

Shallow Water Deposits as Recorders and Modifiers of Global Processes

Objective	Setting	Strategy	Platform	Sampler
Understand origin of stratal unconformities				
	carbonate platforms, ramps siliciclastic shelves	grids & transects per acoustic mapping	1, 2, 3, 4	subaerial push, hammer, or rotary core; seafloor vibra core or (under development) seafloor push / rotary core;
Determine timing & magnitudes of past sealevel changes				
Late Quaternary	coral reefs (individual coral heads, stacked reef front, fore-reef)	grids & transects per acoustic mapping	1, 2, 3, 4	narrow kerf wire line diamond coring
Quaternary	carbonate platforms, ramps incised valleys	global grids & transects per acoustic mapping	1, 2	subaerial push, hammer, or rotary core; seafloor vibra core or (under development) seafloor push / rotary core
Cenozoic	carbonate ramps prograding siliclastic shelves	global grids & transects per acoustic mapping	1, 2, 3, 4	subaerial push, hammer, or rotary core; (under development) seafloor push / rotary core
Analyze land-sea interactions over the last 125 ka				
	silled basins, fjords & other high sedimentation rate deposits	global arrays	1, 2, 3, 4	subaerial push, hammer, or rotary core; seafloor vibra core or (under development) seafloor push / rotary core
Understand tropical climate and its variability				
	coral reefs (individual coral heads, stacked reef front, fore-reef)	grids & transects per acoustic mapping	1, 2, 3, 4	narrow kerf diamond coring wire line
Platforms for ship-based samplers				
	1. 0 to 5 m water depth 2. 5 to 30 m water depth	small portable barge. towed or self-propelled anchored barge with heave compensation or seafloor frame; small jack-up rig.		

3. 30 to 75 m water depth

4. > 75 m water depth

Platform for seafloor-based sampler

anchored modest-size ship with heavecompensation or seafloor frame; large jack-up rig.

dynamically positioned ship with heavecompensation or seafloor frame; semi-submersible platform.

anchored or dynamically positioned ship of intermediate size (crane/A frame must lift 7 tons).