

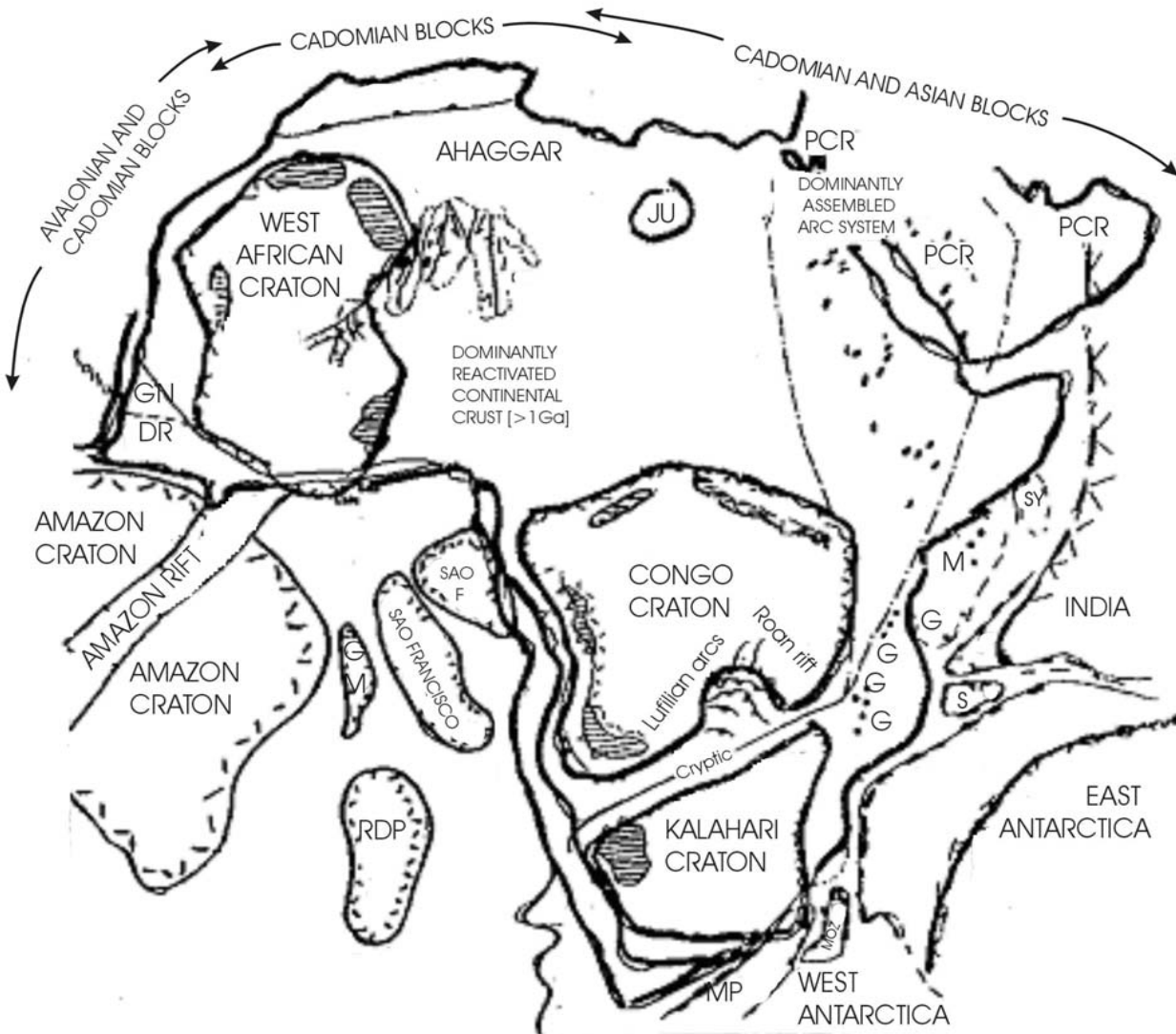
# THE PANAFRICAN OROGENY



## **CHARACTERISTICS THAT HELP IN IDENTIFYING ANCIENT SUTURE ZONES AND COLLISION ZONES**

- (1) Local Preservation (LP) of rifted (Atlantic-type) margin rocks**
- (2) LP of ophiolite fragments**
- (3) LP of fragments of island and Andean arc rocks and arc roots. Often representative of the Altaid style of orogenic development.**
- (4) LP of “Ultra-High Pressure” metamorphic rocks**
- (5) Regional preservation of igneous and metamorphic rocks with reset isotopic systems in reactivated blocks**
- (6) LP of Deformed Alkaline rocks and Carbonatites (DARCS)**
- (7) Paired positive and negative Bouguer gravity anomalies**
- (8) Post-collisional granites**
- (9) Foreland basins**
- (10) Evidence of tectonic escape and post-collisional rifts.**
- (11) Evidence of gravitational collapse and post-collisional rifts.**
- (12) Evidence indicative of the former continuity of suture zones.**
- (13) Occurrence of “impactogenal” rifts**
- (14) Juxtaposition of reactivated and unreactivated blocks (in the absence of any of the other characteristics) in a “cryptic suture zone”**

# How Africa was assembled



3 Cratons. Oceans closed at Margins  
 Reactivated > 1 Ga continental Crust.  
 Altitid style.

Rifts formed at breakup in Congo  
 And W.Africa. Wide thrust-belts  
 Marked them at collision.

Amazon rift formed at collision.  
 As an "impactogen".

Foreland basins (line ornament  
 on cratons) formed as oceans  
 Closed and after collision.

Florida and parts of E.coast were  
 Left in NOAM when Pangea  
 Broke up

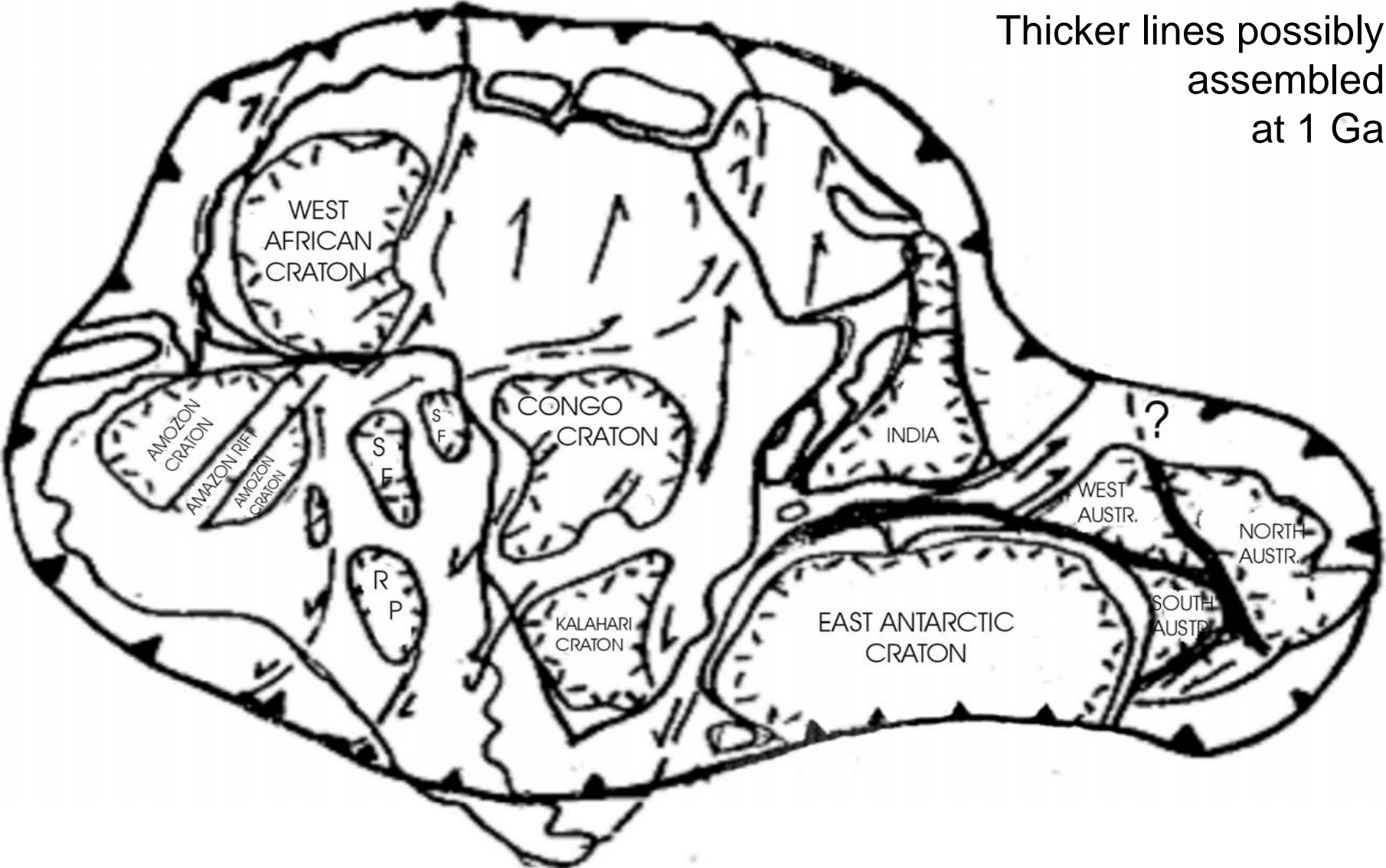
G symbols are granulites.They  
 May mark where continents were  
 Thick after collision.

DR - DEMERARA RISE  
 G - GRANULITE  
 GM - GOIAS MASSIF  
 GN - GUINEA NOSE  
 JU - JEBEL UWEINAT  
 M - MADAGASCAR

MOZ - MOZAMBIQUE RIDGE  
 MP - MALVINAS PLATEAU  
 PCR - POST COLLISIONAL RIFTS  
 RDP - RIO DE LA PLATA  
 S - SRI LANKA  
 SY - SEYCHELLES

# Newly assembled Gondwana ca. 550 Ma

Thicker lines possibly assembled at 1 Ga



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