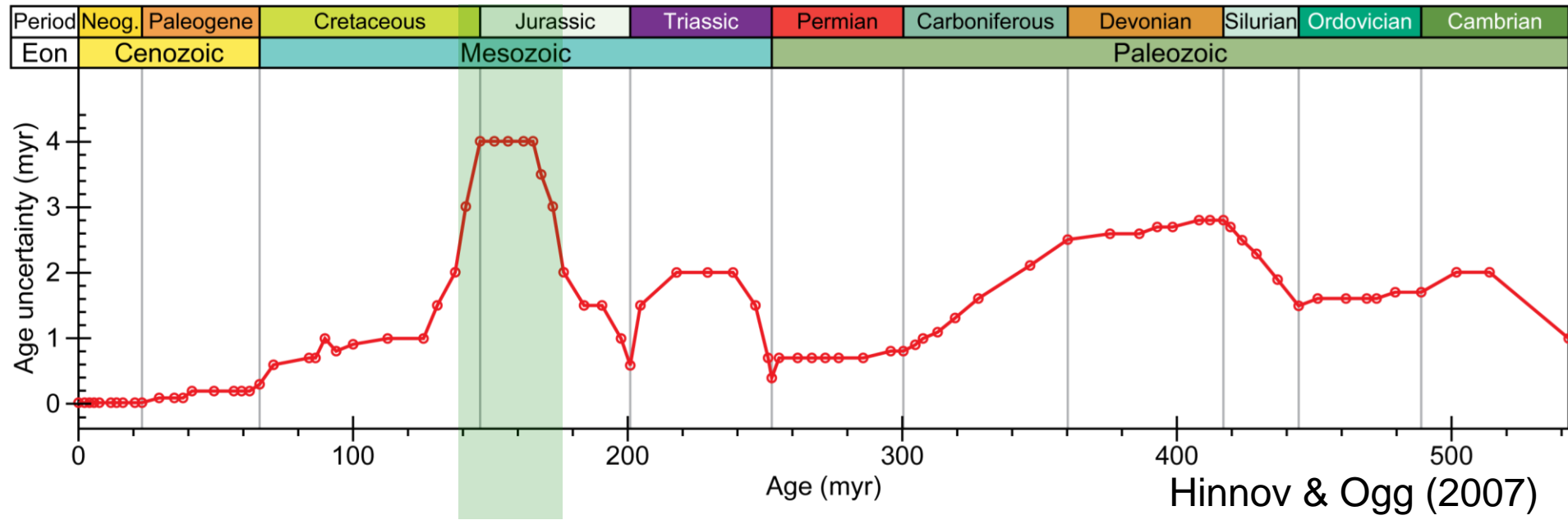


Astrochronology of the Barremian Stage: implications for the dynamics of the anoxic events in the Early Cretaceous

Mathieu MARTINEZ, Roque AGUADO, Miguel COMPANYY,
Jose SANDOVAL, Luis O'DOGHERTY

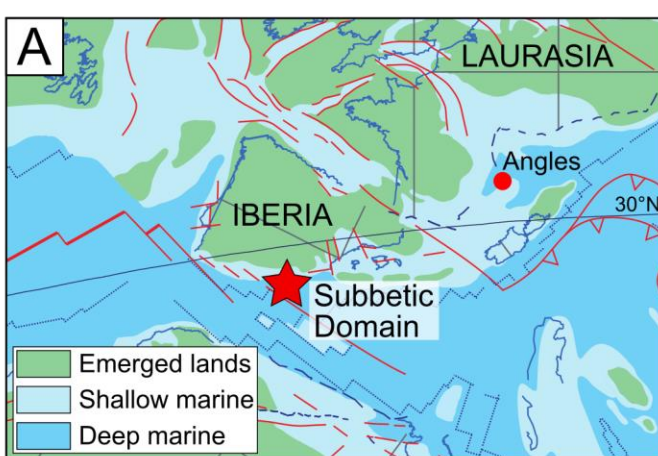


Uncertainties of the Geological Time Scale



Maximum of age uncertainty reached in the Jurassic-Early Cretaceous
Ages and durations can vary up to 5 myr!

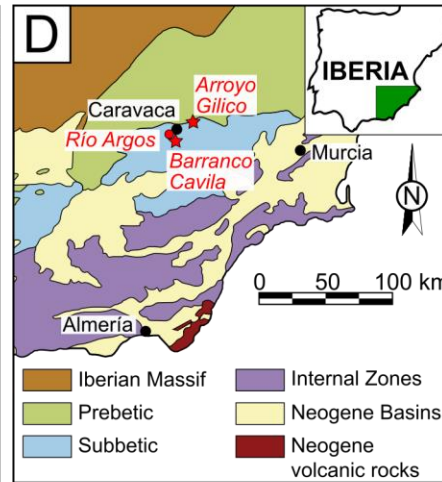
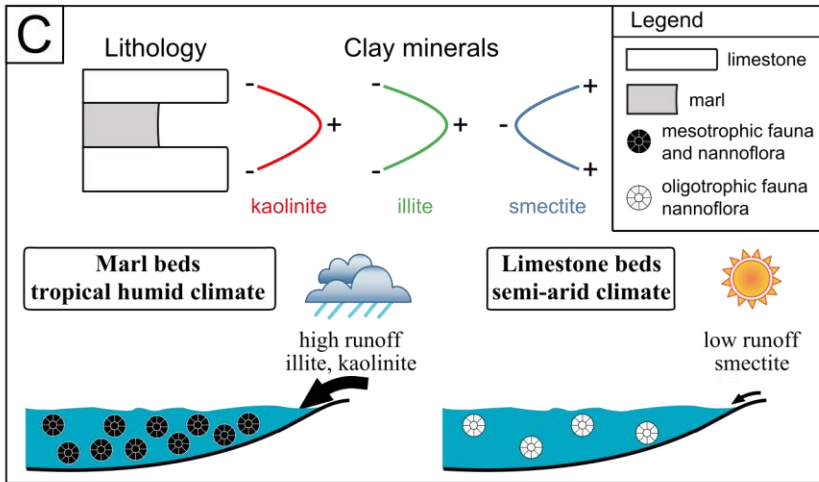
Despite lower levels of uncertainties have been calculate in GTS 2012, recent studies suggest the level of uncertainty shown here is more realistic



Geological setting

Subbetic domain

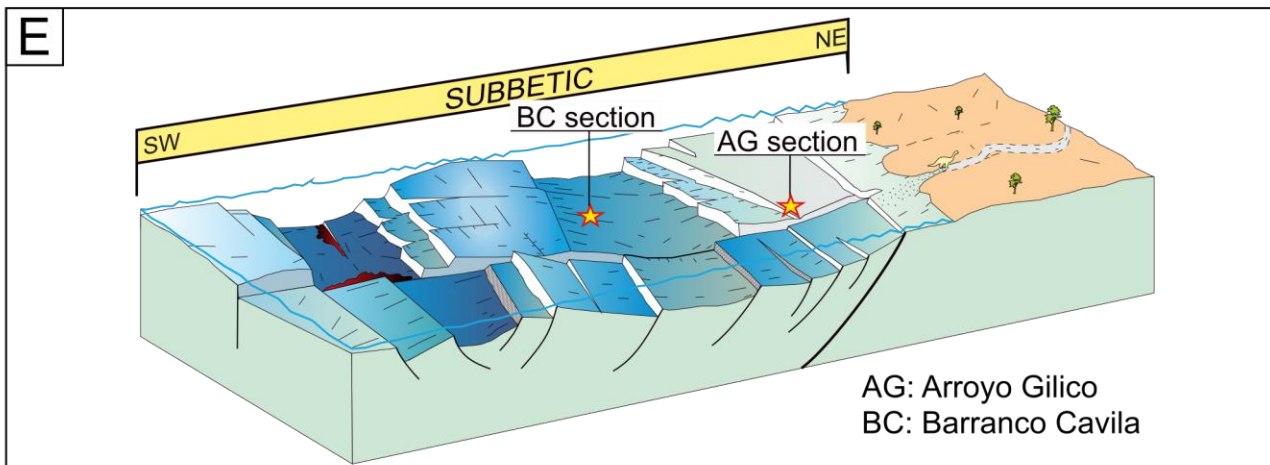
- Hemipelagic marl-limestone alternations



- All ammonite zones and subzones present

- Marl: humid climate; limestone: arid climate

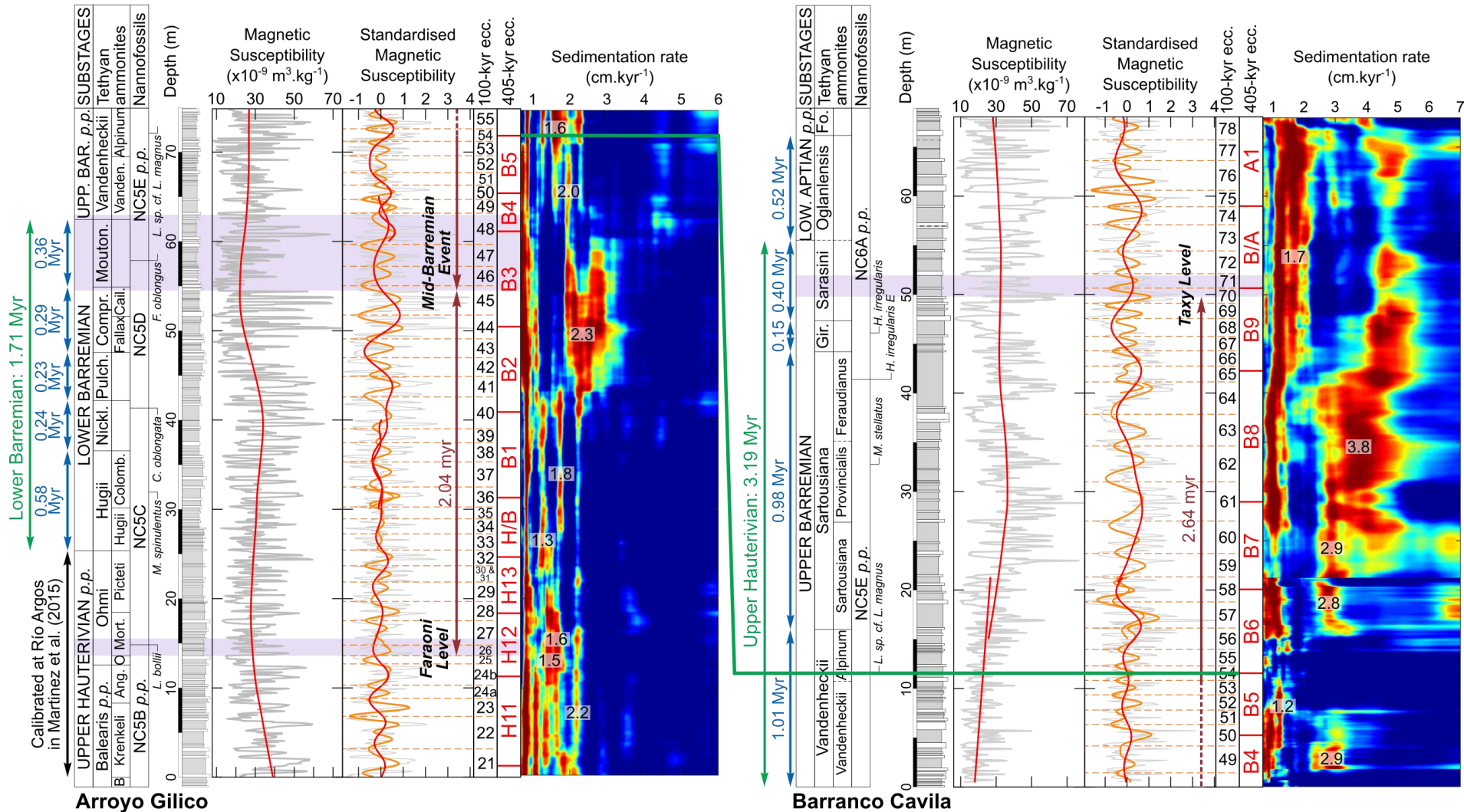
2 sections studied



- Arroyo Gilico: latest Hauterivian to Late Barremian

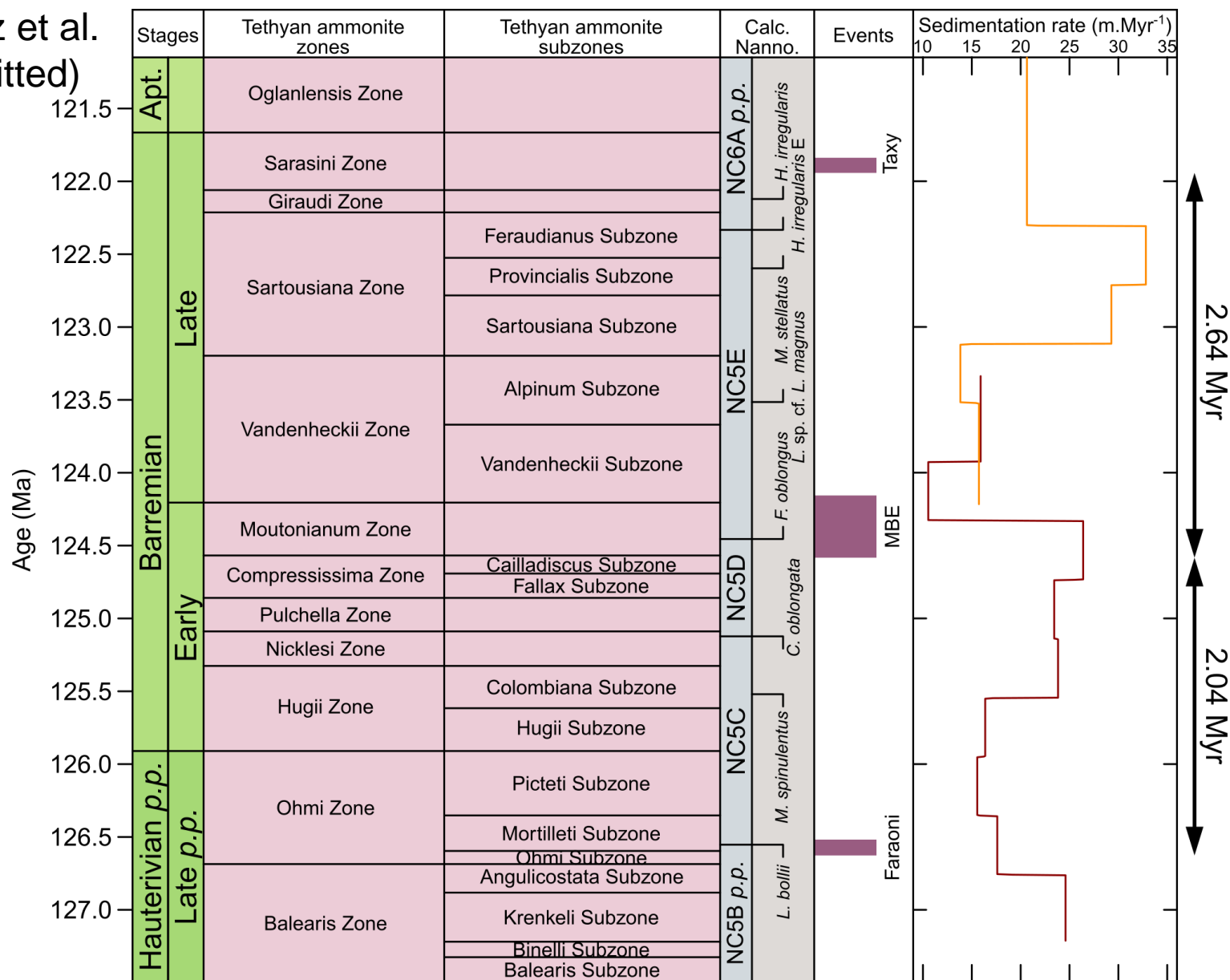
- Barranco Cavila: Late Barremian to Early Aptian

Results and overview of spectral analyses



The proposed time scale of the Barremian Stage

Martinez et al.
(submitted)



References:

Hinnov, L.A., Ogg, J.G., 2007. Cyclostratigraphy and the Astronomical Time Scale. *Stratigraphy* 4 (2-3), 239-251.

Martinez, M., Aguado, R., Company, M., Sandoval, J., O'Dogherty, L. Integrated astrochronology of the Barremian Stage (Early Cretaceous) and its biostratigraphic subdivisions. Submitted on February 7th to Global and Planetary Change. Manuscript no GLOPLACHA-D-20-00061.