

Table S4. Bayesian model class selection to estimate SAF locking depth and MF and BSF dip

	Candidate locking depths (km, 1 km increments) ^a	Candidate dips (degrees NE, 5° increments) ^{b,c}	Most likely locking depth (km)	Most likely dip (degrees NE)	Best fitting deep slip rate (mm/yr) ^e
SAF	10 – 20	N/A	16	N/A	21.6
MF	N/A	45 – 90	N/A	50 ^d	13.6
BSF	N/A	50 – 90	N/A	90	6.9

^a MF and BSF locking depths held fixed at 9 km and 13 km, respectively.

^b SAF dip held fixed at 90 degrees.

^c Dip applies to portion of fault above locking depth.

^d See text for discussion of dip used in modeling.

^e This is best fitting rate for most likely model class.