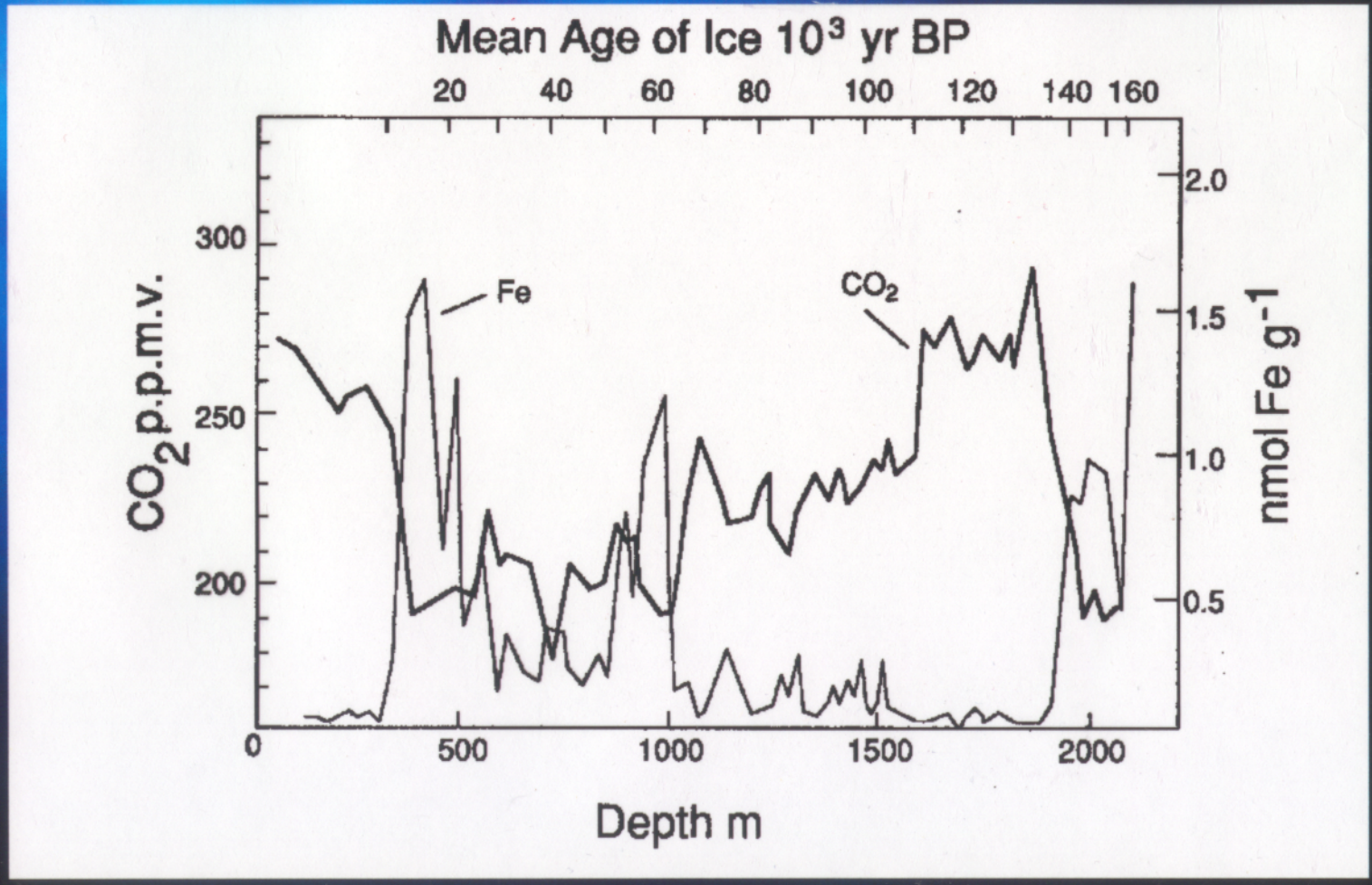
Table 1.2 Estimated Sources and Sinks of Methane

	Annual Release (Tg CH_4)	Range (Tg CH_4)
Source		
Natural Wetlands (bogs, swamps, tundra, etc)	115	100 - 200
Rice Paddies	110	25 - 170
Enteric Fermentation (animals)	80	65 - 100
Gas Drilling, venting, transmission	45	25 - 50
Biomass Burning	40	20 - 80
Termites	40	10 - 100
Landfills	40	20 - 70
Coal Mining	35	19 - 50
Oceans	10	5 - 20
Freshwaters	5	1 - 25
CH_4 Hydrate Destabilization	5	0 - 100
Sink		
Removal by soils	30	15 - 45
Reaction with OH in the atmosphere	500	400 - 600
Atmospheric Increase	44	40 - 48

IRON AND ATMOSPHERIC CO_2 FROM VOSTOCK



FROM MARTIN ET AL, PALEOCEAN. 5,1-13 (1990)

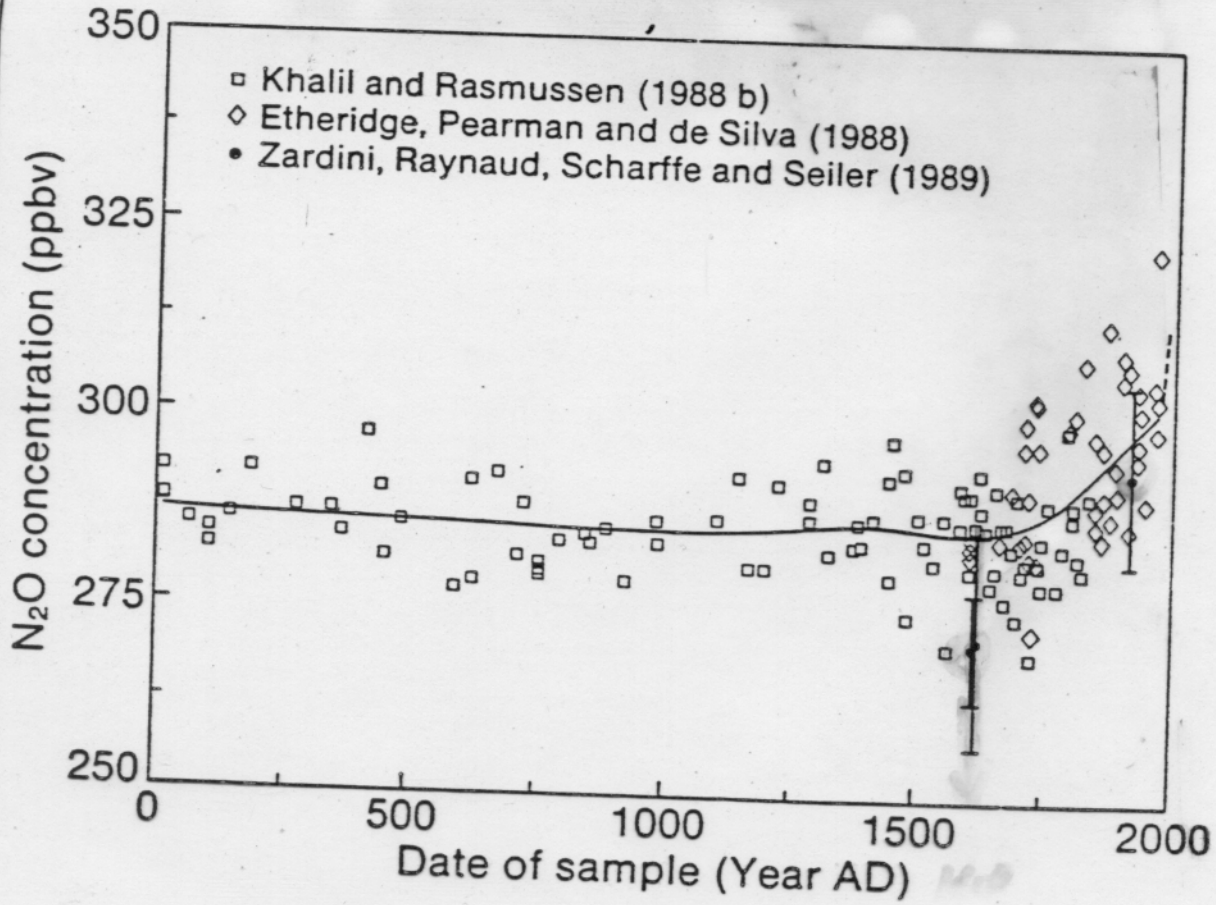


Figure 1.14: Nitrous oxide measurements from ice-core samples.

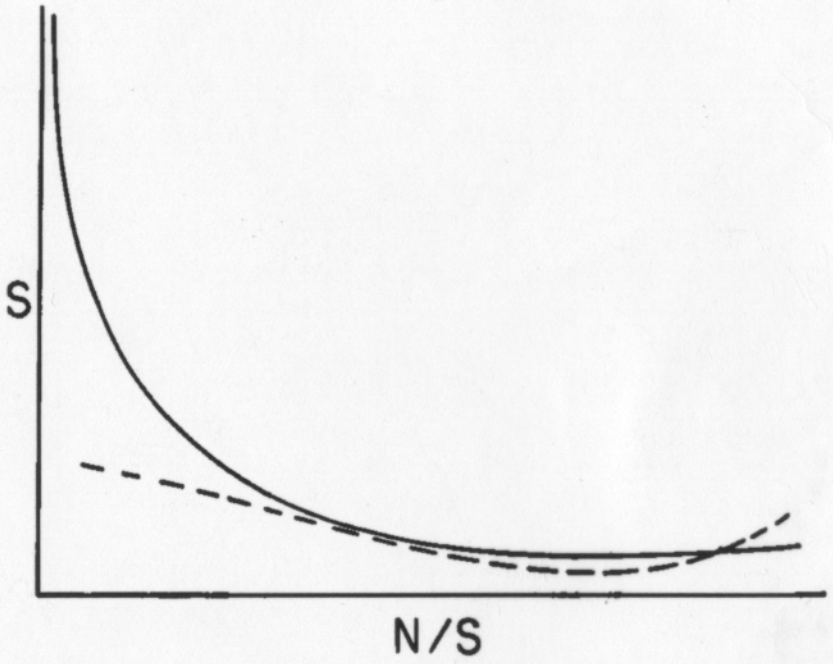


Figure 6–4. General relationship between the number of species (S) and the number of individuals per species (N/S). Most natural communities contain a few species with large numbers of individuals (the common or dominant species) and many species, each represented by a few individuals (the rare species). Rigorous physical environment, pollution, or other stresses will tend to flatten the curve, as shown by the dotted line.

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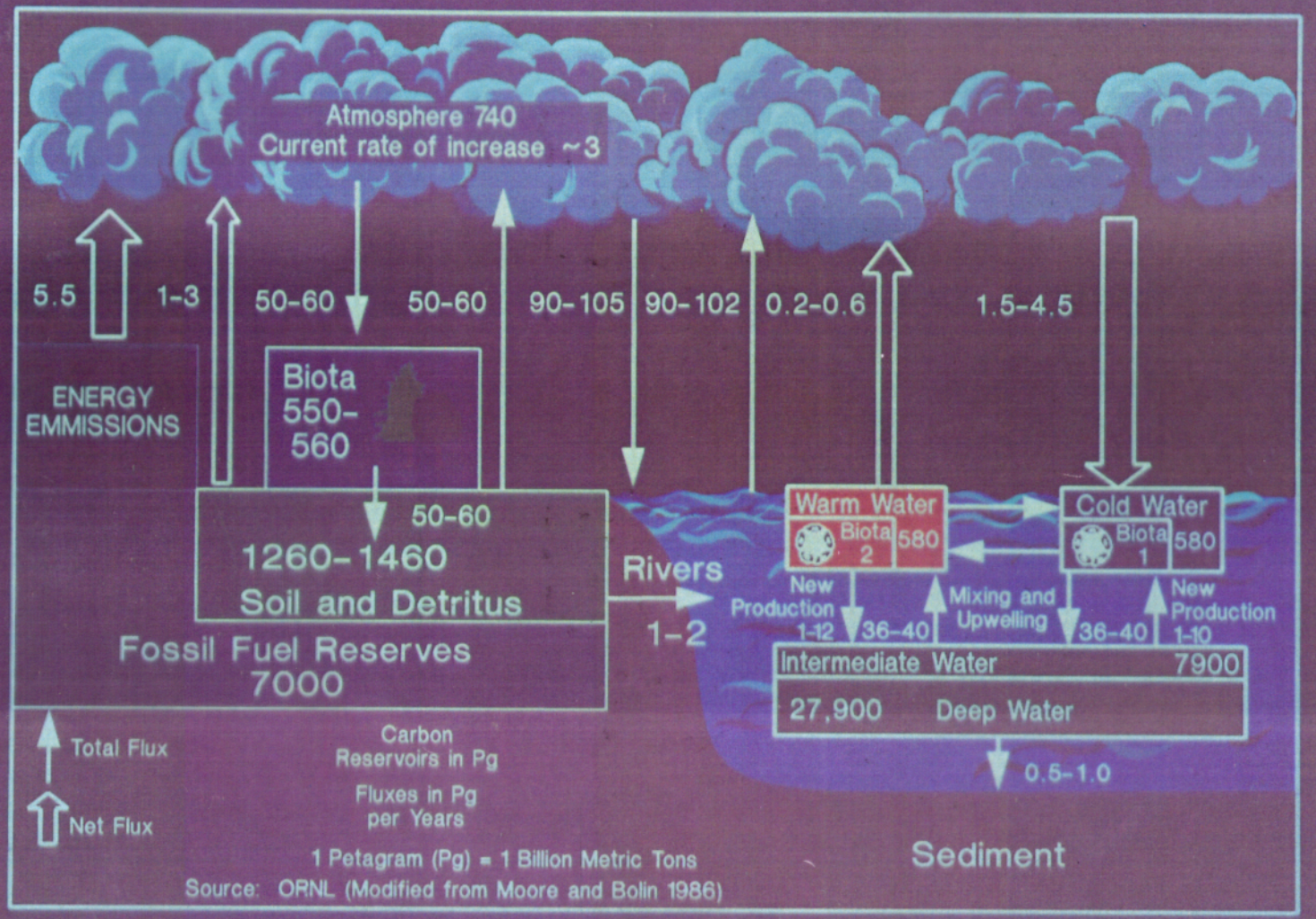
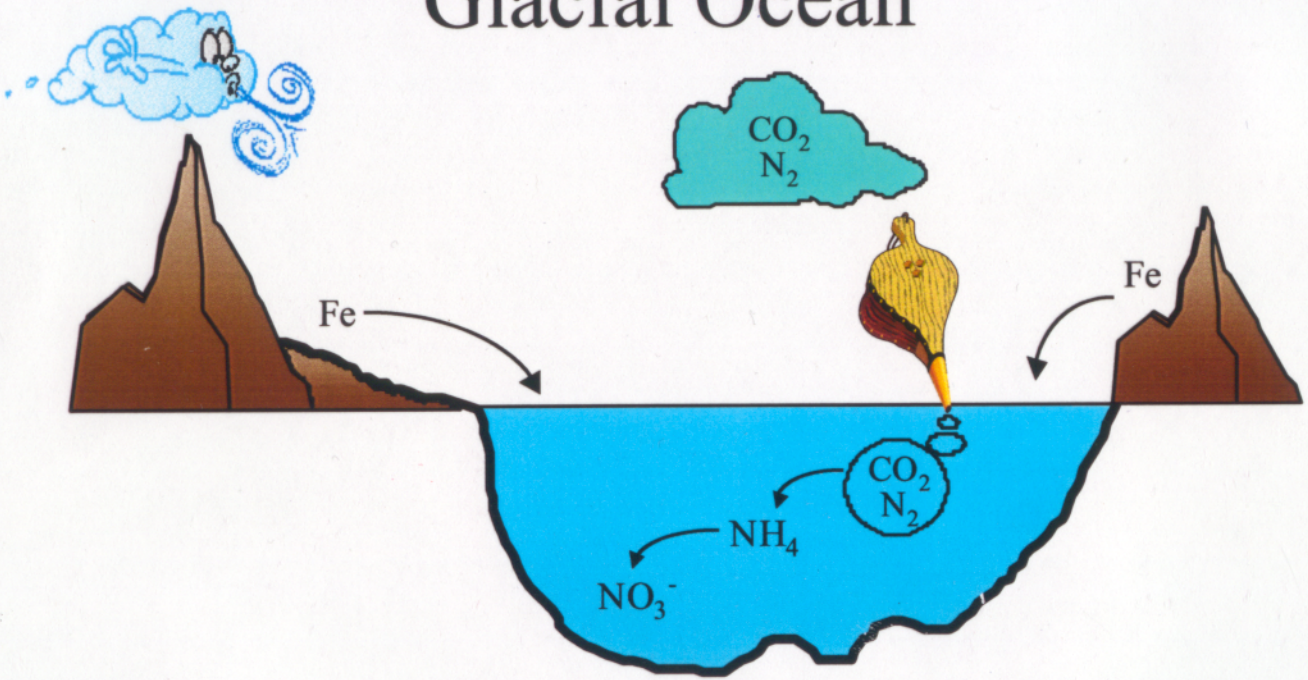
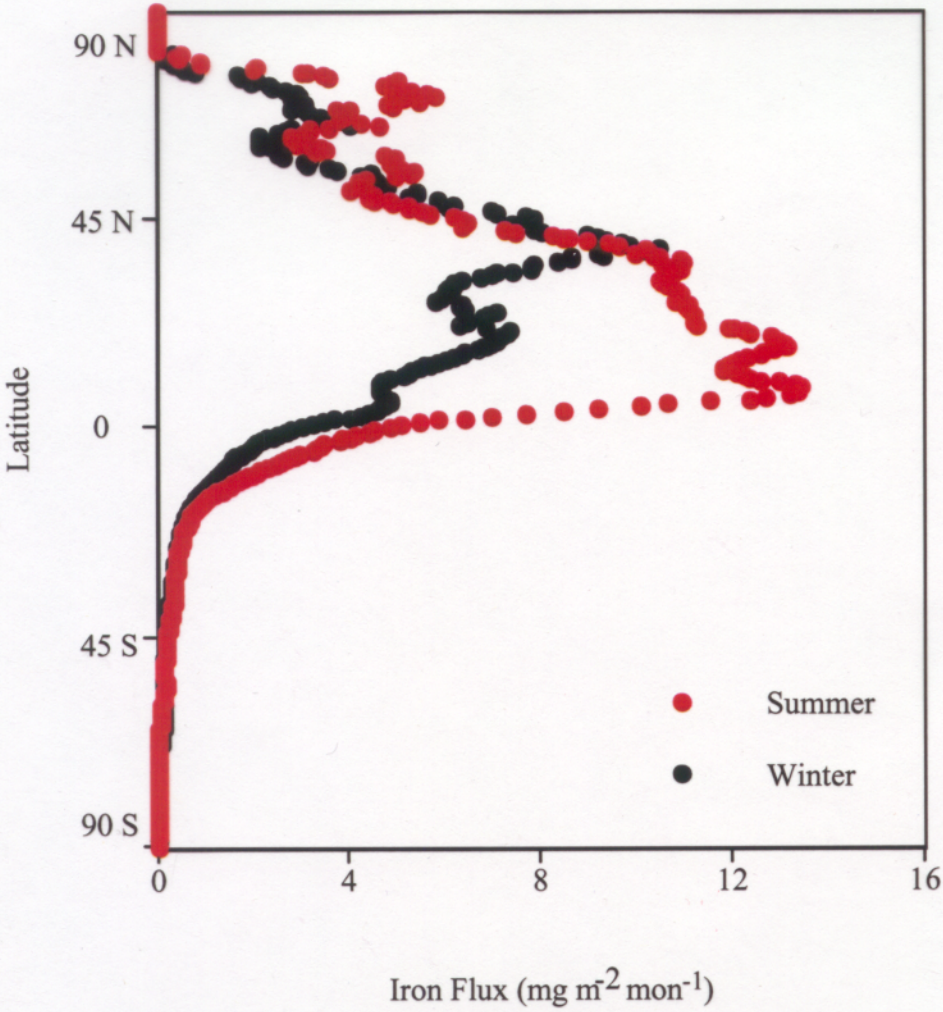
CARBON CYCLE



Glacial Ocean




90 N
45 N
0
45 S
90 S
Latitude
0
4
8
12
16
Summer
Winter
Iron Flux (mg m-2 mon-1)

GLOBAL RADIATION BUDGET AT TOP OF THE ATMOSPHERE

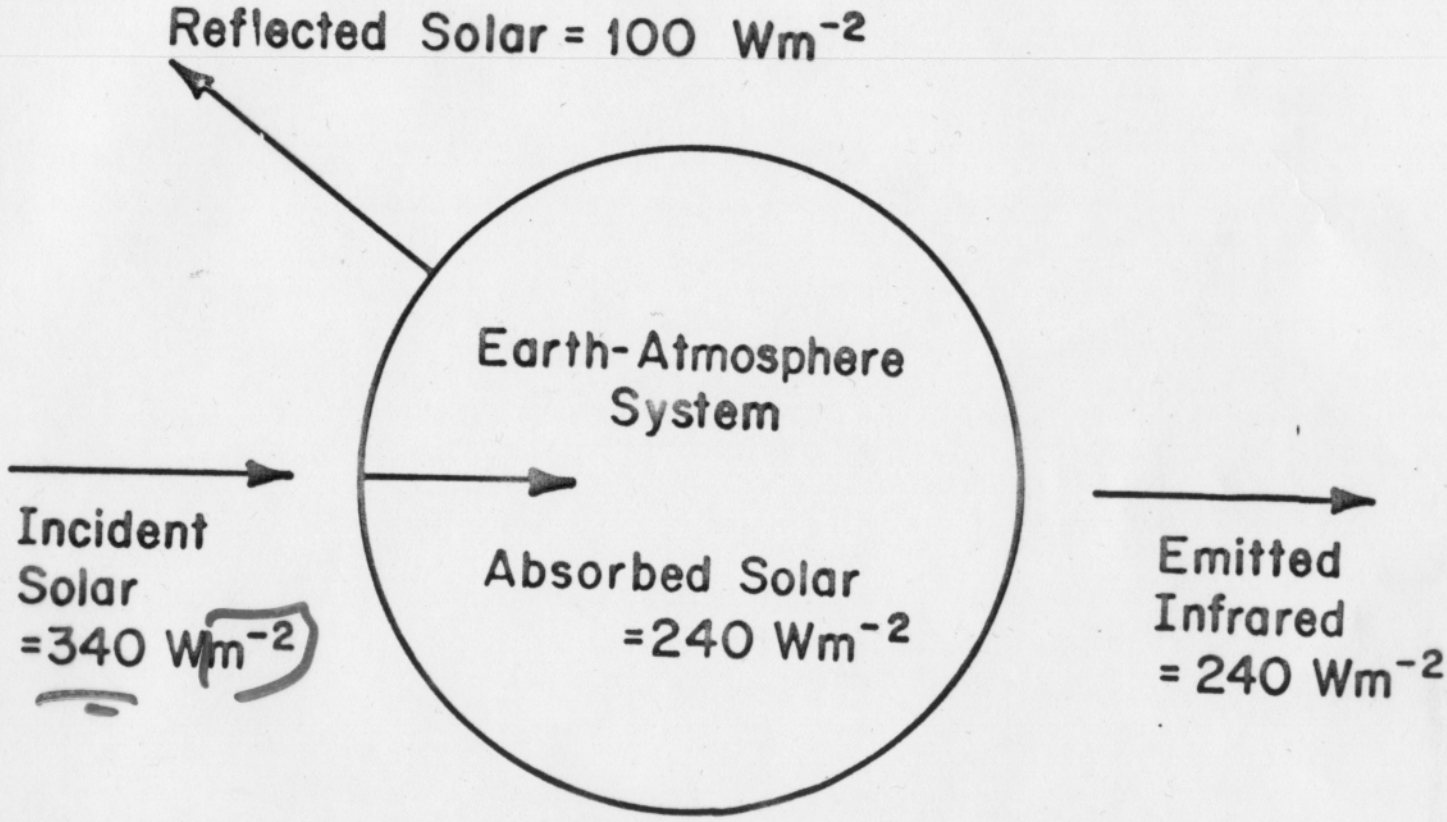


Fig. 7.4. Components of precession: (a) axial precession akin to that of a spinning top; (b) precession effect due to changes in elliptical orbit; (c) combined effect of the two results in a slow shift of the equinox through the earth's elliptical orbit. [From Pisias and Imbrie, 1986/87] *Courtesy of Oceanus Magazine (©) 1986 by Woods Hole Oceanographic Institution.*