

AG - Seminar Sedimentary Systems WiSe 17/18 “Submarine Geomorphology”

Oceans cover 70 % of the Earth's surface and the ocean floor shows a wealth of submarine landforms. However, these submarine landscapes cannot be directly observed. Over the last 3 decades, technical advances in seafloor surveying and sampling techniques have resulted in an explosion of our knowledge about the marine realm and marine landscape evolution and radically transformed our view of the ocean. For example, new multibeam-bathymetry surveying techniques continuously lead to increasing resolution of submarine digital elevation models (see Figure below). In this seminar, we will first acquire a broad overview about the state-of-art marine surveying techniques. Then, we will learn about the major processes that shape submarine landforms in various oceanic settings. This seminar will be based on a recently published textbook and several peer-reviewed papers.

Seminarraum Geologie

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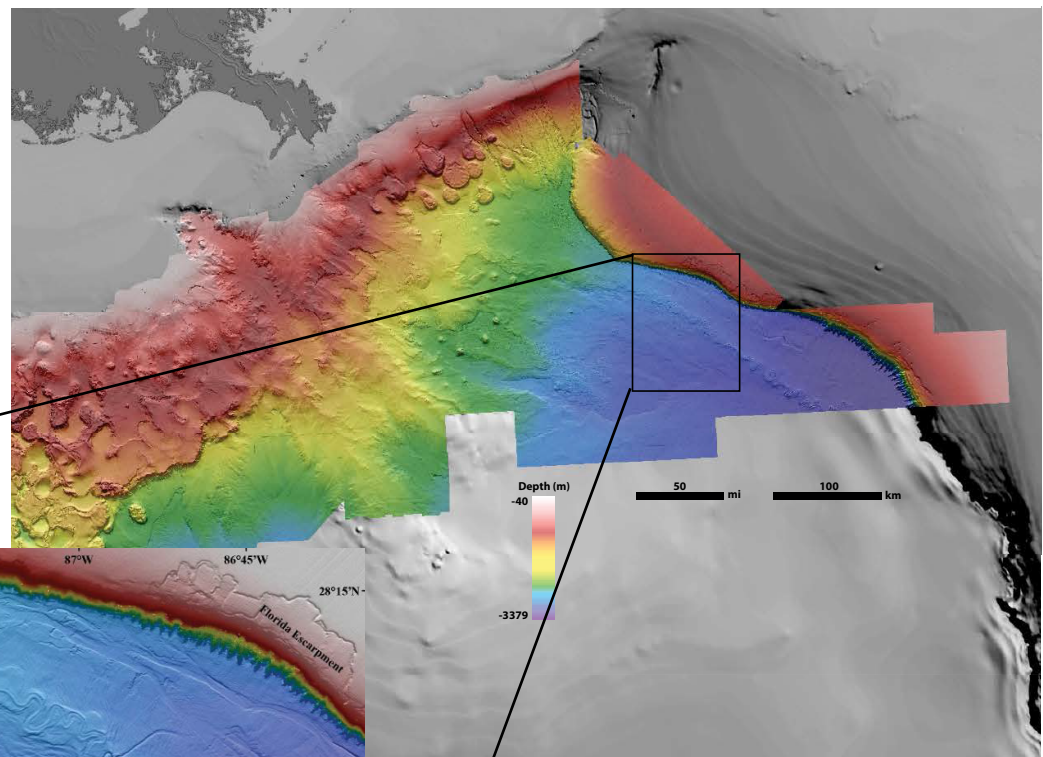
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Tuesday 15:15-16:45

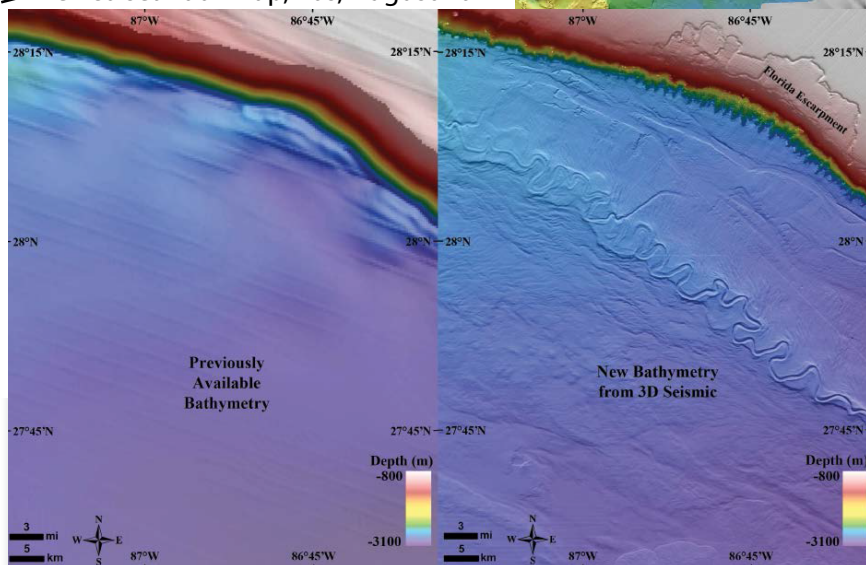
Start: 17.10.2017

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Kramer and Shedd, 2017, New Gulf of Mexico seafloor map, Eos, August 2017



Northern Gulf of Mexico deep-marine bathymetry grid created from 3-D seismic surveys. The grid defines water depth with 1.4 billion 12- x 12-meter cells. Credit: U.S. Department of the Interior's Bureau of Ocean Energy Management (BOEM).

The Joshua submarine channel on the eastern Gulf of Mexico abyssal plain compared with older, low-resolution data. The channel is visible on the sea floor for 280 km, far beyond the bounds of this image, and an additional 240 kilometers is buried beneath younger sediment systems.