Benthos crucial role in SO Carbon cycle

• Big bio component, not static

• *more algae double benthic C in 25 yrs*

• less sea ice increase shallow scouring

• complex feedbacks from ice changes

• Measurable record in skeletons (*corals, bivalves, bryozoans*)
Benthic carbon ‘sink’

-ve feedbacks
i) ice shelf  +10^5 t.C.yr
ii) sea ice    +10^7 t.C.yr

+ve feedbacks
i) ice scour  -10^5 t.C.yr

(Peck et al GCB 2010, Barnes et al GCB 2015, Barnes GCB 2016)
C benthic change measurable with time

- BAS, Bristol, PML Team
- measure benthic pathway;
  - C accumulation
  - C immobilization
  - C sequestration