



Deep CRES (CSCOR)



Initial Tasks

- Capacity Building
- Relationship to Geomorphology
- Characterization

US HG5 110HD-1 CA-35 07MAY08
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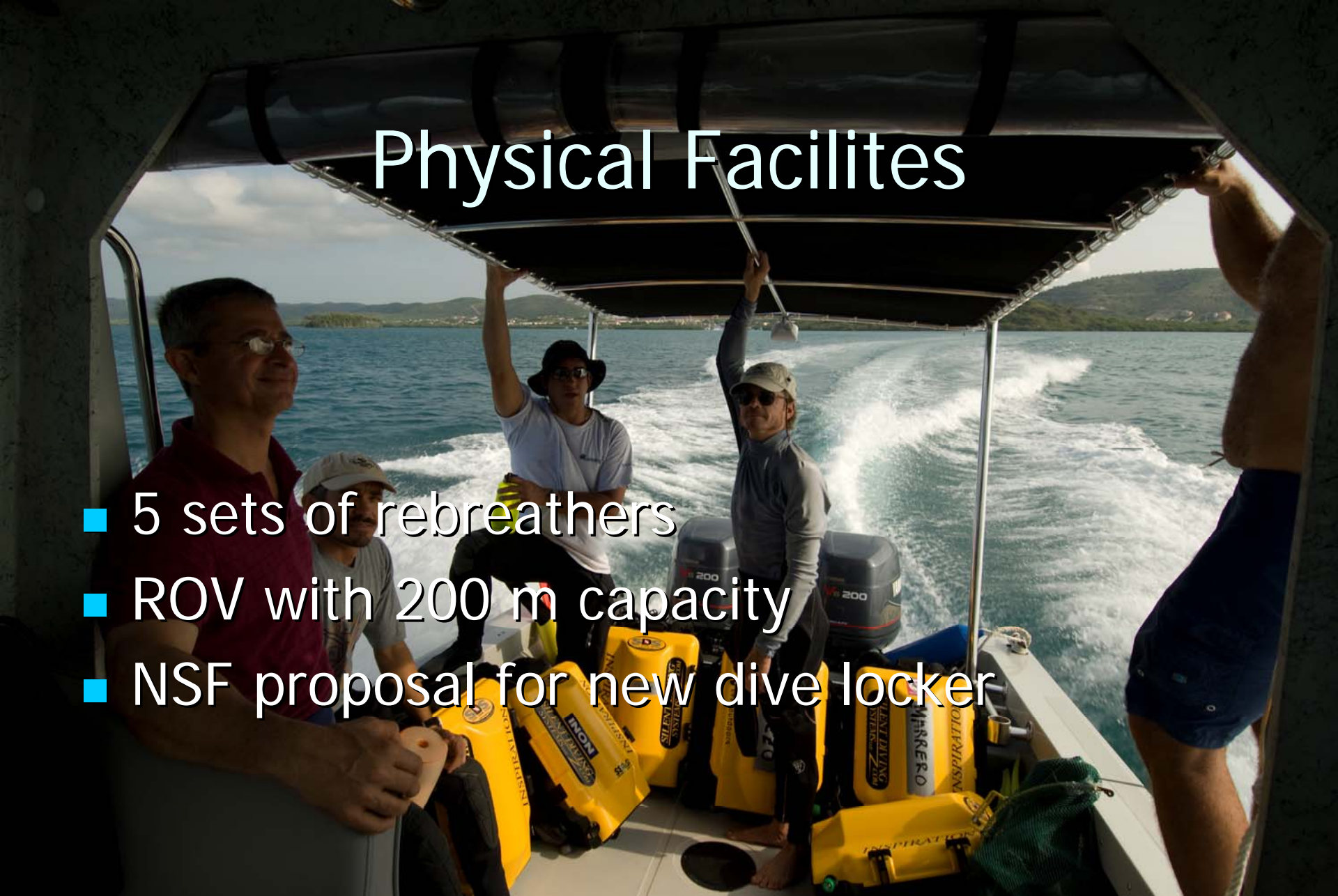
Diver Training

An underwater photograph showing three divers in a blue, slightly hazy environment. The divers are wearing black wetsuits and yellow BCDs. They are positioned in a line, moving from left to right. The background shows a rocky seabed with some sparse vegetation and a few thin, white, branching structures. The lighting is soft and diffused, typical of an underwater setting.

- 5 Divers
- 3 Graduate Students
- Mixed-gas rebreathers
- 100 m range (currently at 70 m)
- Integrated with NURC UNC-Wilmington

Physical Facilities

- 5 sets of rebreathers
- ROV with 200 m capacity
- NSF proposal for new dive locker



Geomorphology of the Slope

- The geomorphology of the upper insular slope exerts a fundamental control on the location and distribution of mesophotic coral ecosystems (MCEs)
- The topography of the slope directs downslope sediment movement and provides topographic highs conducive to coral growth

Geomorphology varies by location along the shelf



Geomorphic zones

100 50 0 100 Meters

WEINBERG

20m

40m

60m

80m

100m

Shelf-edge reef front

Shallow fore-reef slope

Fore-reef spur and groove

Intermediate fore-reef slope

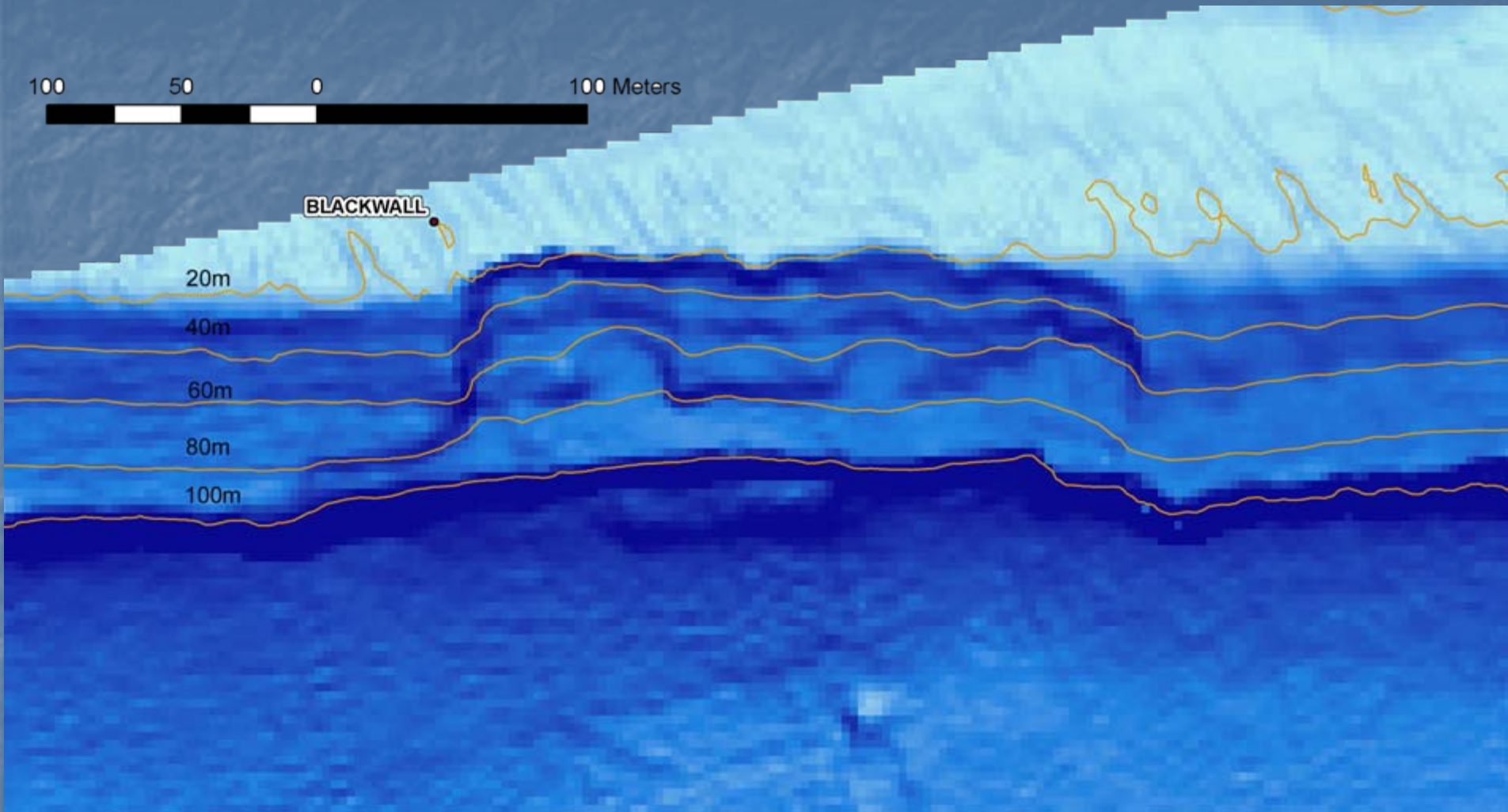
Fore-reef terrace

Deep fore-reef slope

MCEs



Southwest-facing slope



Shelf-edge reef front



Weinberg Site - Parguera Shelf Edge

Shelf-edge reef front



Shallow fore-reef slope

Precipicio - ~ 145 / 44 m

An underwater photograph showing a shallow fore-reef slope. A diver is visible in the upper left, swimming towards the right. The reef is covered in various corals and marine life, including large, flat, brownish corals and smaller, colorful corals. The water is clear and blue, and the overall scene is brightly lit.

Shallow fore-reef slope

Black Wall East - ~155'/47m

An underwater photograph of a shallow fore-reef slope. The scene is dominated by large, perforated sponges in shades of brown and orange. To the right, there are branching corals and other smaller reef structures. The background is a deep, dark blue, suggesting a steep drop-off. The lighting is focused on the foreground, highlighting the textures of the coral and sponge.

Fore-reef spur

Black Wall East – Photo-transect line at ~150'/46m

An underwater photograph showing a fore-reef spur. The seabed is covered with various types of coral, including large, flat, brownish corals and smaller, more colorful ones. A white line, likely a photo-transect line, is stretched across the reef. A yellow marker is visible on the reef. The water is dark blue, and the overall scene is dimly lit.

Intermediate fore-reef slope

Hoyo-Southeast

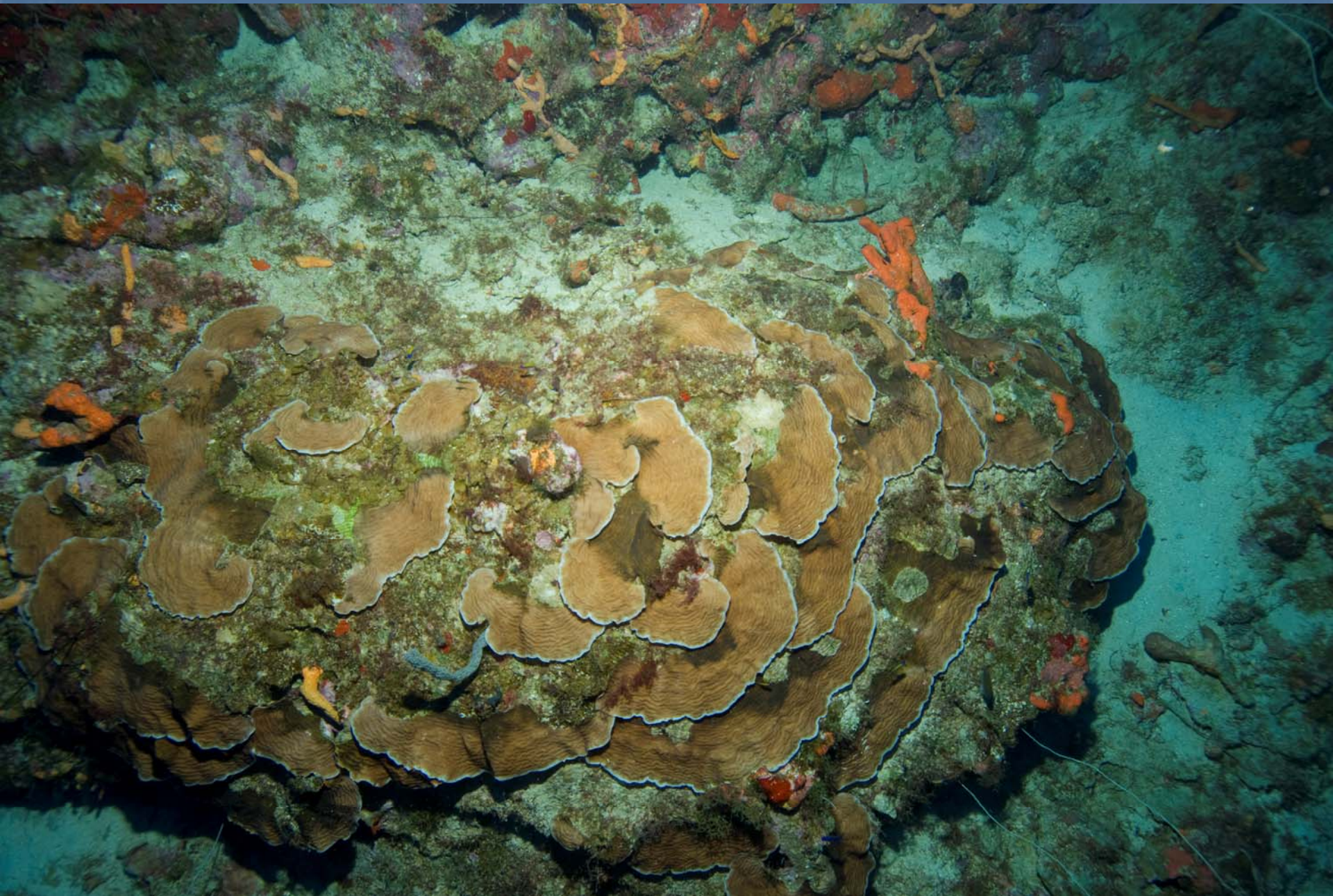


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D5 0069.4MS 2LC 12:02:55

Terrace

U5 HG5 205HD+1 CA-10 30JAN08
D5 L5 0080.0MS 21C 12:06:09

Corals develop on raised areas



Deep Reef Habitats

Important resources
Shallow fauna
Residual populations





Thank you!