

Mohammed Al-Musawi et al., 2023, Cross-basin chronostratigraphic correlation of carbonate succession (Llandover, Michigan Basin, USA) using global carbon  $\delta^{13}\text{C}_{\text{carb}}$  isotope excursions: GSA Bulletin, <https://doi.org/10.1130/B36809.1>.

## Supplemental Material

**Table S1.** Stable carbon isotope values of samples analyzed in the current study sorted by locality.

**Figure S1.** Proposed stratigraphic relationship between the Cabot Head Shale, Lime Island, and Byron formation in area between the Lemcool #1 core (Locality I, Fig. 2; mid-ramp) and Composite 2 (inner ramp). The proposed relationship shows the possibility of a stratigraphic trap in locations where the younger Cabot Head Shale and Lime Island Formation (Ae2) are overlying the older (Ae1) Lime Island and Byron formations.

**Figure S2.** (A) Burrowed/bioturbated lime mudstone within the Early Aeronian CIE (2485.6-2485.9 m; Locality J, Fig.2; Composite 3). (B) Dark gray structureless lime mudstone within the Late Aeronian CIE (2471.9-2472.2 m; Locality J, Fig.2; Composite 3).

Mid-ramp  
Lemcool #1

Inner ramp  
Composite 2

Ae2- Ae3  
Boundary

Ae1- Ae2  
Boundary

Ae - Rh  
Boundary

Unconformity

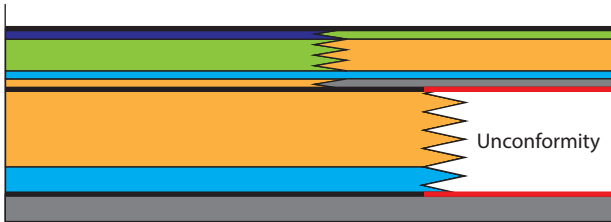
Cabot Head  
Shale

Lime Island

Byron

Hendricks

Schoolcraft



**A**

**B**

55

3110

2.5 cm

2.5 cm

