

Table S1. Indian-Burman plate motion along the northern Sunda megathrust from various plate rotation models

Model	Latitude	Longitude	Speed mm/yr	Azimuth	N Vel. mm/yr	E Vel. mm/yr	Plate (reference)	Yunnan Block Vel.				Sagaing Fault Vel.				Andaman spreading Vel. (from Curray, 2005)				Vector (1) Respect to Indian				Vector (2) Respect to Indian			Vector (3) Respect to Indian		Megathrust Orientation	Angle between megathrust and vector(1)	Angle between megathrust and vector(2)	Angle between megathrust and vector(3)	GPS Vel. (respect to Indian plate from Socquet et al., 2006)								
								Average	Azimuth	Max	Min	Average	Azimuth	Max	Min	Average	Azimuth	N Vel.	E Vel.	Min	Max	Azimuth	Min	Max	Azimuth	Average	Azimuth	Lat					Long	mm/yr	Azimuth	N. Vel.	E. Vel.	Site	Reference		
								mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr					mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	mm/yr	
MORVEL 2010	23° 30' N	90° 30' E	41.58	10.98°	40.82	7.92	IN(SU)	-6	90	-22	-18	0									20.4	24.2	202.8	199.1	23.4	26.7	216.5	211.4			165	-36.0	-48.9								
GSRM v1.2	23° 30' N	90° 30' E	33.22	6.16°	33.03	3.56	IN(SU)	-6	90	-22	-18	0									11.6	15.4	197.9	193.3	14.6	17.8	220.9	212.5			165	-30.6	-51.7	23.72	92.73	11.24	247.05	-4.38	-10.35	AIWL	Jade et al., 2007
Socquet 2006	23° 30' N	90° 30' E	35.43	10.46°	34.84	6.43	IN(SU)	-6	90	-22	-18	0									14.4	18.0	206.6	200.9	17.9	20.9	224.1	216.4			165	-38.7	-55.3								
MORVEL 2010	21° 15' N	91° 15' E	42.11	12.56°	41.1	9.15	IN(SU)	-6	90	-22	-18	0									21.2	24.8	205.6	201.6	24.4	27.6	218.4	213.3			140	-63.6	-75.8	21.40	93.90	13.79	211.7	-11.73	-7.25	MIND	Calais et al., 2006
GSRM v1.2	21° 15' N	91° 15' E	33.67	8.13°	33.33	4.76	IN(SU)	-6	90	-22	-18	0									12.3	16.1	202.8	197.2	15.6	18.7	223.5	215.1			140	-60.0	-79.3	21.38	93.90	14.43	214.5	-11.89	-8.17	MIND	Socquet et al., 2006
Socquet 2006	21° 15' N	91° 15' E	35.83	11.93°	35.06	7.41	IN(SU)	-6	90	-22	-18	0									15.0	18.6	209.6	203.5	18.7	21.7	225.8	218.2			140	-66.5	-82.0	21.38	93.90	15.48	225	-10.94	-10.95	MIND	Simons et al., 2007
MORVEL 2010	19° 30' N	92° 30' E	42.79	13.84°	41.55	10.24	IN(SU)			-22	-18	0									22.1	25.7	207.6	203.5					140	-65.6											
GSRM v1.2	19° 30' N	92° 30' E	34.32	9.73°	33.82	5.8	IN(SU)			-22	-18	0									13.2	16.8	206.1	200.1					140	-63.1											
Socquet 2006	19° 30' N	92° 30' E	36.36	13.16°	35.41	8.28	IN(SU)			-22	-18	0									15.8	19.3	211.7	205.4					140	-68.6											
MORVEL 2010	18° N	93° 30' E	43.34	14.84°	41.89	11.1	IN(SU)			-22	-18	0									22.8	26.3	209.2	204.9					150	-57.0											
GSRM v1.2	18° N	93° 30' E	34.84	10.99°	34.2	6.64	IN(SU)			-22	-18	0									13.9	17.5	208.6	202.3					150	-55.4											
Socquet 2006	18° N	93° 30' E	36.79	14.11°	35.68	8.97	IN(SU)			-22	-18	0									16.4	19.8	213.3	206.9					150	-60.1											
MORVEL 2010	15° N	93° 5' 60" E	43.52	16.35°	41.76	12.25	IN(SU)			-22	-18	0	-30	335	-27	12	23.2	26.7	211.8	207.3					28.4	238.7	210	0.5													
GSRM v1.2	15° N	93° 5' 60" E	34.95	12.99°	34.06	7.86	IN(SU)			-22	-18	0	-30	335	-27	12	14.4	17.9	213.1	206.1					21.1	250.4	210	0.4													
Socquet 2006	15° N	93° 5' 60" E	36.91	15.49°	35.57	9.86	IN(SU)			-22	-18	0	-30	335	-27	12	16.8	20.1	216.0	209.3					23.5	248.6	210	-2.7													
MORVEL 2010	12° N	92° E	43.46	17.81°	41.38	13.29	IN(SU)			-22	-18	0	-30	335	-27	12	23.5	26.9	214.4	209.6					29.1	240.4	186	-26.0													
GSRM v1.2	12° N	92° E	34.82	14.96°	33.64	8.99	IN(SU)			-22	-18	0	-30	335	-27	12	14.7	18.0	217.7	209.9					22.0	252.4	186	-27.8					11.6	92.7	9.7	240.5	-4.8	-8.4	CARI	Banerjee et al., 2008	
Socquet 2006	12° N	92° E	36.85	16.80°	35.28	10.65	IN(SU)			-22	-18	0	-30	335	-27	12	17.0	20.3	218.7	211.6					24.1	195.4	186	-29.2													