

SOUTH AFRICAN TRACE GAS EXPERIMENT (SATRE) –COORDINATED CONTINUOUS OCEAN-ATMOSPHERE MEASUREMENTS ONBOARD THE R/V METEOR

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The South African TRace gas Experiment (SATRE) took place on-board the German research vessel R/V Meteor from July 2013 to March 2014, including the cruises M98 to M104. The major goal of SATRE was to study the air-sea fluxes of climate-relevant trace gases – such as carbon dioxide, nitrous oxide, methane and carbon monoxide – in the waters around South Africa (with a special focus on the Benguela upwelling region off SW Africa) in order to assess their global relevance as a source/sink of atmospheric trace gases. Simultaneous at-sea deployment of novel laser-based sensors for the detection of trace gases allowed an inter-comparison exercise which is a step forward towards autonomous monitoring platforms and opens the way for novel research approaches.