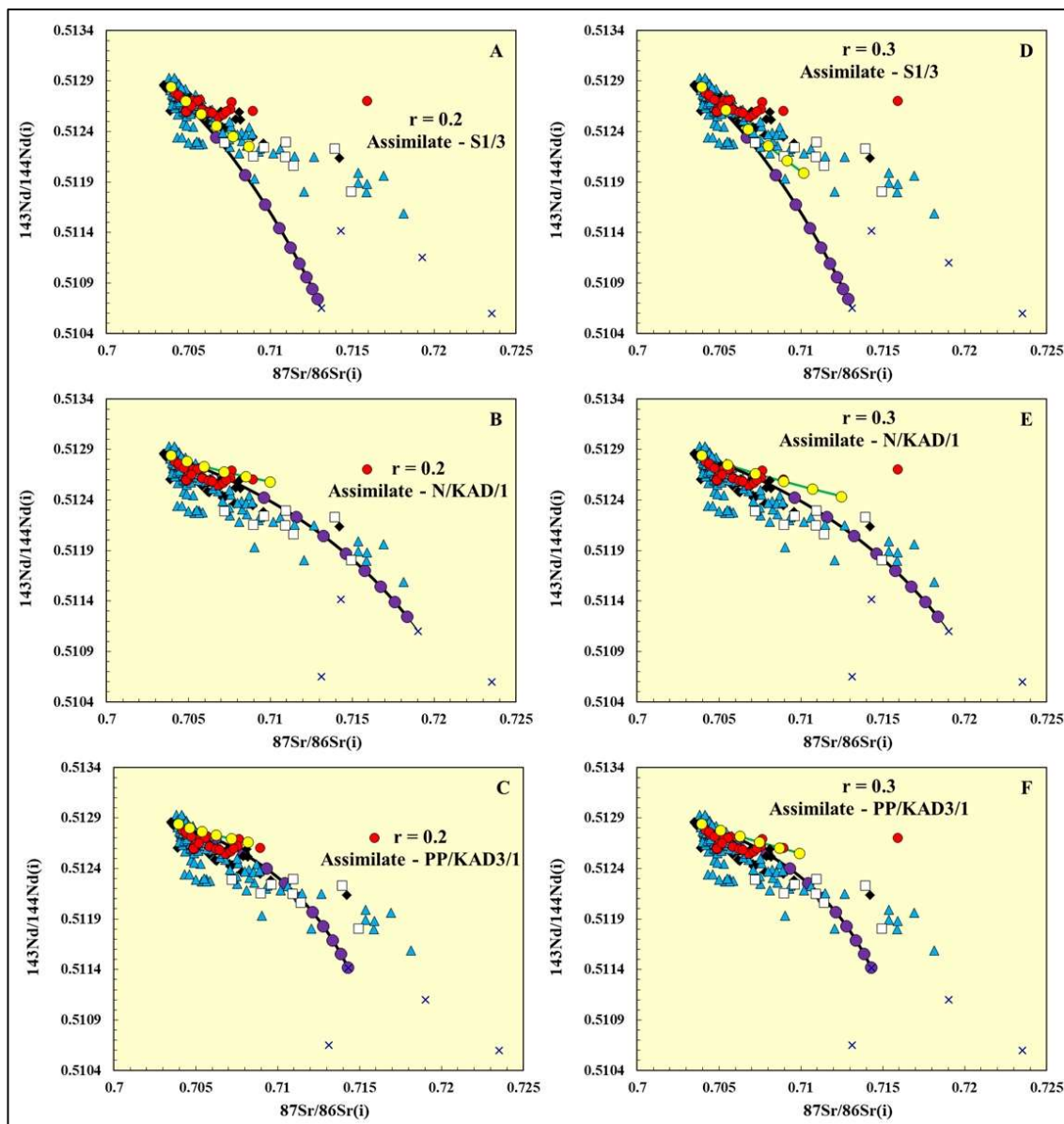


Supplementary File



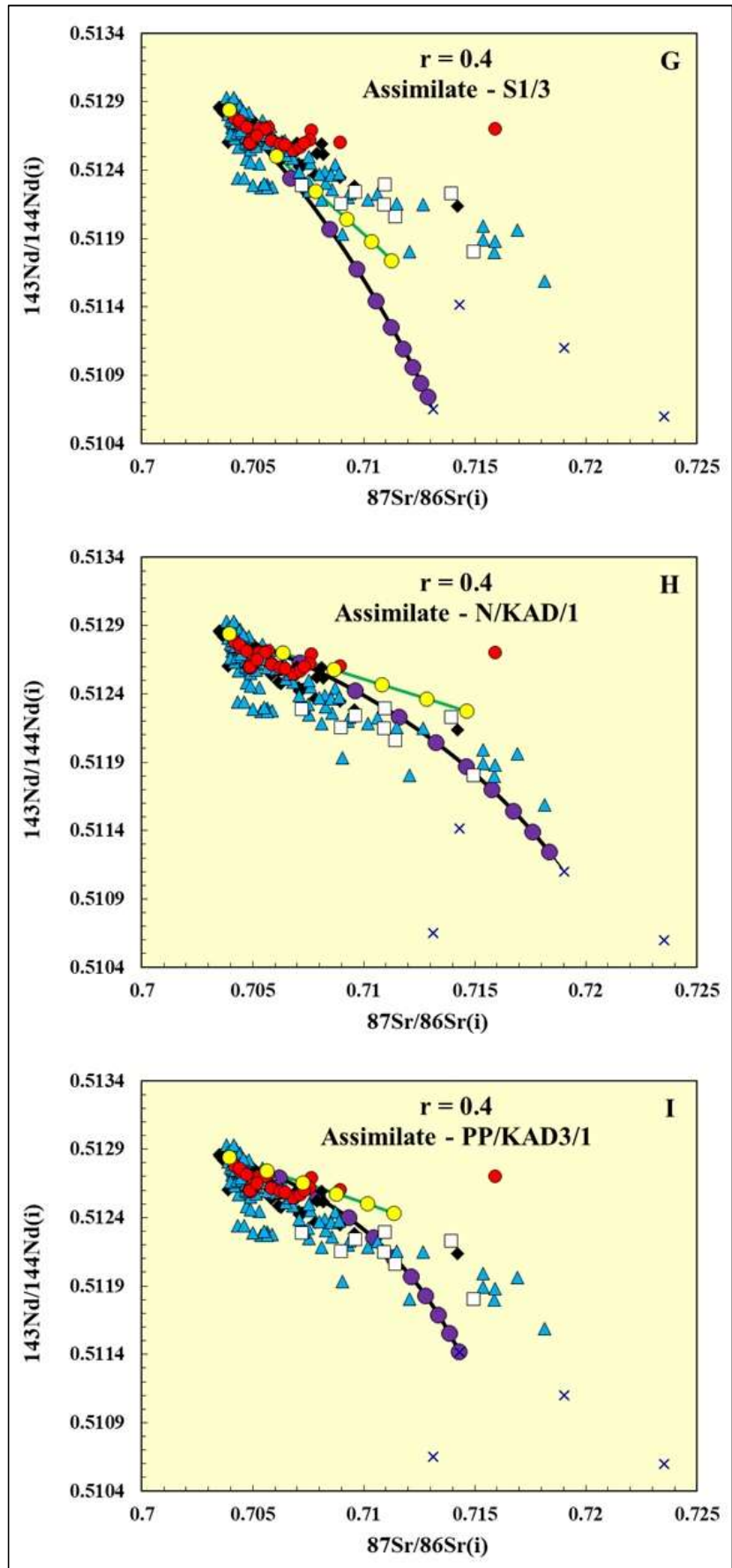


Fig. S1. $^{87}\text{Sr}/^{86}\text{Sr}_i$ vs. $^{143}\text{Nd}/^{144}\text{Nd}_i$ plots with AFC (green line with yellow circles) and mixing (black line with violet circles) curves calculated using **A**) $r = 2$ and assimilate – S1/3, **B**) $r = 2$ and assimilate – N/KAD/1, **C**) $r = 2$ and assimilate – PP/KAD3/1, **D**) $r = 3$ and assimilate – S1/3, **E**) $r = 3$ and assimilate – N/KAD/1, **F**) $r = 3$ and assimilate – PP/KAD3/1, **G**) $r = 4$ and assimilate – S1/3, **H**) $r = 4$ and assimilate – N/KAD/1 and **I**) $r = 4$ and assimilate – PP/KAD3/1 for basalts from Kutch zone, Western Ghat zone, Central Son-Narmada zone and Eastern Son-Narmada zone of Deccan Volcanic Province (DVP), India. Each marker on AFC and mixing curves indicates 10% increment in each process. Source rock (sample name = MMD13) used for AFC is have $^{87}\text{Sr}/^{86}\text{Sr} = 0.703981$, $^{87}\text{Rb}/^{86}\text{Sr} = 0.062$, $^{143}\text{Nd}/^{144}\text{Nd} = 0.512918$ and $^{147}\text{Sm}/^{144}\text{Nd} = 0.180802$ (after Sheth *et al.* 2014). Three calc-alkaline lamprophyres from eastern Dharwar craton 1) S1/3, 2) N/KAD/1 and 3) PP/KAD3/1 used as assimilates for AFC calculations. 1) S1/3 have $^{87}\text{Sr}/^{86}\text{Sr} = 0.713418$, $^{87}\text{Rb}/^{86}\text{Sr} = 0.3119$, $^{143}\text{Nd}/^{144}\text{Nd} = 0.510695$ and $^{147}\text{Sm}/^{144}\text{Nd} = 0.0993$ (after Pandey *et al.* 2020) 2) N/KAD/1 have $^{87}\text{Sr}/^{86}\text{Sr} = 0.713418$, $^{87}\text{Rb}/^{86}\text{Sr} = 0.2794$, $^{143}\text{Nd}/^{144}\text{Nd} = 0.511151$ and $^{147}\text{Sm}/^{144}\text{Nd} = 0.1115$ (after Pandey *et al.* 2018) and 3) PP/KAD3/1 have $^{87}\text{Sr}/^{86}\text{Sr} = 0.714678$, $^{87}\text{Rb}/^{86}\text{Sr} = 0.4138$, $^{143}\text{Nd}/^{144}\text{Nd} = 0.511475$ and $^{147}\text{Sm}/^{144}\text{Nd} = 0.134$ (after Pandey *et al.* 2018). The bulk distribution coefficients (D) used in AFC calculations are $D_{\text{Nd}} = 0.25$ and $D_{\text{Sr}} = 1.8$. The PETROGRAM excel program developed by Gündüz and Asan (2021) is used for AFC calculations. Symbols for DVP basalts are as in earlier figures.