Geophysical Research Abstracts, Vol. 7, 04414, 2005
SRef-ID: 1607-7962/gra/EGU05-A-04414

New Insights into the Saharan Slide: A detailed Study from Source to Sink.

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An integrated dataset combining geophysical data (3.5kHz, Parasound and airgun seismic profiles, GLORIA sidescan sonar, Hydrosweep multibeam bathymetry) and piston/gravity cores has been used to investigate the giant Saharan Slide. The dataset extends from the erosional slide headwall on the continental slope to the final site of deposition several hundred km's away on the lower continental rise.

Seismic profiles from the headwall region provide evidence for headwall re-activation. There are two obvious headwall scarps (Fig. 1); a gravity core from immediately above the upper scarp provides a complete stratigraphic sequence of the 'background' sediments in the area and will be used as a reference core. Gravity coring just below the upper scarp successfully penetrated to 50 cm below a major glide plane, showing the contrast in rheology between the much older sediment below the glide plane and the younger slide debris above the glide plane. Evidence suggests that this thin slide debris is $<$10 ka, and it is interpreted to be a result of re-activation of the upper headwall scarp. The overall morphology of the headwalls and the glide plane is believed to have been shaped by the main Sahara Slide event, which is dated at 60 ka. Accurate dating of cores around the slide headwall provides more information on the present-day stability of this region.

Further downslope, volcaniclastic turbidite sands were entrained by the Saharan Slide as it moved over the lower slope south of the Canary Islands. Upslope of this region the slide deposit is comprised of coherent but highly contorted "background" slope

sediments. Sand entrainment then transformed the slide into a bimodal flow, with the highly deformed slope sediments rafted on top of a thin layer of volcaniclastic sands.