



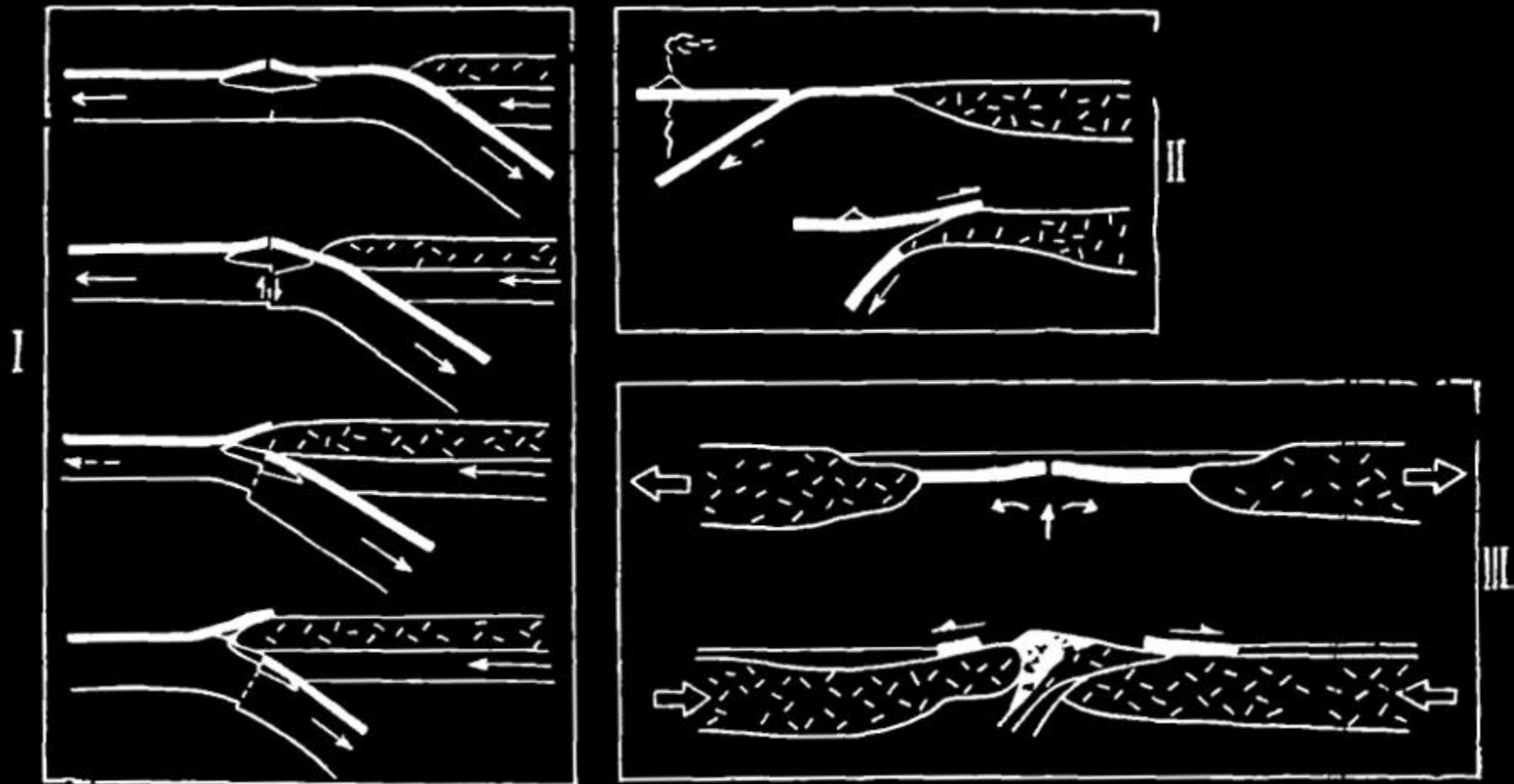
**Латеральная миграция вулканоплутонических поясов:**  
 А – изменение угла наклона; Б – изменение глубины магмогенерации;  
 В – субдукционная аккреция; Г – субдукционная эрозия.

Table 9.6 Details of major subduction zones

Subduction zone	Plates	Length of zone (km)	Approx. subduction rate (cm yr <sup>-1</sup> )	Approx. dip angle (degrees)	Thermal parameter (1000 km)	Geometry
Kurile–Kamchatka–Honshu	Pacific under Eurasia	2800	6–13	40	5–7.5	
Tonga–Kermadec–New Zealand	Pacific under India	3000	8	60	12–17	
Middle America	Cocos under N. America	1900	9	70	<1	
Aleutians	Pacific under N. America	3800	6	50	2.5	
Sundra–Java–Sumatra–Burma	India under Eurasia	5700	7	70	4	
Cascadia	Juan de Fuca under N. America	1400	2	15	<1	
South Sandwich–Scotia	S. America under Scotia	650	2			
Caribbean	S. America under Caribbean	1350	0.5	50		
Aegean	Africa under Eurasia	1550	3			
Solomon–New Hebrides	India under Pacific	2750	10	70	9–12	
Izu–Bonin–Marianas	Pacific under Philippine	4450	10	60	7–12	
Iran	Arabian under Eurasia	2250	5	5		
Himalayan	India under Eurasia	2400	5			
Ryukyu–Philippine	Philippine under Eurasia	4750	7	45	2–6	
Peru–Chile	Nazca under S. America	6700	9	30	1.5–5	

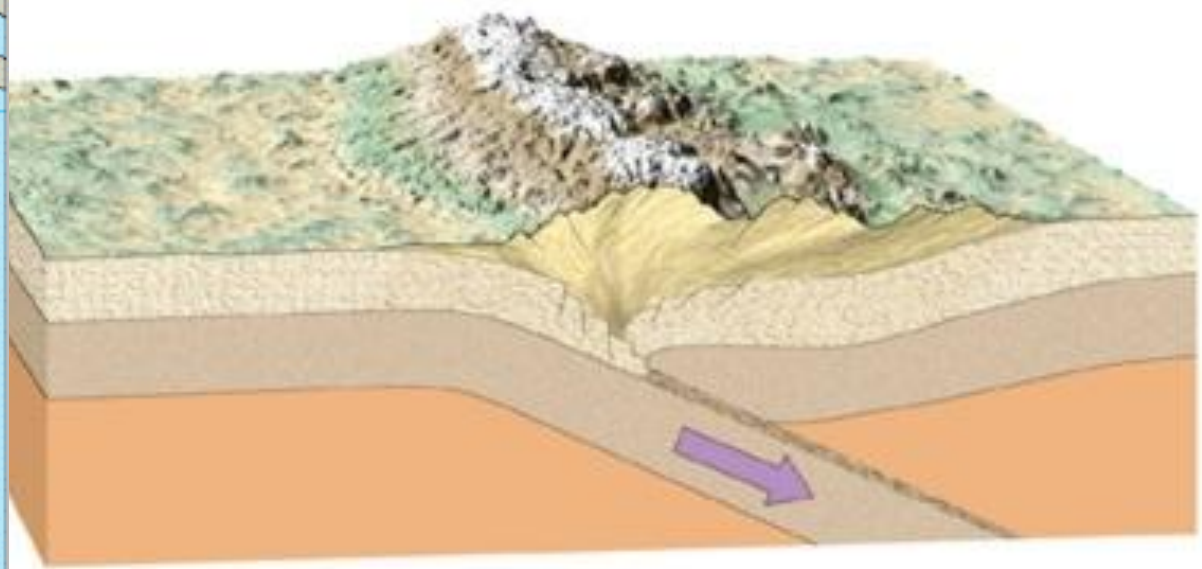
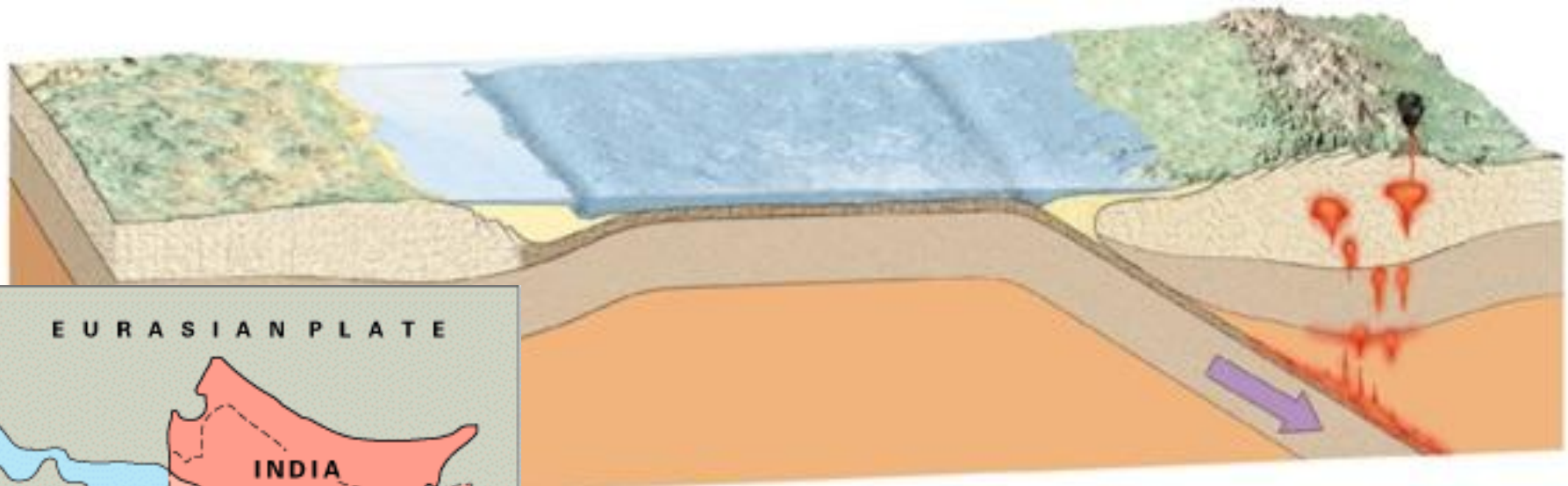
*Note:* The subducted plate is oceanic except for the Iran and Himalayan subduction zones, for which all or part of the subducted plate is continental. Thermal parameter = age of subducting plate × descent rate.

*Sources:* After Toksöz (1975), Furlong and Chapman (1982), Stein and Stein (1996) and Kirby *et al.* (1996).



Столкновение активной континентальной окраины с хребтом (1).  
 Столкновение пассивной окраины с фронтом энсиматической дуги (2).  
 Закрытие бассейнов океанского типа (3).







BEFORE

Tip of Indian plate

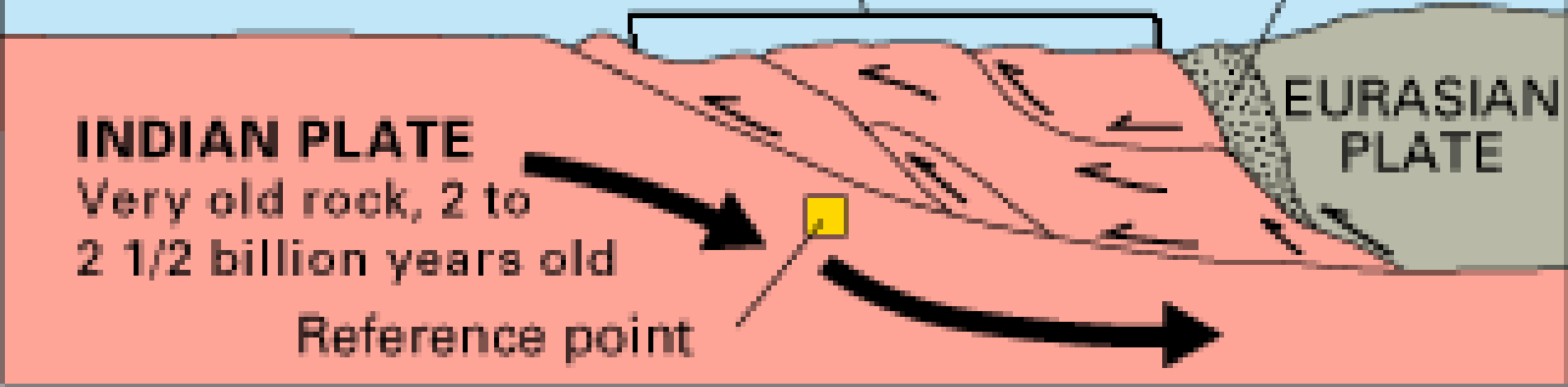
Ancient oceanic crust

INDIAN PLATE

Very old rock, 2 to 2 1/2 billion years old

Reference point

EURASIAN PLATE



AFTER

Rising Himalayas

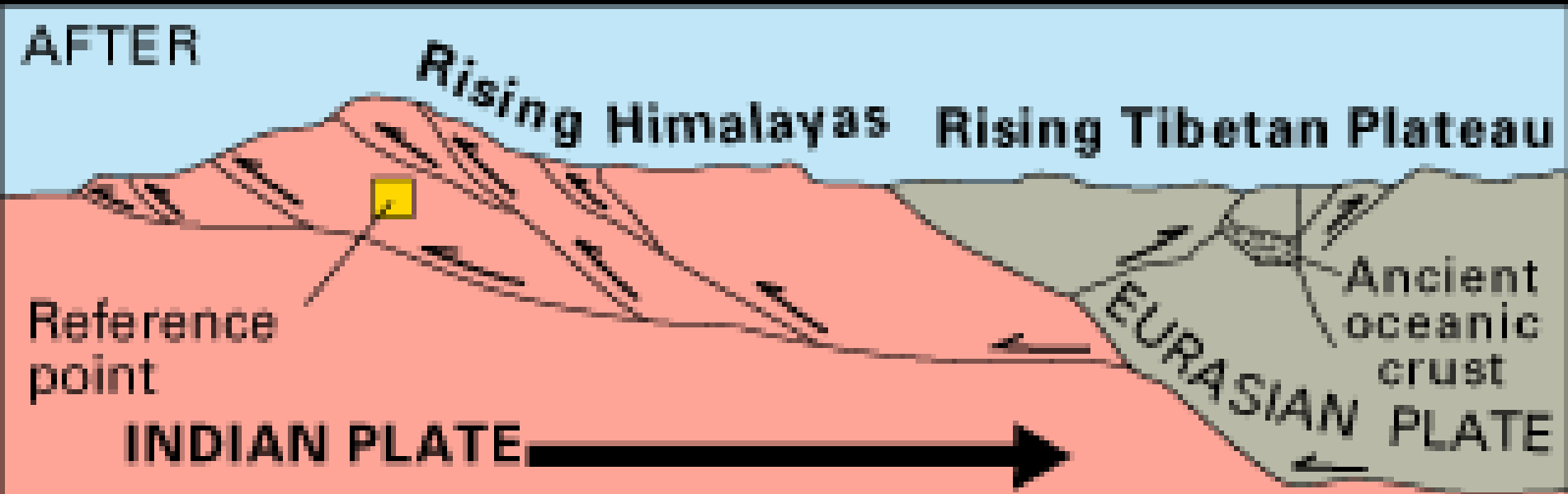
Rising Tibetan Plateau

Reference point

INDIAN PLATE

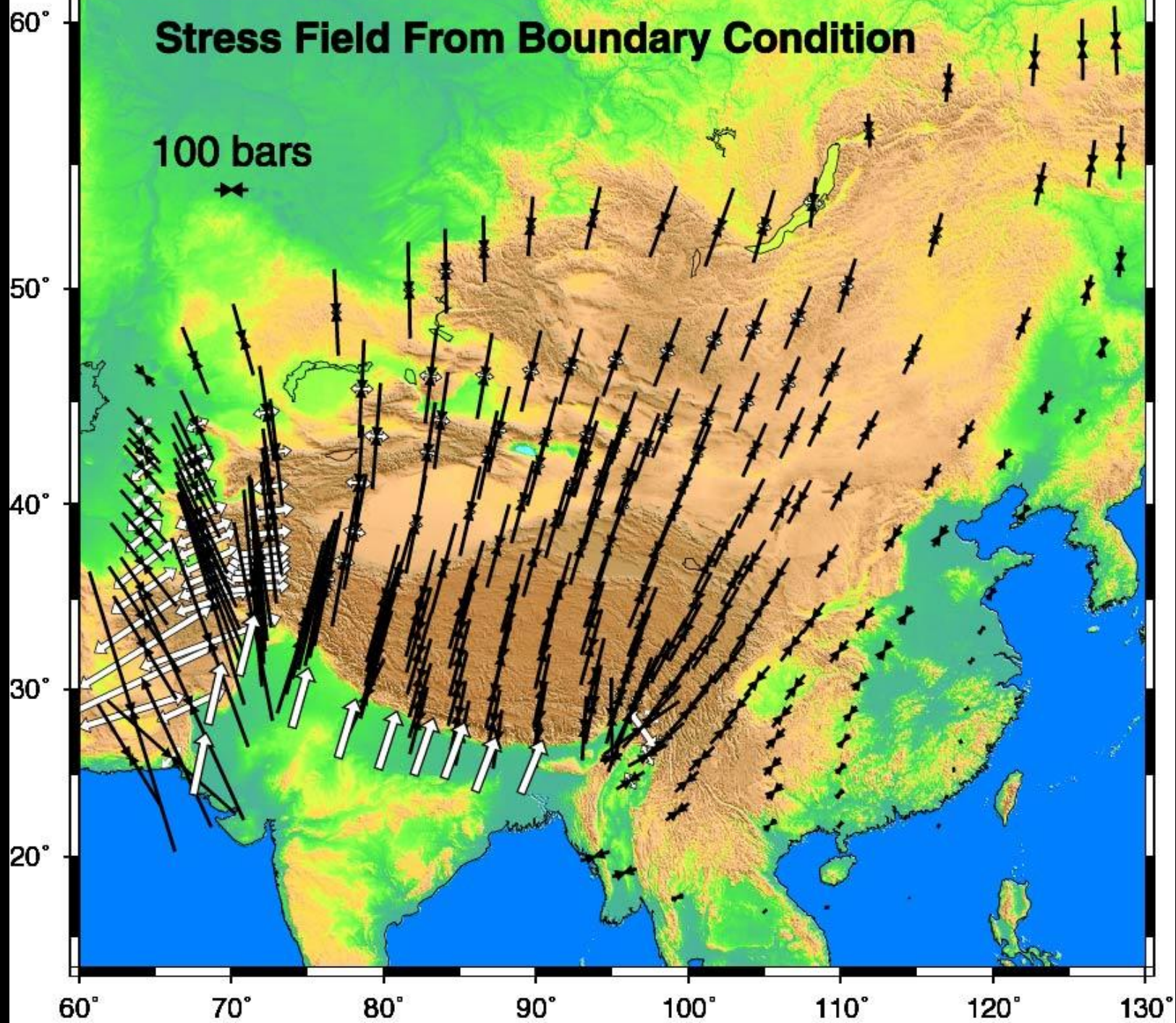
EURASIAN PLATE

Ancient oceanic crust

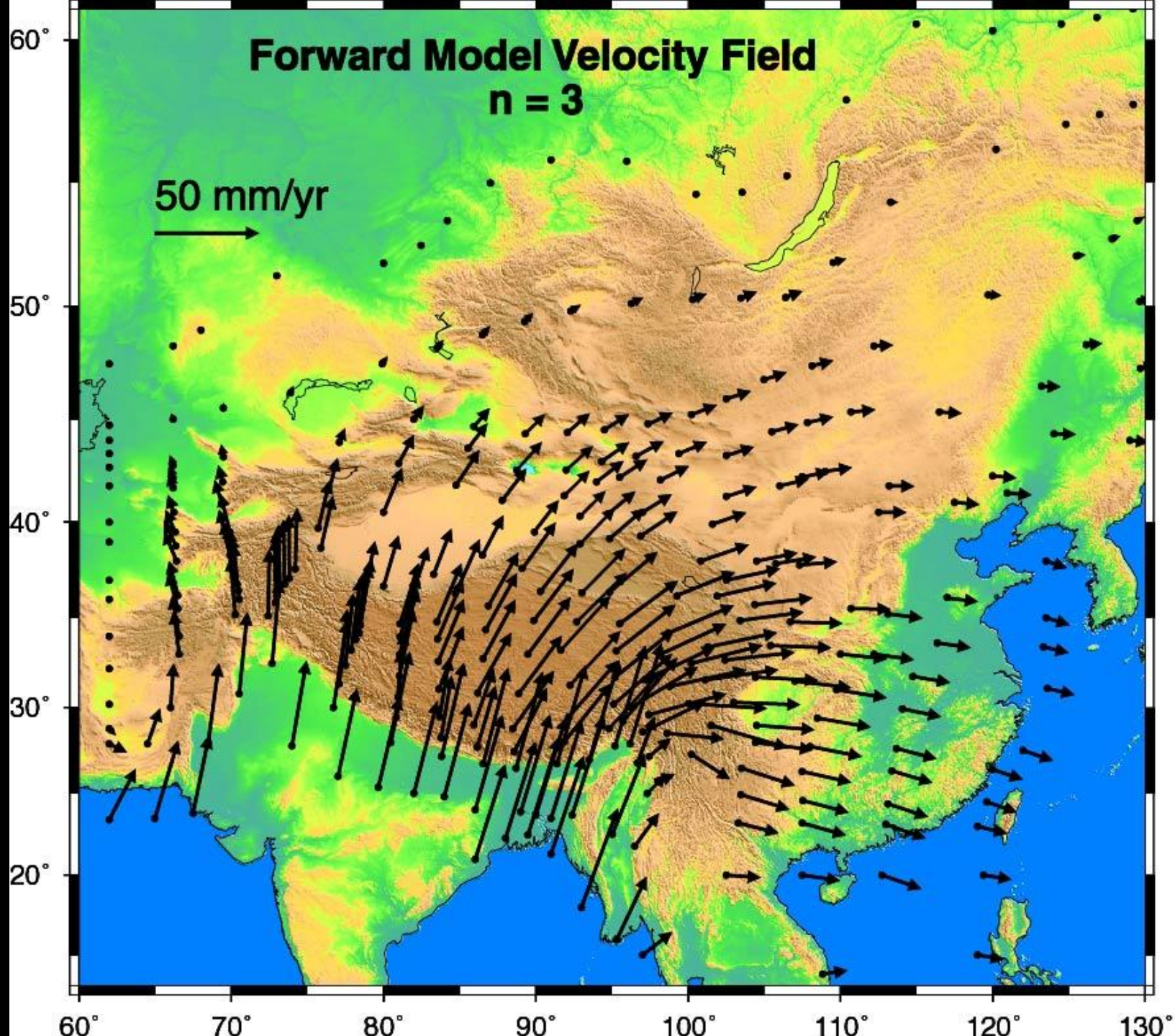


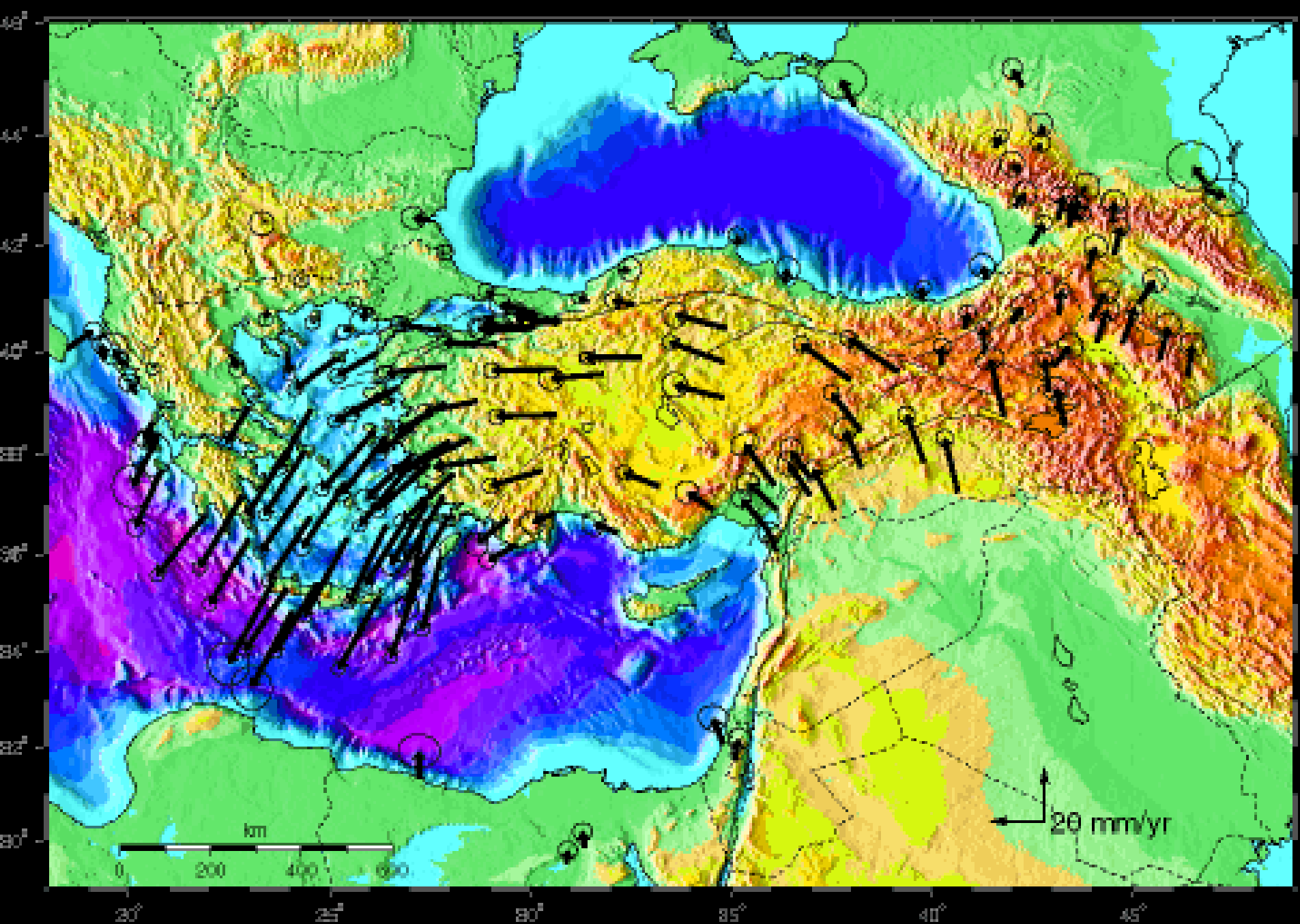
# Stress Field From Boundary Condition

100 bars



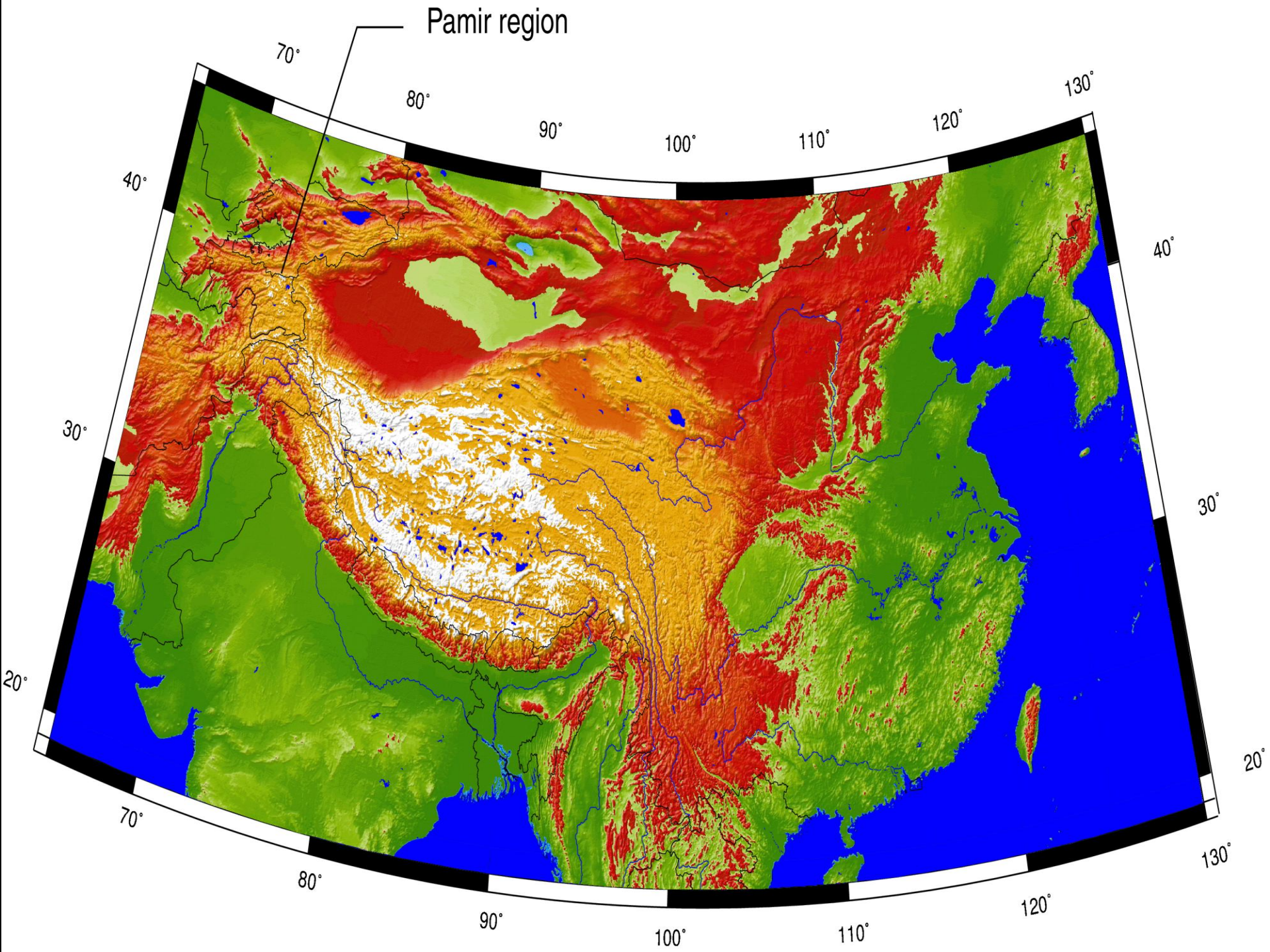






0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900 10000

Pamir region



# Происхождение гранитов

## Типы гранитов:

S-граниты (sedimentary)

I-граниты (igneous)

M-граниты (mantle)

A-граниты (anorogenis, anhydrous, alkaline)

## S-граниты

- образуются в результате переплавления осадочного материала.

Обеднены CaO, NaO, Sr