Review of de Mahiques et al "New insights of the influence of ocean circulation on the sedimentary distribution in the Southwestern Atlantic margin (23 ℃S to 55 ℃S) based on Nd and Pb isotope fingerprinting" in Ocean Science

This paper published a large set of Nd and Pb isotope data for sediments from five distinct locations, the Santos, Pelotas, Punta del Este, R ó de la Plate and Argentinean margin. The authors try to use Nd and Pb isotope data to discuss the sources of the sediments and thus the transport model from provenance to the deposition area. Although the isotope dataset is worth publishing, there are a number of problems with the language expression and data interpretation, which will require major revision or complete rewriting of the manuscript.

I found the paper is difficult to follow because of the language. The authors need to polish the language in this paper.

In addition, I found most of the ideas in this paper has been discussed in the published paper of **de Mahiques et al., 2008, Marine Geology.** The authors need to highlight new insights about the sediment sources and ocean circulations.

I still have detailed reviews as following:

21 Not true. There is latitudinal trend for Nd isotopes, but not for Pb isotopes.

40 "Rare Earths" should be "Rare Earth Elements" or "REEs"

260-264 Pb/Pb? Please correct the ratios in this sentence and the flowing sentences through all manuscript

347 The sediment samples from Punta del Este basin also have Nd and Pb isotope ratios between Antarctic sediments (a endmember) and Paran á Igneous Province (g endmember). How to exclude this provenances?

353-363 The authors try to attibute the Nd and Pb isotope data of Pelotas samples to the influence from R ó de la Plate Plume water. But the Pelotas samples display larger range of Nd and Pb isotope compositions than R ó de la Plate samples. It is evidence that the Pelotas samples were effected by other sediment provenances. However, the authors did not discuss this point. In

addition, the Pelotas sediment samples are obviously located in the area of Brazil Current (Fig. 1), but the authors did not discuss the possible influence from Brazil Current.

363-370 It could not convince me that the Santos samples are related to Precambian metamorphic rocks and granites of the Southeastern Brazilian coast. The Nd and Pb isotope data of the Santos sediments and Precambian metamorphic rocks as well as granites of the Southeastern Brazilian coast (h, i and j end members) are obviously distinct. The following transport model of the Precambrian Brazilian cannot convince me as well.

418-419 It is not true. I observed that the Pelotas samples display mixture characteristics between Santos samples and Punta del Este samples, not R ó de la Plate samples.

420-421 It is not true. The Santos samples did not have similar Nd and Pb isotope compositions compared to the Precambian rocks (Fig. 7).

What is the Nd and Pb isotope compositions of Two Argentina samples from Brazil-Malvinas confluence (BMC)? Did they inherit the isotope compositions from Malvinas Current or Brazil Current?

Fig. 1 what is thin red line which is basically parallel with thick red line in this figure?