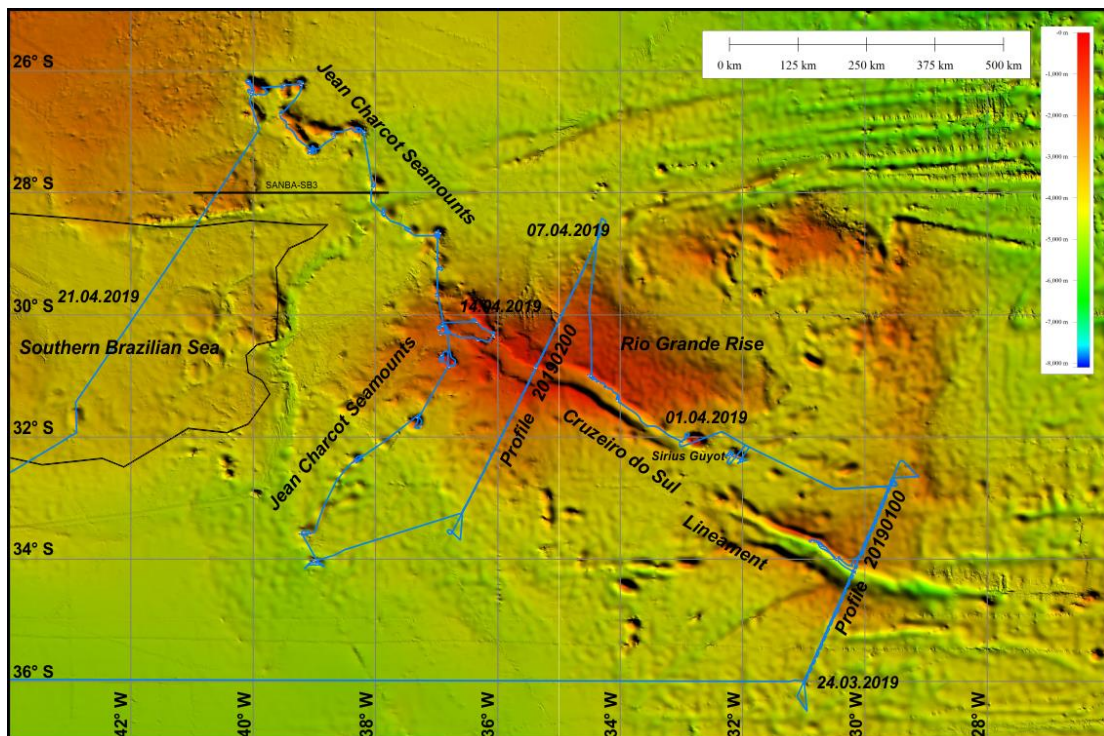
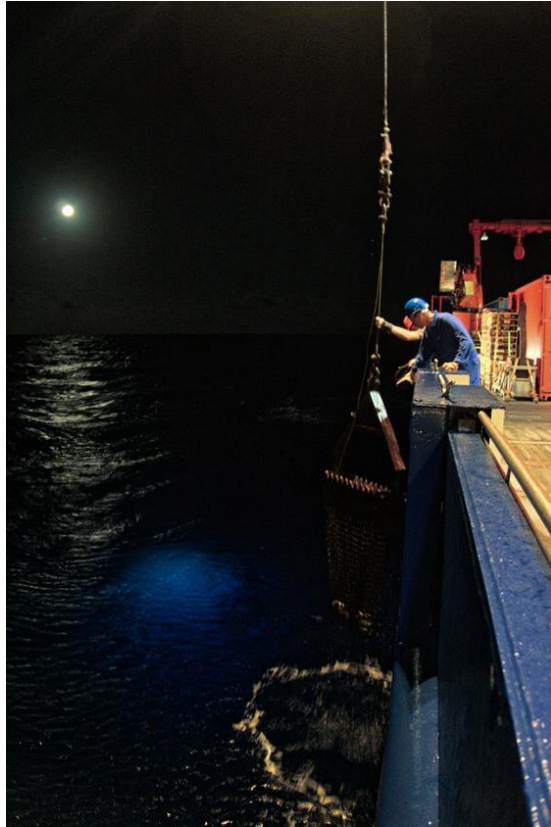




At the very end of the fourth week we had successful dredge hauls at the northwestern end of the rift graben, this time on both the southern and northern walls. During Monday night we returned to one of the seamounts on the western Rio Grande Rise to try to get samples from a deep valley-like structure. Unfortunately, the dredge haul recovered only carbonate crusts. By then we had only five more days until the end of our scientific program. We planned originally to sample most of the seamounts in the northern part of the Jean Charcot Seamount Chain and to measure a third seismic refraction profile across the seamount chain. Since writing our proposal colleagues from France, Portugal and Brazil published a seismic refraction profile close to where we were planning our profile. We will be able to meet some of our objectives using their results. So, because no rock samples had yet been recovered from the seamounts we decided to continue with the dredging program for the rest of the expedition before we had to start our transit back to Montevideo.



*Cruise track as of 21.04.2019 (marked in blue).*



*The dredge is arriving back onboard. (Photograph: Jan Falkenberg)*

As things turned out we really needed this extra time for dredging. Just as in the previous weeks we had to spend a lot of time finding and mapping suitable steep slopes, which was often very difficult because of unfavorable wind and swell directions. Our success rate varied from seamount to seamount. Some yielded samples that will allow us to establish their composition and age. Others yielded no suitable samples despite our best efforts. The final challenge for us was to sample the very large seamount at the northwestern end of the seamount chain, not far from the Brazilian Extended Economic Zone (EEZ). Although it took us almost a full day and four attempts but we recovered a large piece of basalt in the last dredge haul of the expedition. So at about 1 am on Saturday morning the dredge program came to an end.

Overall we have recovered a fascinating and scientifically valuable collection of rocks from along much of the ~500 km long Jean Charcot seamount chain and the entire length of Rio Grande Rise rift graben.

The seismic measurements were also very successful. Since we could not measure another profile, we used the time to evaluate and check the recorded data. The general quality is very good, and we are hoping for exciting results after a careful analysis of the data. We started also to dismantle our seismic equipment, pack boxes and load the containers. Thanks to the unstinting support of the crew we have been able to achieve most of what was planned when we left the harbor.

The weather was fine during the course of the week, with the exception of one fast-moving low-pressure system, so we could continue with our planned research without any interruptions.

Now that we are on transit back to Montevideo most of the daily and night watches are finished so it was possible to take a group photo. The remaining time has been used also to pack everything and to clean the laboratories. At the moment all underway measurements are still running such as the magnetics. Tomorrow, when we sail into Uruguayan waters we must shut down all the scientific instruments. On Wednesday morning we will arrive to Montevideo and a successful expedition will come to an end.

I would like express my heartfelt thanks to master Ralf Schmidt, Chief Engineer Thomas Ogrodnik and all the crew of *Maria S. Merian* for all their unstinting help and professionalism. We always received their full support for our measurements and sampling. On behalf of all the members of the scientific party I can say that we've had five exciting weeks in a relaxed atmosphere onboard *Maria S. Merian*. We have felt very comfortable in a homely atmosphere Our cooks Mike and Georg together with our stewardess Sylvia served us delicious meals on Sunday and Monday in a mess room specially decorated for Easter.

I am grateful to Stefan Krumm, Tabea Altenbernd, Jörg Geldmacher, John O'Connor, Adalbert Pfeiffer, Henning Kirk, Jonah Geils and all members of the Scientific Party for their great support on this expedition. Finally, I also want to thank especially all people in Germany who have made our expedition to the Rio Grande Rise possible.

And at the very end, I thank John, the ghostwriter of the English versions of the weekly reports.



*Group photograph. (Photograph: Jörg Walter)*