

## Noble gas systematics around the Rodriguez Triple Junction in the Indian Ocean

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We performed a precise measurement of Ne isotope for a sample showing highest  $^{40}\text{Ar}/^{36}\text{Ar}$  ratio (16000) at the Rodriguez Triple Junction, in the Indian Ocean. As a result, we obtained typical MORB value,  $^{20}\text{Ne}/^{22}\text{Ne}=11.81\pm 0.49$ ,  $^{21}\text{Ne}/^{22}\text{Ne}=0.0562\pm 0.0031$ . The  $^{40}\text{Ar}/^{36}\text{Ar}$  was  $14120\pm 540$ , being consistent with previous measurement.

In this area, all isotopes shows a variation interpreted as a mixing of single magmatic endmember with atmospheric component. Contrarily, a sample shows unique signature in the case of coupling with different element (e.g. Ne-Ar, Xe-Ar), reflecting some difference of mixing mechanism.

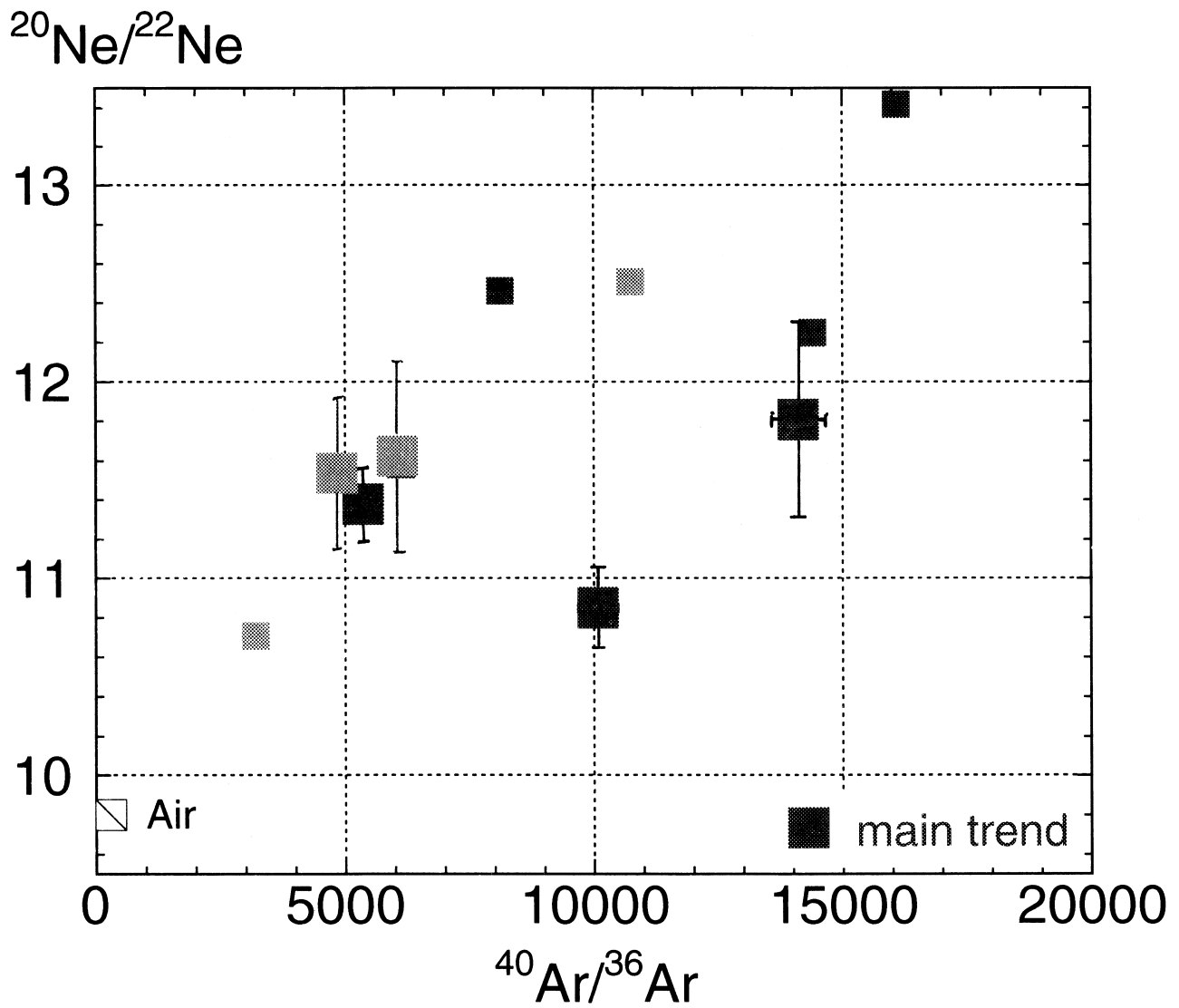


Figure: The  $^{40}\text{Ar}/^{36}\text{Ar}$  vs.  $^{20}\text{Ne}/^{22}\text{Ne}$  diagram. Small squares: Data with large analytical uncertainties.