

Figure 1. The locations of Ocean Drilling Program (ODP) sites 980-984 in the North Atlantic and site 926 on the Ceara Rise in the western equatorial Atlantic. [from Ortiz et al. *Paleoceanography*, 14, 171-186, 1999]

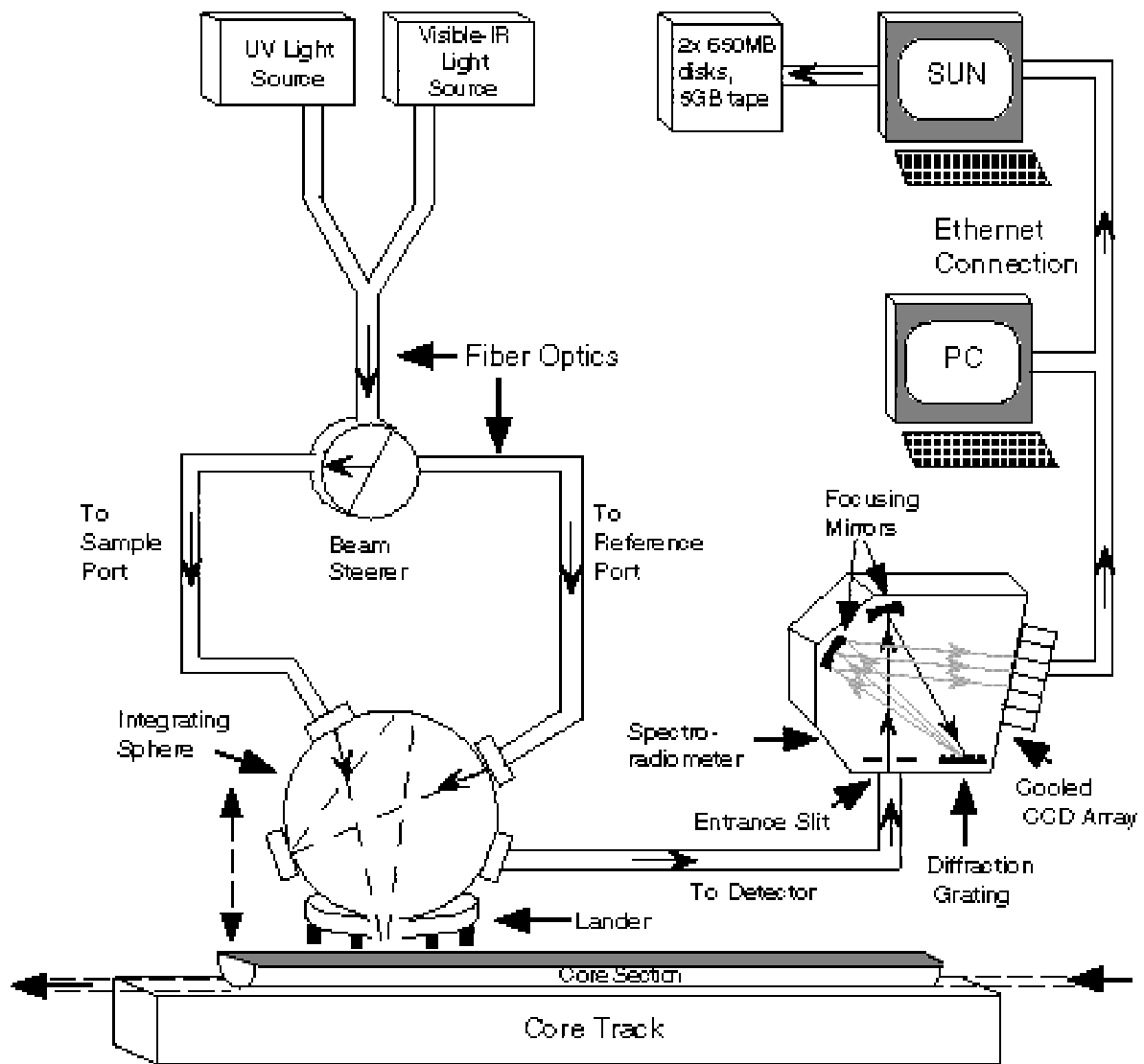


Figure 2. A schematic illustration of the major components of the Oregon State University split-core analysis track (OSU SCAT). Reprinted from *Ortiz et al.* [1999] with permission of the Ocean Drilling Program.

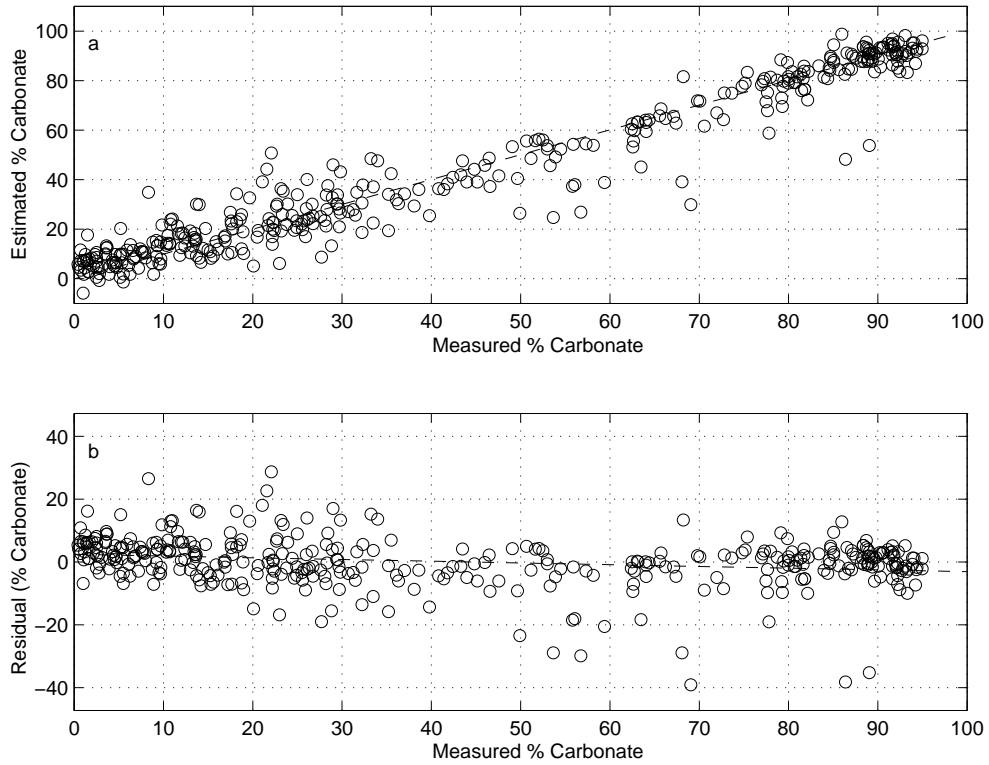


Figure 3. (a) Percent carbonate measured by coulometry versus percent carbonate estimated by diffuse spectral reflectance for ODP sites in the North Atlantic. (b) Residual errors in reflectance-based carbonate estimates as a function of carbonate measured by coulometry. [from Ortiz et al. *Paleoceanography*, 14, 171-186, 1999]

Reflectance based proxy % carbonate: Leg 162, Sites 980–984

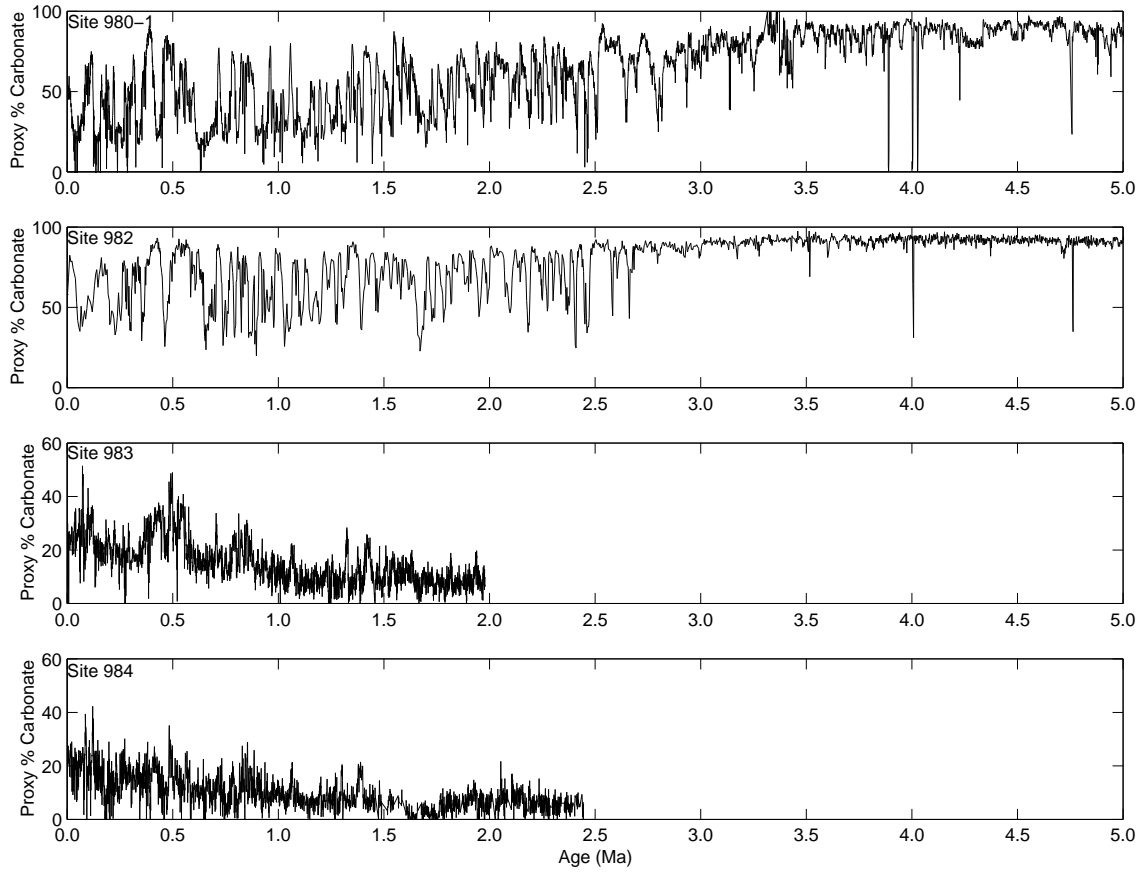


Figure 4. North Atlantic carbonate estimates derived from percent reflectance using the transfer function described in the text. Data are plotted as a function of age using a preliminary age model based on biostratigraphy and magnetostratigraphy. [from Ortiz et al. *Paleoceanography*, 14, 171-186, 1999]

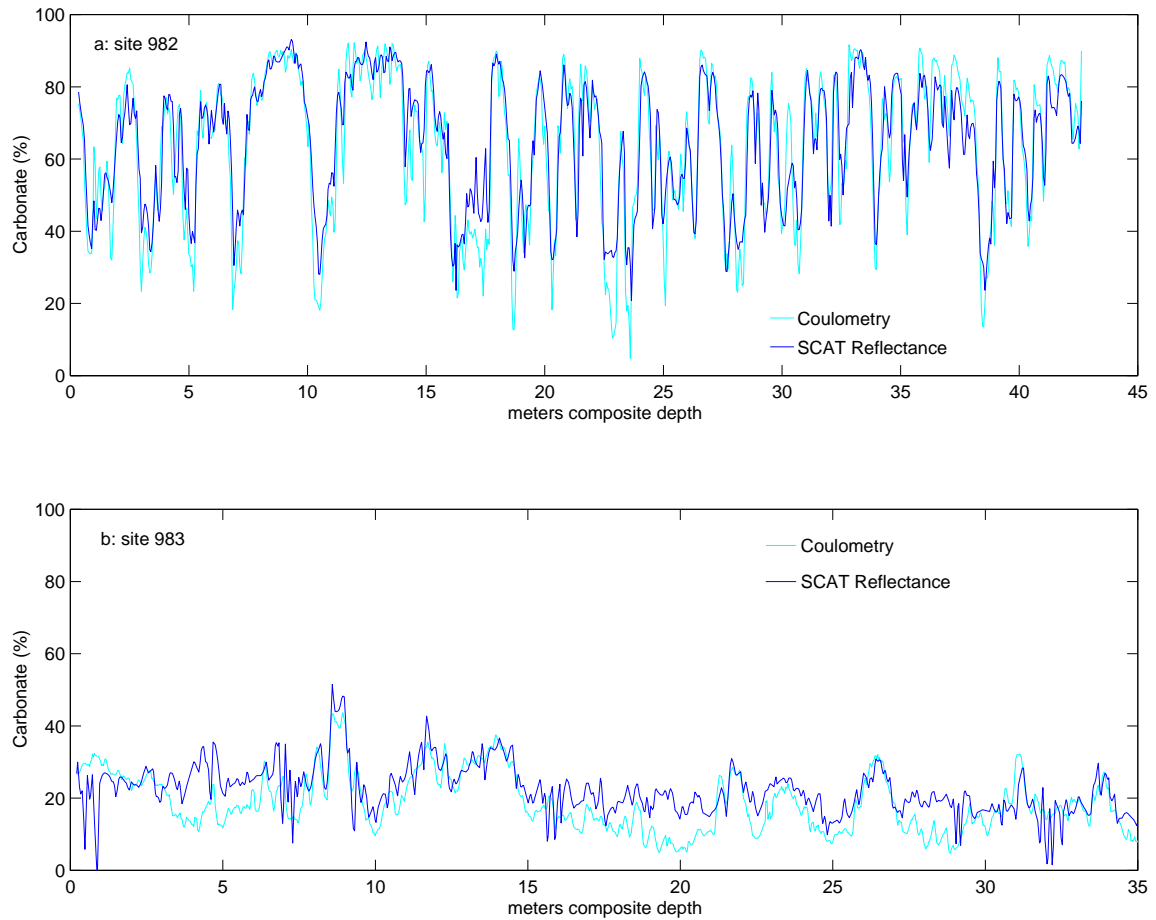


Figure 5. Validation of the reflectance-derived carbonate transfer function using coulometric carbonate data from (a) the Rockall Bank (site 982) and (b) the Gardar Drift (site 983). The 5 cm resolution coulometric carbonate measurements were smoothed with a two point running mean to approximate the 4-8 cm resolution of the reflectance measurements. Coulometric carbonate data from *Venz et al. [1999]* (site 982 on the Rockall Bank) and *Channell et al. [1997]* (site 983 on the Gardar Drift) are independent of the data used to construct the transfer function presented in the text. [from Ortiz et al. *Paleoceanography*, 14, 171-186, 1999]

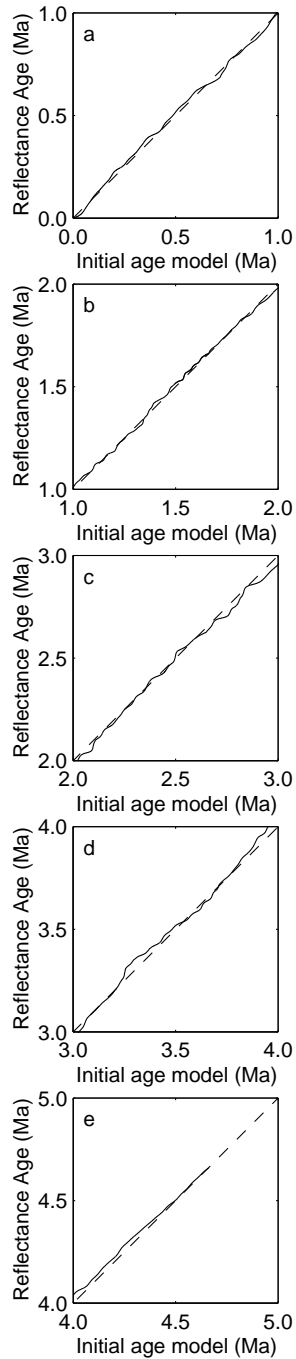


Figure 6. Feni Drift age-age mapping function for (a) 0 - 1, (b) 1 - 2, (c) 2 - 3, (d) 3 - 4, and (e) 4 - 5 Ma time intervals. The mapping function is derived by inverse correlation of the reflectance-derived carbonate records from the sites on Feni Drift and the Ceara Rise as explained in the text. [from Ortiz et al. *Paleoceanography*, 14, 171-186, 1999]

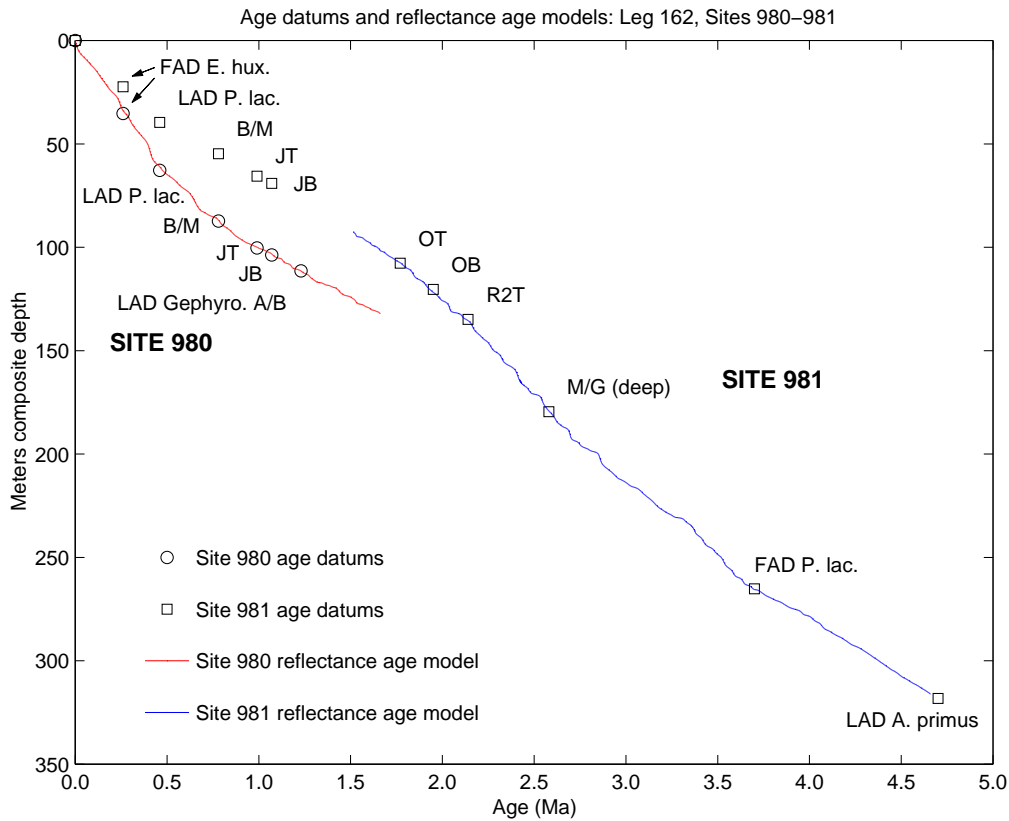


Figure 7. Depth-age plot for Feni Drift records from site 980 and site 981, ODP Leg 162. Open circles and stars refer to biostratigraphic and paleomagnetic datums determined for sediments from sites 980 and 981, respectively [Leg 162 Shipboard Scientific Party, 1996a]. Solid lines represent the high-resolution age models developed by frequency mapping the reflectance-based carbonate record from sites 980 and 981 onto the reflectance-based carbonate record from Ceara Rise. For biostratigraphic events, FAD refers to first-appearance depth, while LAD refers to last-appearance depth. Abbreviations for marker species are E. hux., *Emiliana huxleyi*; P. lac, *P. lacunosa*; Gephyro A/B, *Gephyrocapsa* spp. A/B, and A. primus, *A. primus*. Magnetostratigraphic events are B/M, Brunhes/Matuyama boundary; JT, top of Jaramillo; JB, bottom of Jaramillo; OT, top of Olduvai; OB, bottom of Olduvai; R2T, top of Reunion 2; and M/G (Deep), Matayama/Gauss boundary (deeper pick). [from Ortiz et al. *Paleoceanography*, 14, 171-186, 1999]

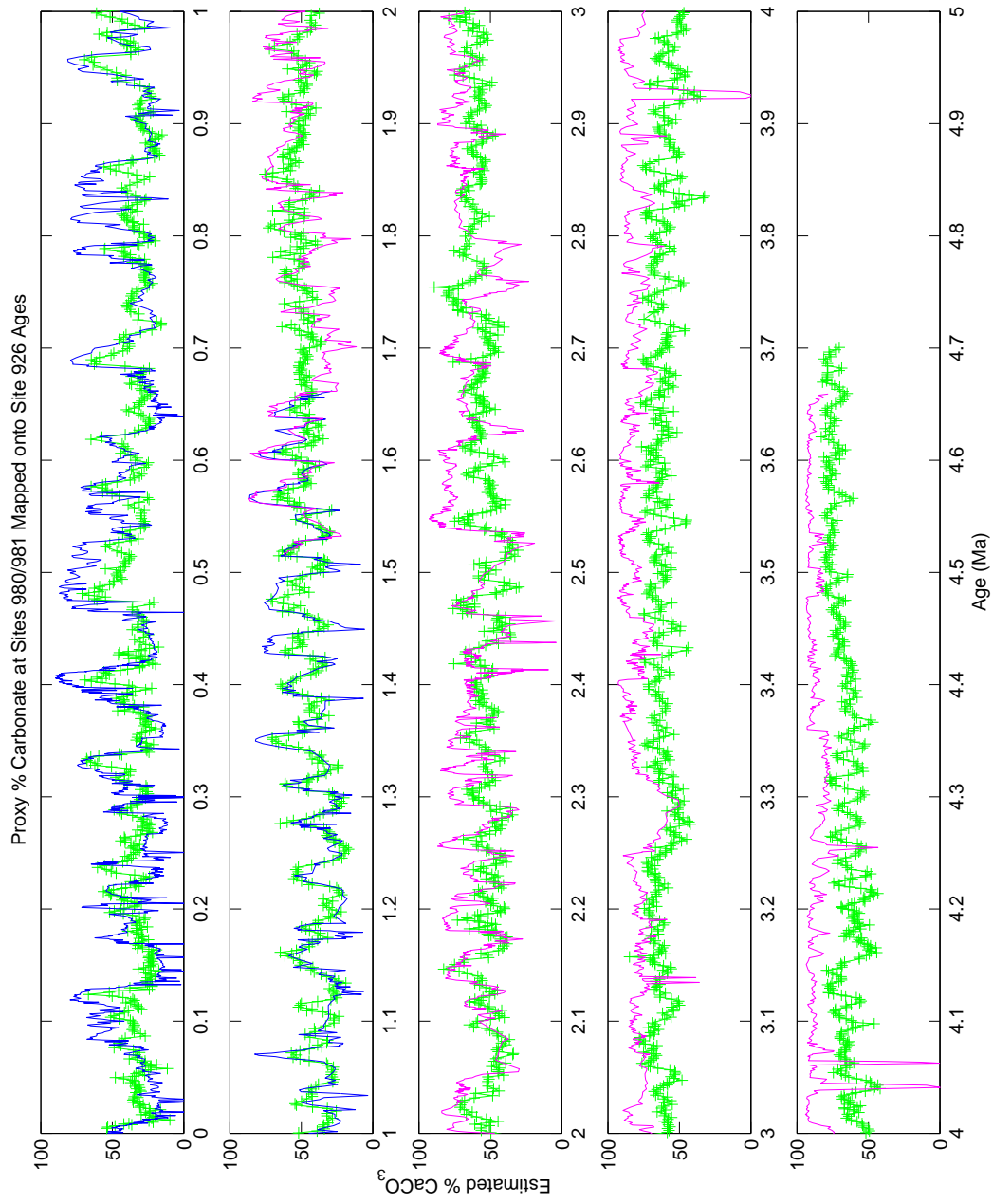


Figure 8. Reflectance-derived carbonate records for site 926 on the Ceara Rise and sites 980 and 981 on the Feni Drift plotted on the Ceara Rise age model using the age-age mapping function derived as part of this study. [from Ortiz et al. *Paleoceanography*, 14, 171-186, 1999]

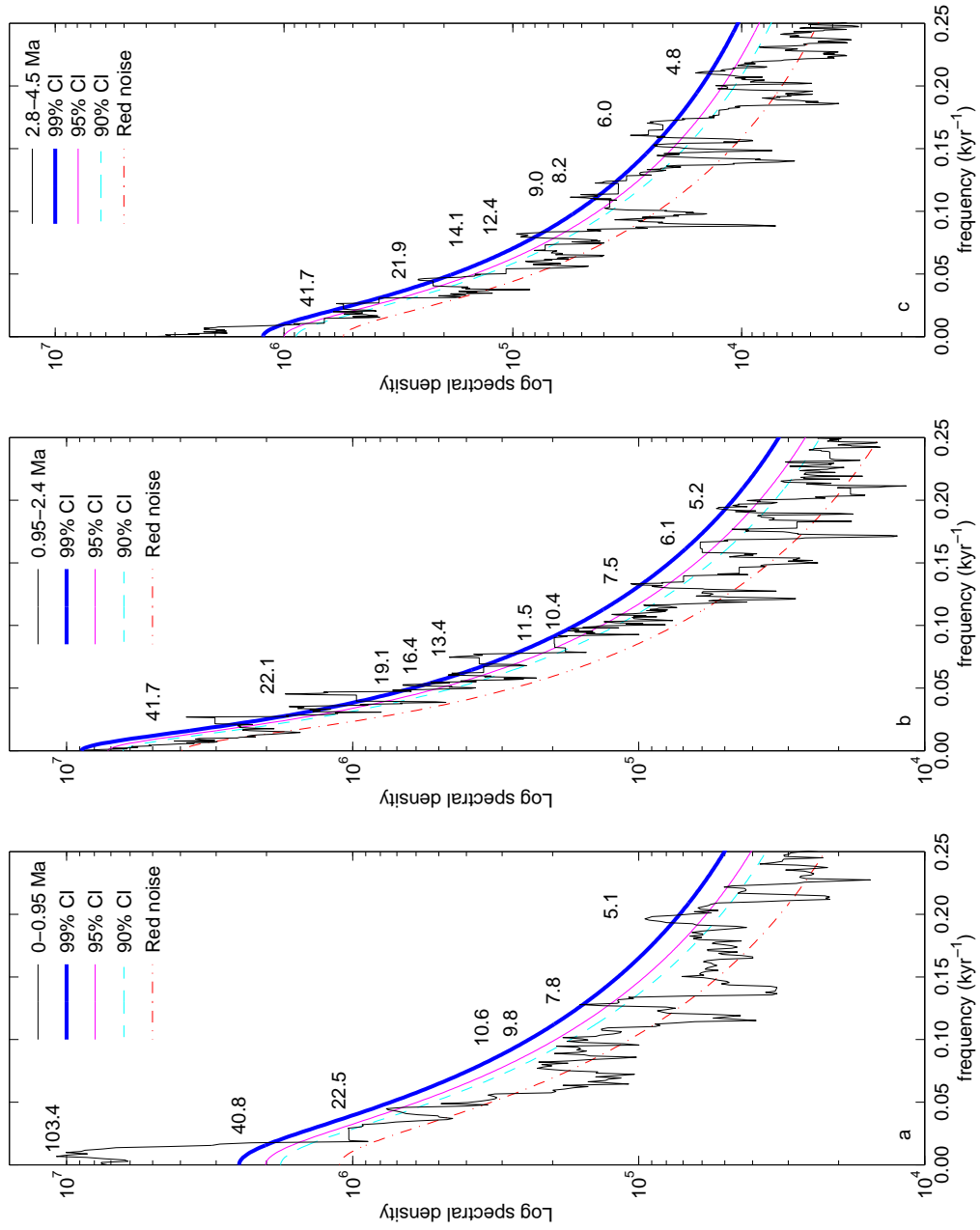


Figure 9. Multitaper power spectra for proxy percent carbonate at Feni Drift for time interval from (a) 0 to 0.95, (b) 0.95 to 2.4, and (c) 2.8 to 4.5 Ma. All spectra are calculated with a time-bandwidth resolution of four and seven tapers. Significance levels at 90%, 95%, and 99% are derived from confidence intervals relative to a robust, median, red noise background [Mann and Lees, 1996]. Significant spectral peaks are labeled by period in kyr. [from Ortiz et al. Paleocceanography, 14, 171-186, 1999]

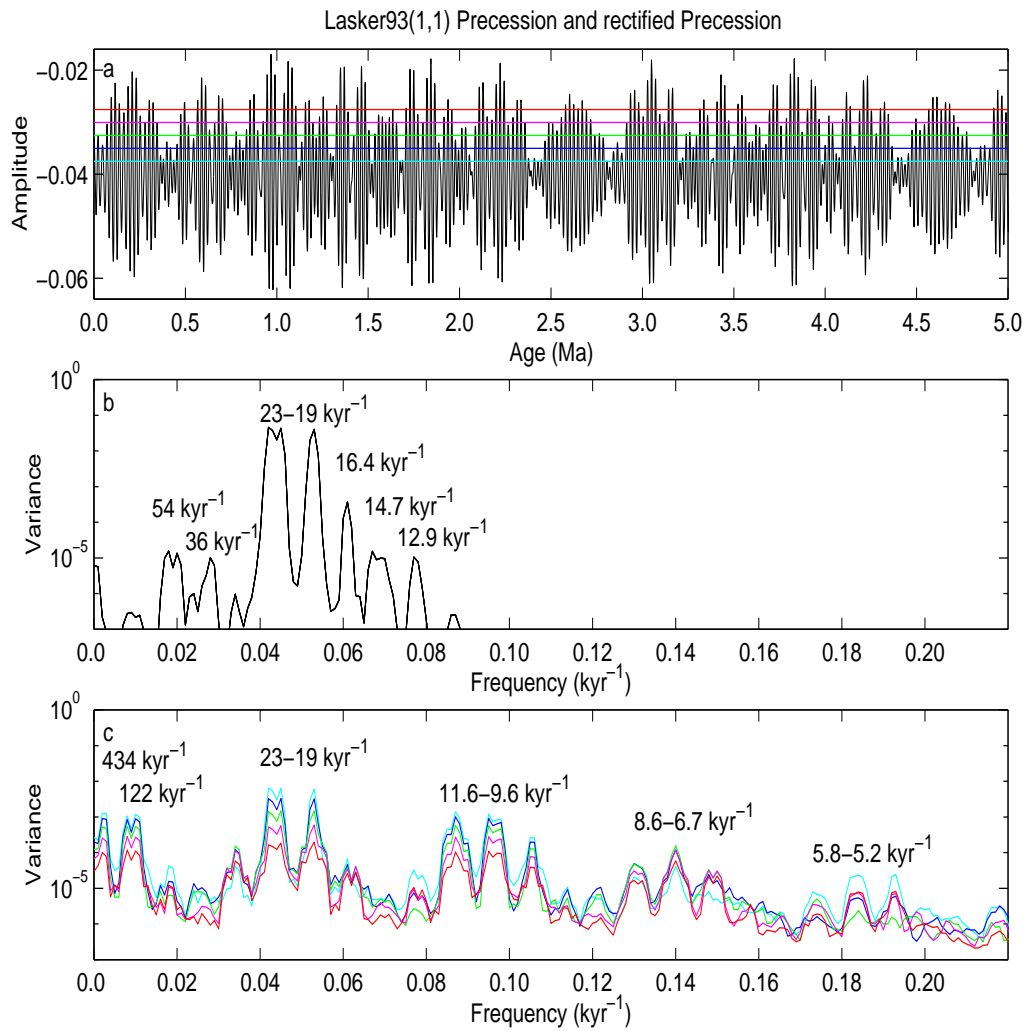


Figure 10. (a) Precession record for 0 - 5 Ma from *Lasker et al.* [1993]. Horizontal lines represent rectification thresholds used for clipping the precession curve. (b) Power spectra of the precession record plotted in Figure 10a, (c) Power spectra for precession record rectified at the levels indicated in Figure 10a. [from Ortiz et al. *Paleoceanography*, 14, 171-186, 1999]