

MG 07 – Do., 11:00 – 11:20 Uhr _ Seminarraum

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New hydroacoustic and core data reveal sediment transport patterns off Uruguay

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Submarine landslides cause slope instabilities and might damage sea-floor infrastructure or even generate tsunami waves. Therefore it is of major importance to understand all processes related to gravity-driven mass wasting and slope stability at continental margins. New swath bathymetry and parametric echo-sounding data from the Uruguay shelf and slope north-east of the Rio de la Plata were collected during METEOR Cruise M78/3. These data are investigated in order to understand mass wasting and sedimentary transport processes at the margin off Uruguay. Large amounts of silty suspension freight are delivered from the Rio de la Plata estuary. These sediments are potentially unstable, leading to numerous mass transport units in the working area.

Prominent features identified in the study include slide deposits, channels and several prominent escarpment structures. The situation is complicated by intensive slope parallel sediment transport due to strong contour currents. Our data indicate interaction between gravity-driven downslope transport and alongslope sediment transport. Contourite deposits in the headwall areas of mass wasting events suggest widespread weak layers at those deposits. The up to 70m-high headwalls, are focusing contour currents resulting in small alongslope channels. Future work will concentrate on the reconstruction of the geological/sedimentological history of the study area in order to assess slope stability and sediment transport in greater detail.