



Refining lithostratigraphy, cyclostratigraphy and magnetostratigraphy in Italian reference sections of Hauterivian age (Bosso, Monte Acuto and Frontone) for future comparison of cyclostratigraphic results

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Astrochronology has proven to be a powerful method to constrain the duration of geological periods. However in some geological periods, cyclostratigraphic studies give diverging results. For instance the duration of the Hauterivian Stage was estimated as 3.5 myr in central Italy, and 5.9 ± 0.4 myr in South-Eastern France and South-Eastern Spain (Martinez et al., 2015, Sprovieri et al., 2006). However the comparison of the cyclostratigraphic results of different sections requires to have an independent stratigraphic framework. For future comparison we are refining the lithostratigraphy, cyclostratigraphy and magnetostratigraphy of Italian sections by high resolution logging and sampling. This has already led to identify thin shale beds sequences that can be correlated between sections. These sequences can be useful for further study of the Maiolica Formation. Indeed such marker beds are the only stratigraphic markers that can be directly observed on the field. Their identification could therefore help to define the age of new sections.

M. Martinez et al., « Astrochronology of the Valanginian–Hauterivian stages (Early Cretaceous): Chronological relationships between the Paraná–Etendeka large igneous province and the Weissert and the Faraoni events », *Glob. Planet. Change*, vol. 131, p. 158–173, août 2015.

M. Sprovieri, R. Coccioni, F. Lirer, N. Pelosi, et F. Lozar, « Orbital tuning of a lower Cretaceous composite record (Maiolica Formation, central Italy) », *Paleoceanography*, vol. 21, no 4, p. PA4212, December 2006.