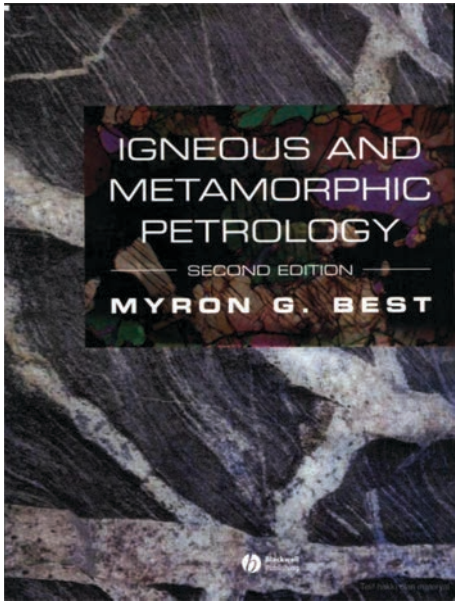
Corso di Geologia del Cristallino

Per info:

Email: luca.ziberna@units.it

Palazzina N, Via Weiss 8, 34128, Trieste



Libro di testo principale usato come riferimento:

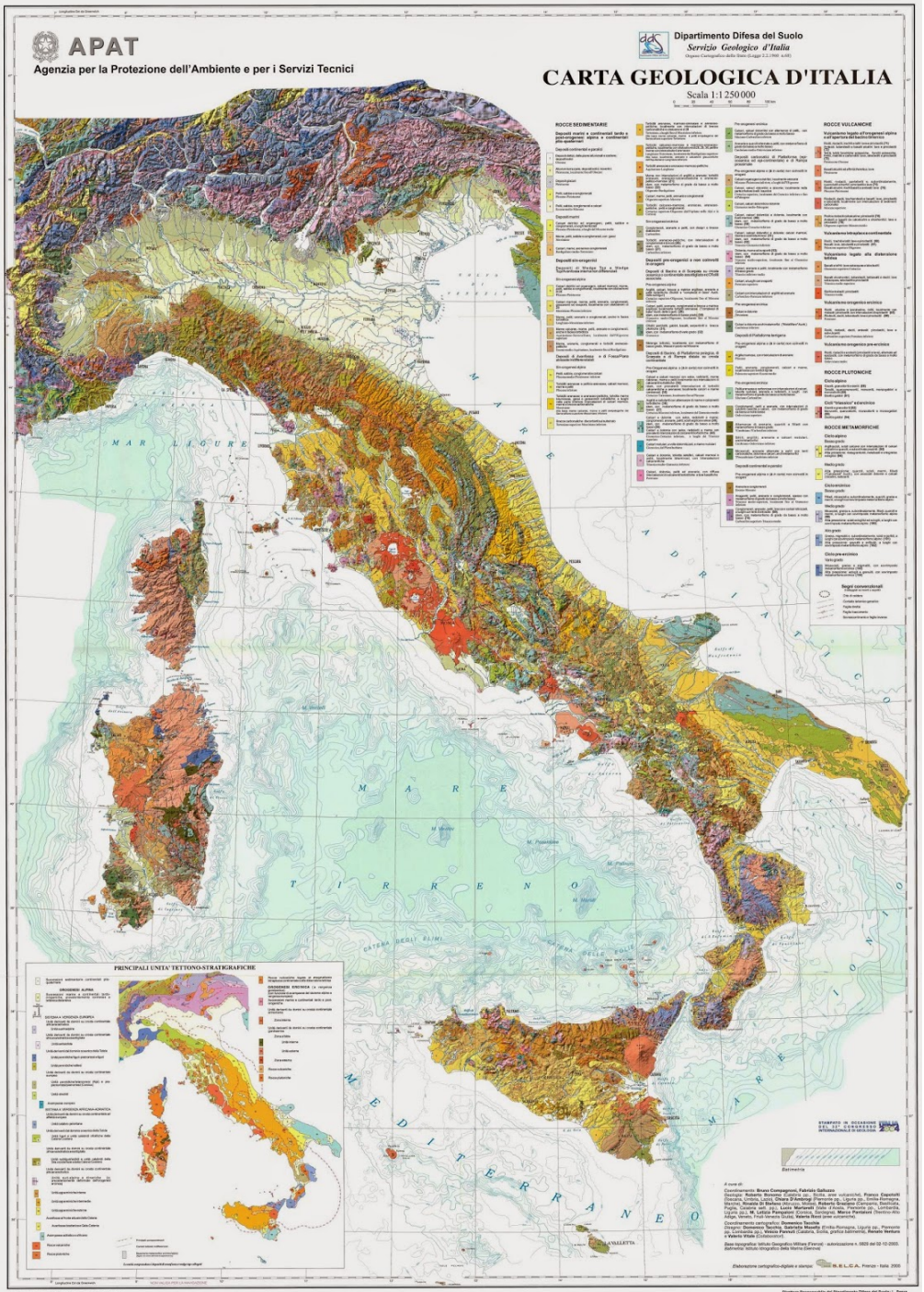
Best, M.G. (2003). Igneous and Metamorphic Petrology. 2nd ed. Blackwell Publishing. 729 pp.

Punti importanti

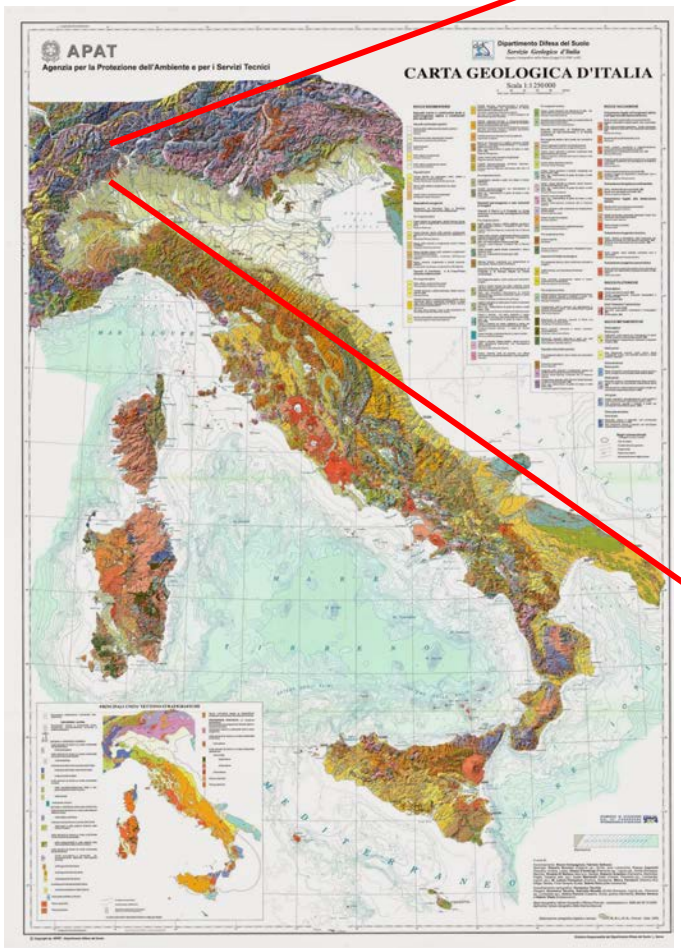
- Quanti studenti?
- Orari lezioni, aule, etc
- Background degli studenti
- Strutturazione generale del corso (lezioni frontali, laboratorio e escursioni)
- Giornate delle escursioni didattiche, costi, automezzi etc

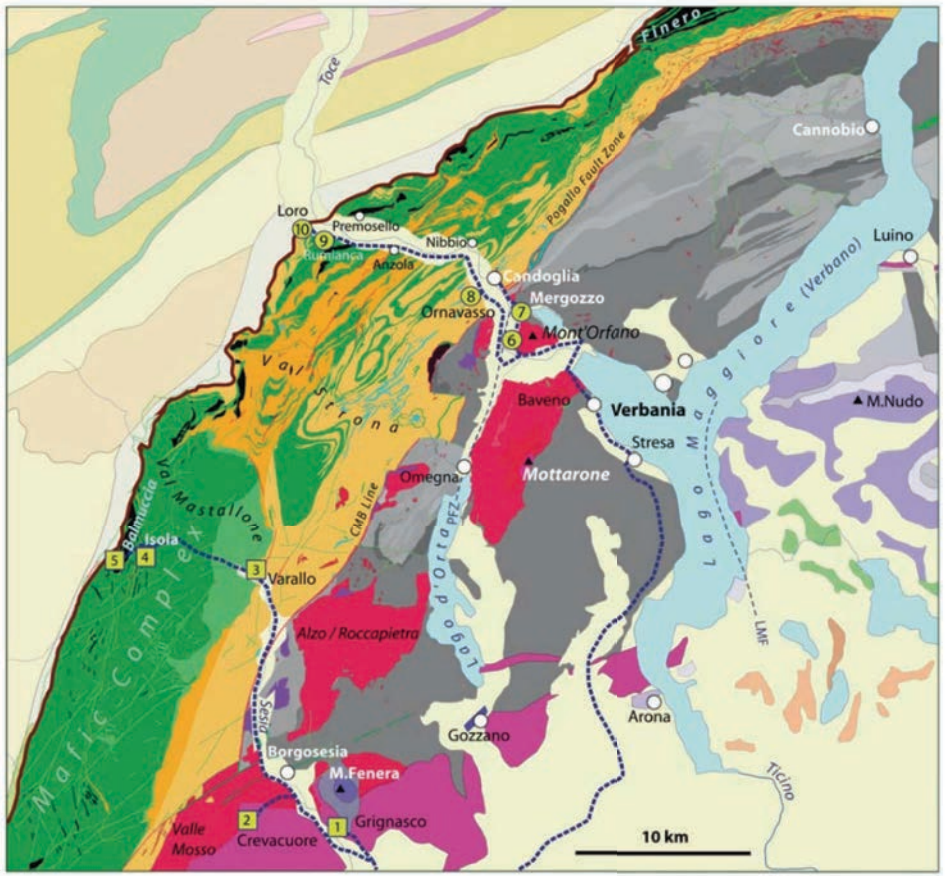
Introduzione

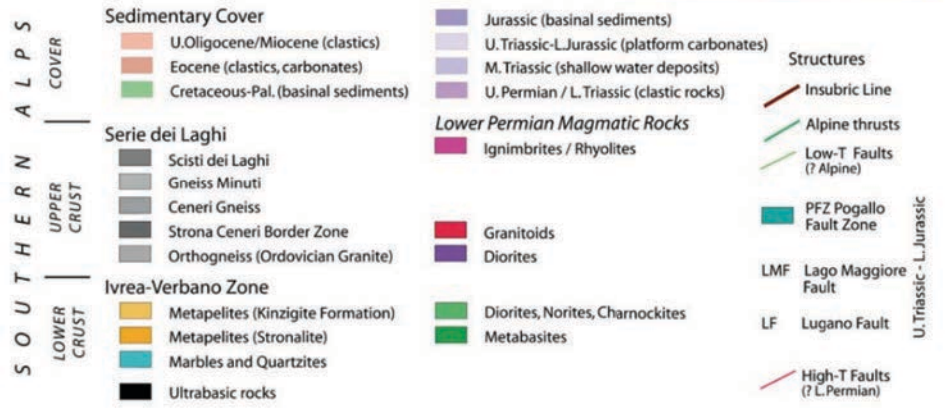
Perché è importante lo studio dei complessi magmatici e metamorfici?



...per la caratterizzazione del territorio







Brack et al. (2010; Swiss Bull.)

Fig. 3: Geological map of the Massiccio dei Laghi west of Lago Maggiore (Ivrea-Verbano Zone and Serie dei Laghi; simplified after a compilation by T. James 2001). The proposed field trip itineraries and stops are indicated: crustal section and mantle rocks in Valsesia (squares), upper and lower crustal rocks in Val d'Ossola (circles).

Stefano BRANCA[1] Mauro COLTELLI[1] Gianluca GROPPELLI[2] Fabio LENTINI[3]

GEOLOGICAL MAP OF ETNA VOLCANO

1:50.000 Scale

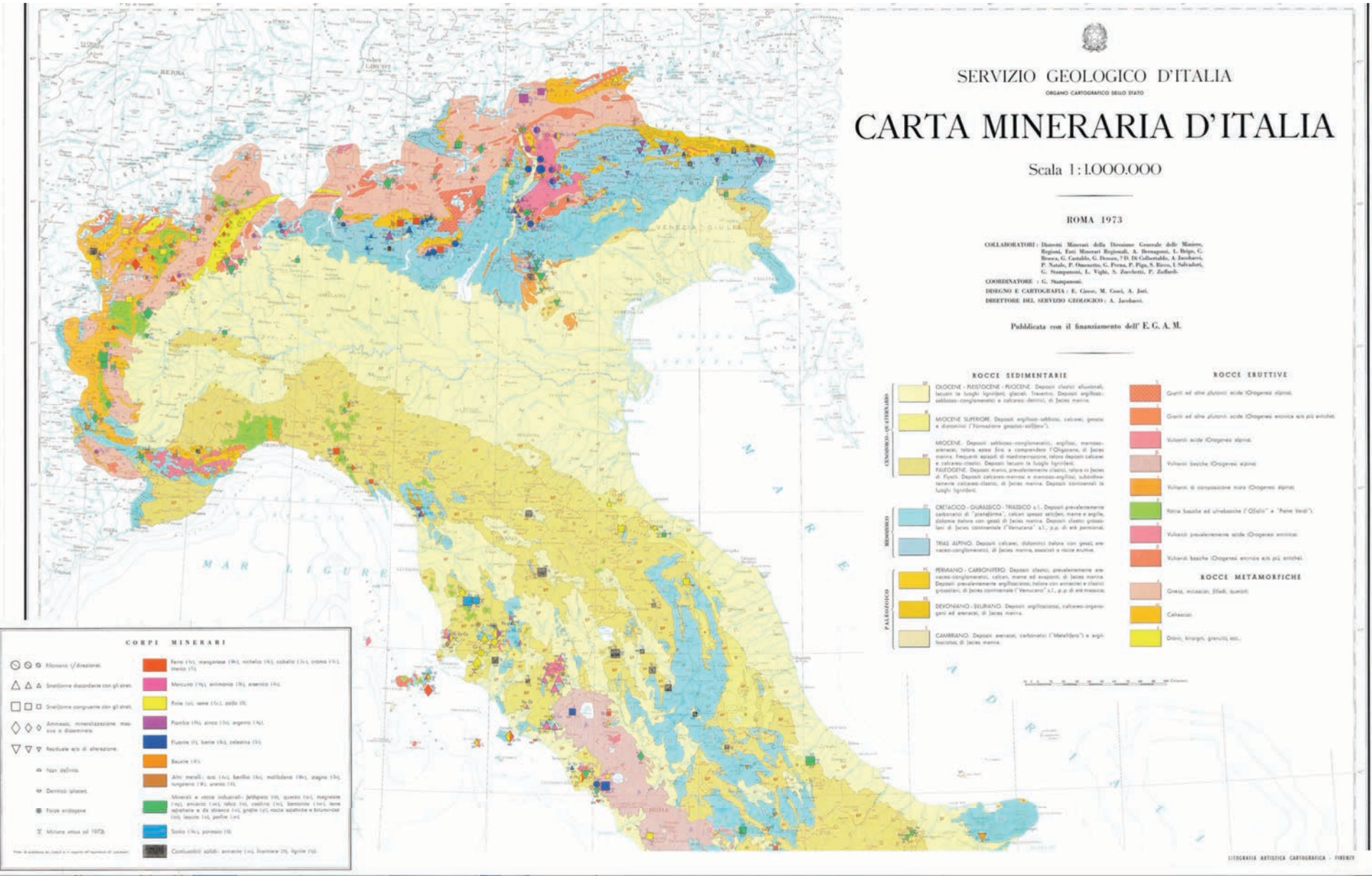
INDEX MAP

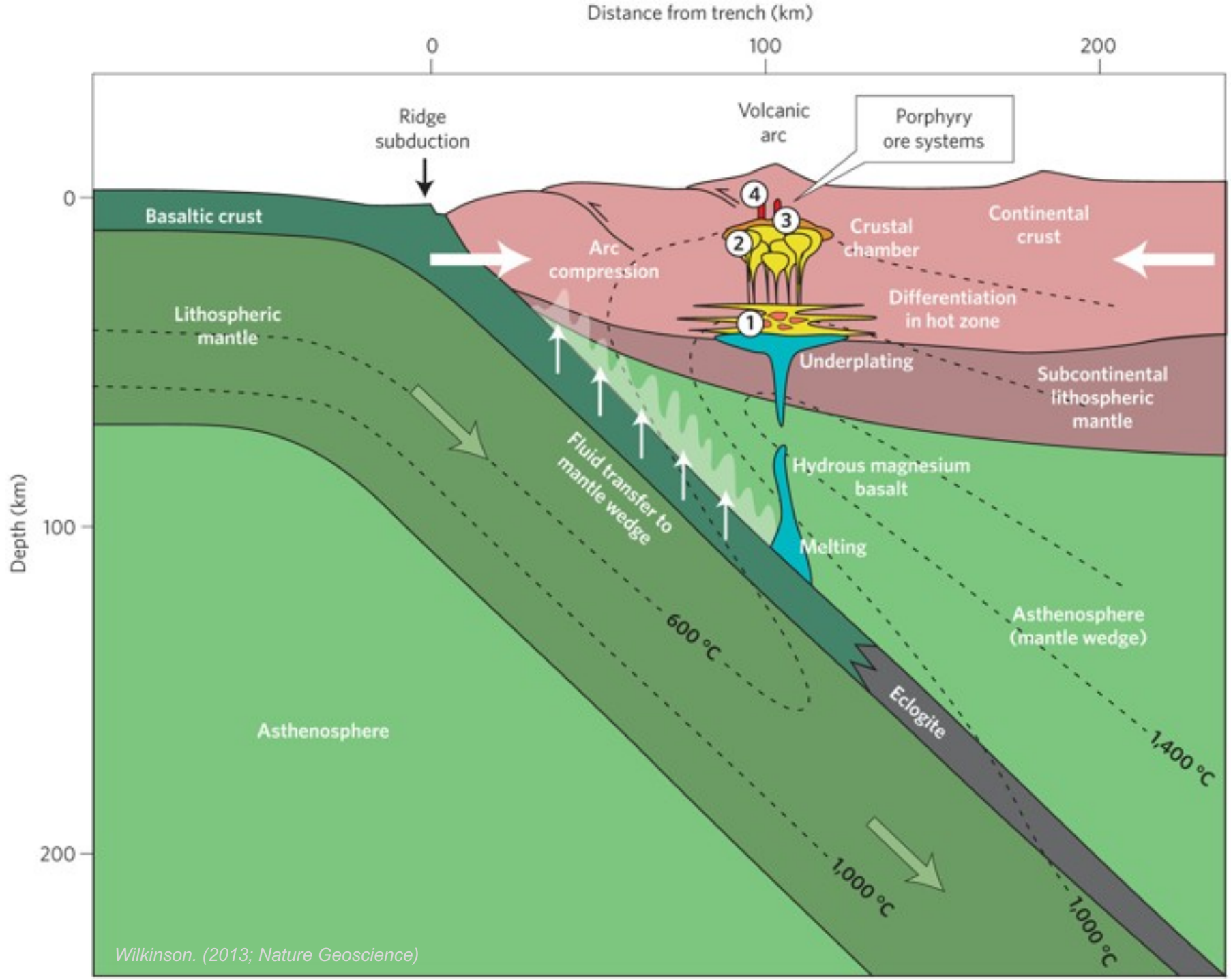
STRATIGRAPHIC RELATIONSHIPS SCHEME OF MOUNT ETNA VOLCANIC DISTRICT

SYNTHEMIC UNITS SCHEME

GEOLOGICAL CROSS-SECTION

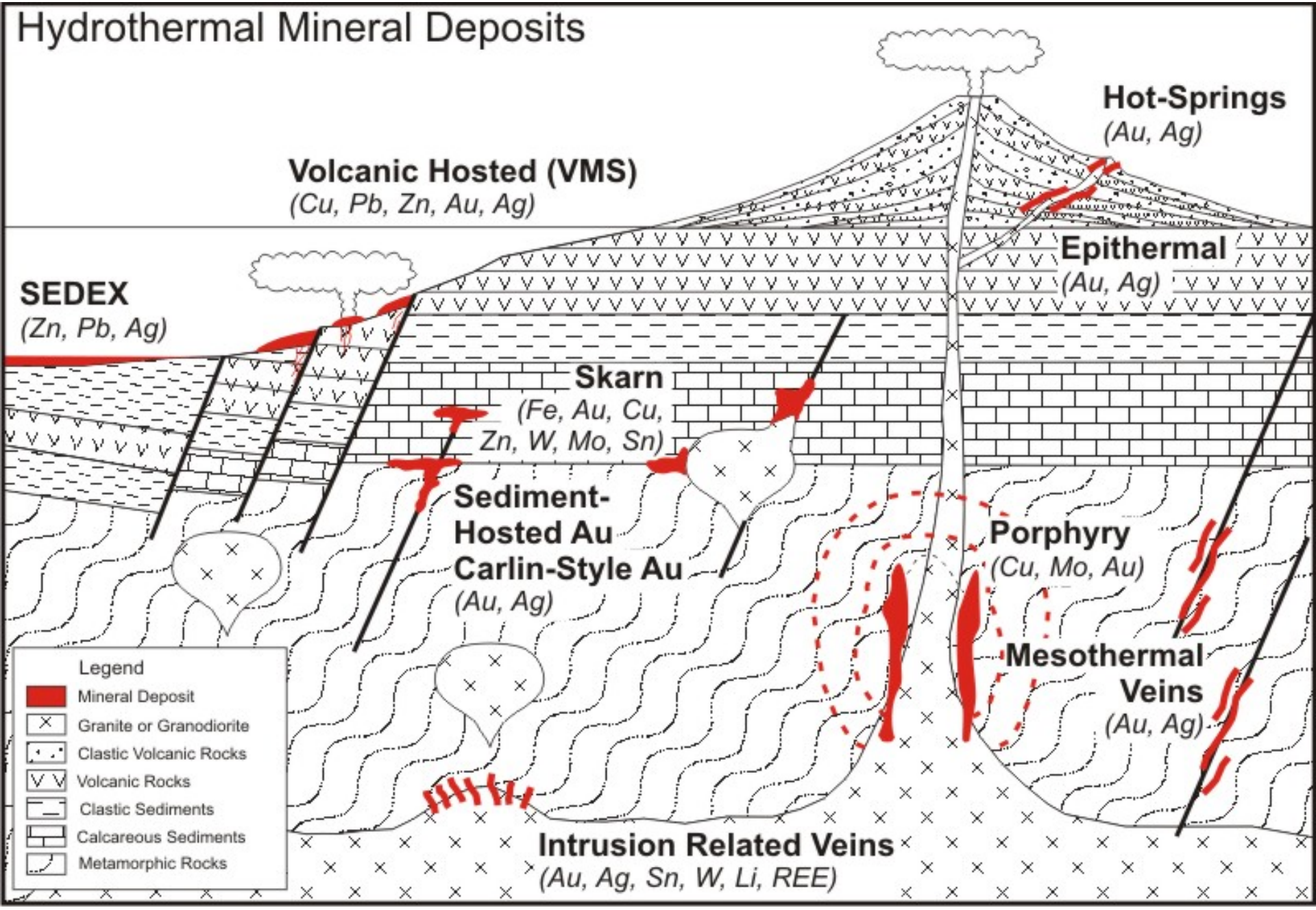
...per la prospezione delle georisorse minerarie



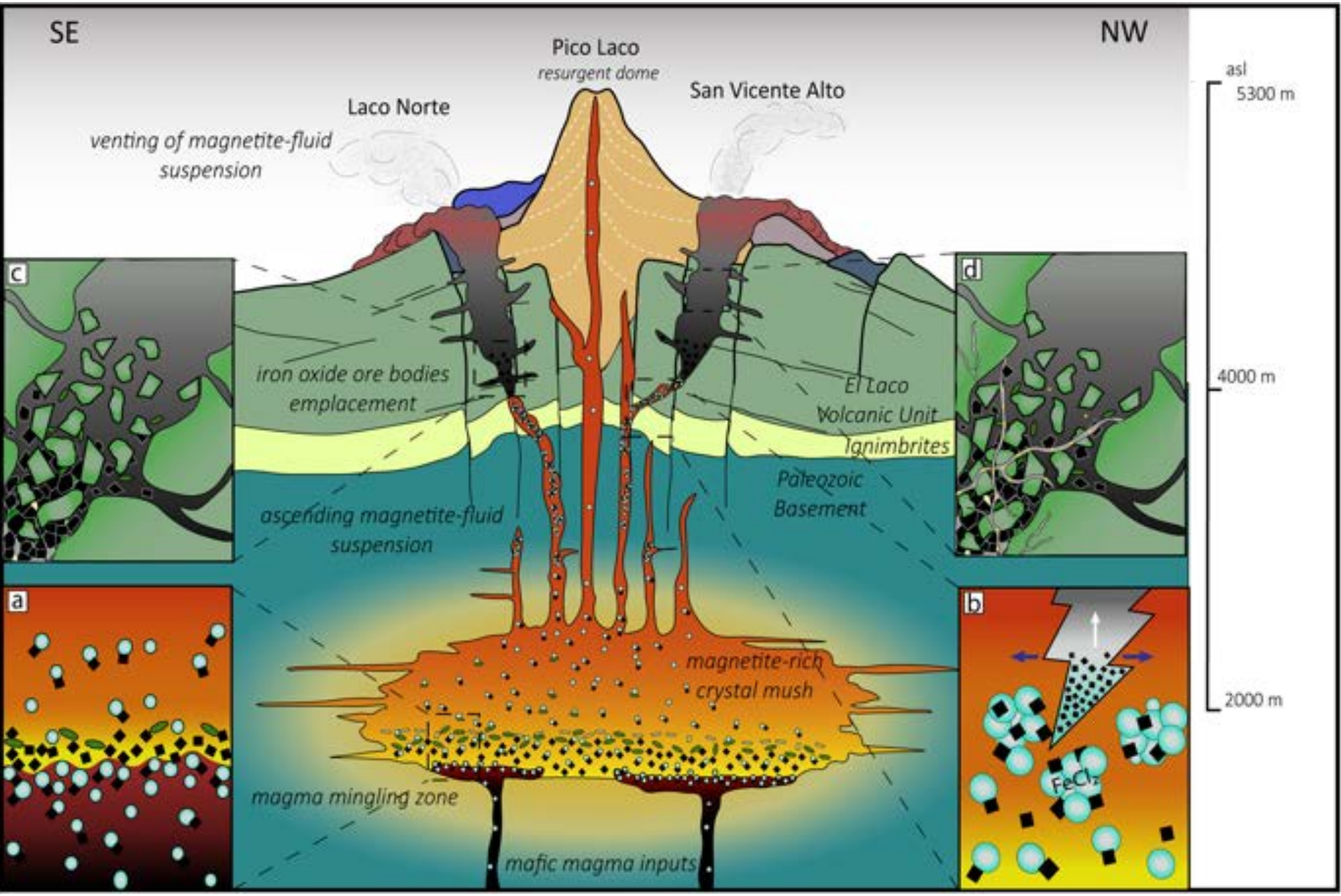


Wilkinson. (2013; Nature Geoscience)

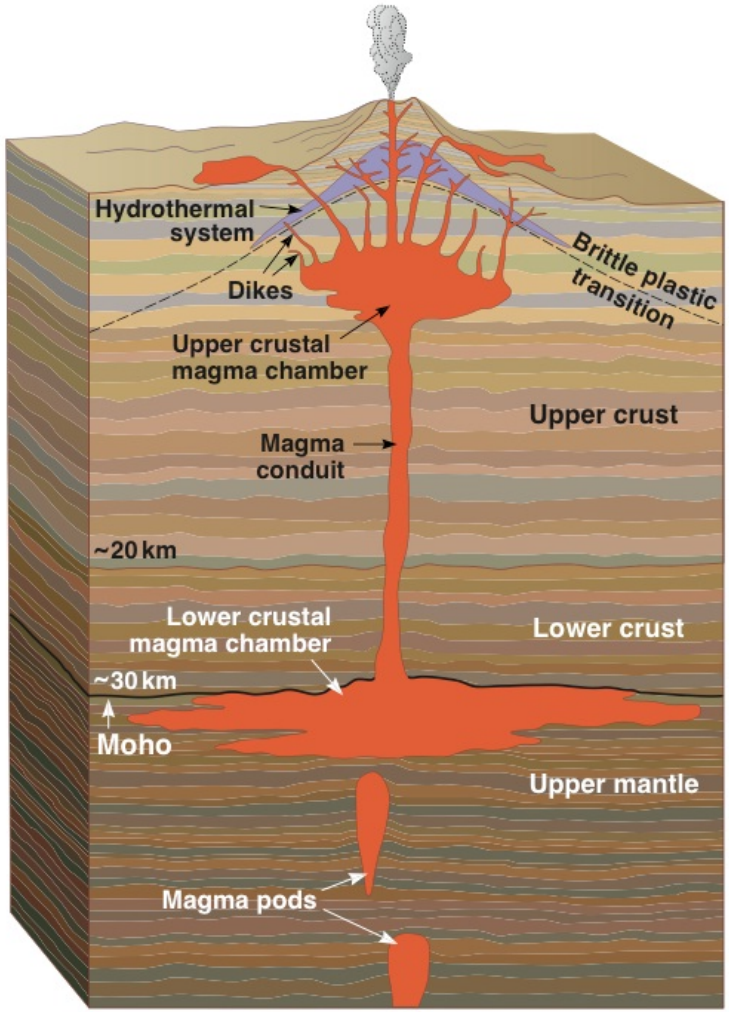
http://earthsci.org/mineral/mindep/class_dep/class_dep.html



Ovalle et al. (2018; Nature)



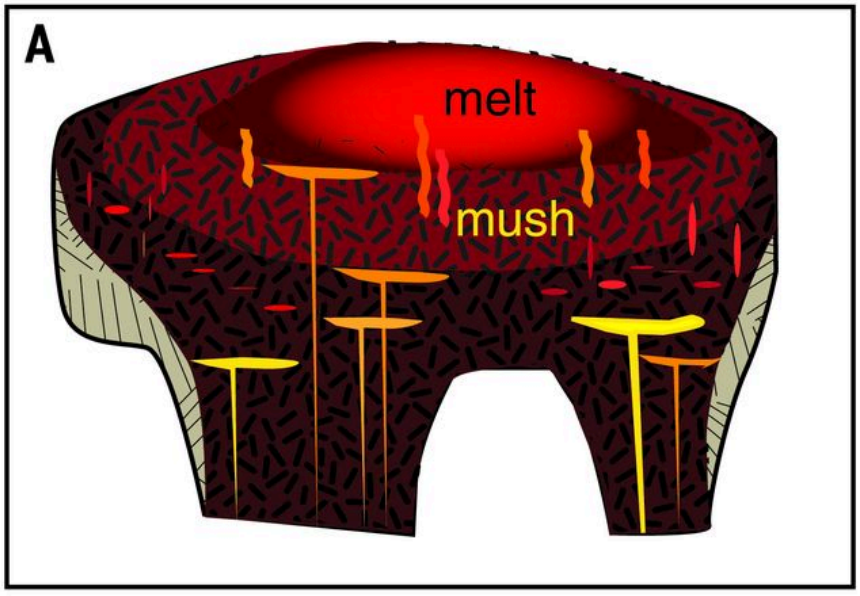
...per comprendere l'evoluzione dei sistemi magmatici e dei vulcani

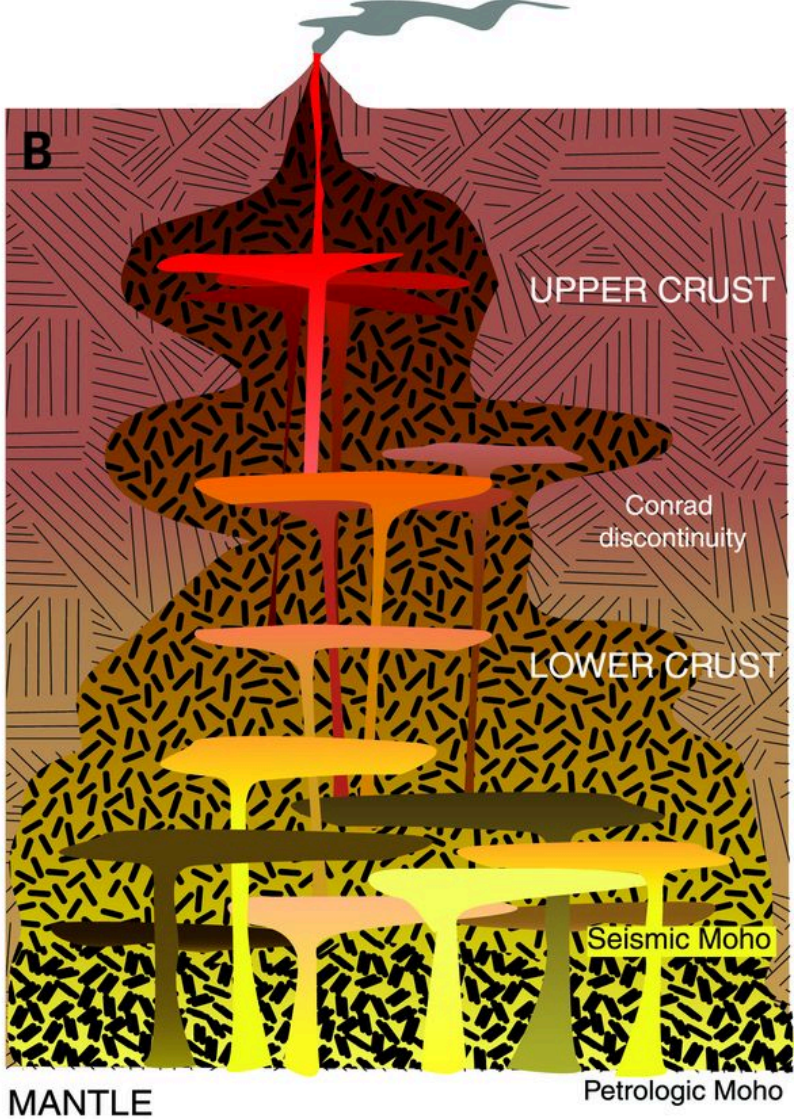


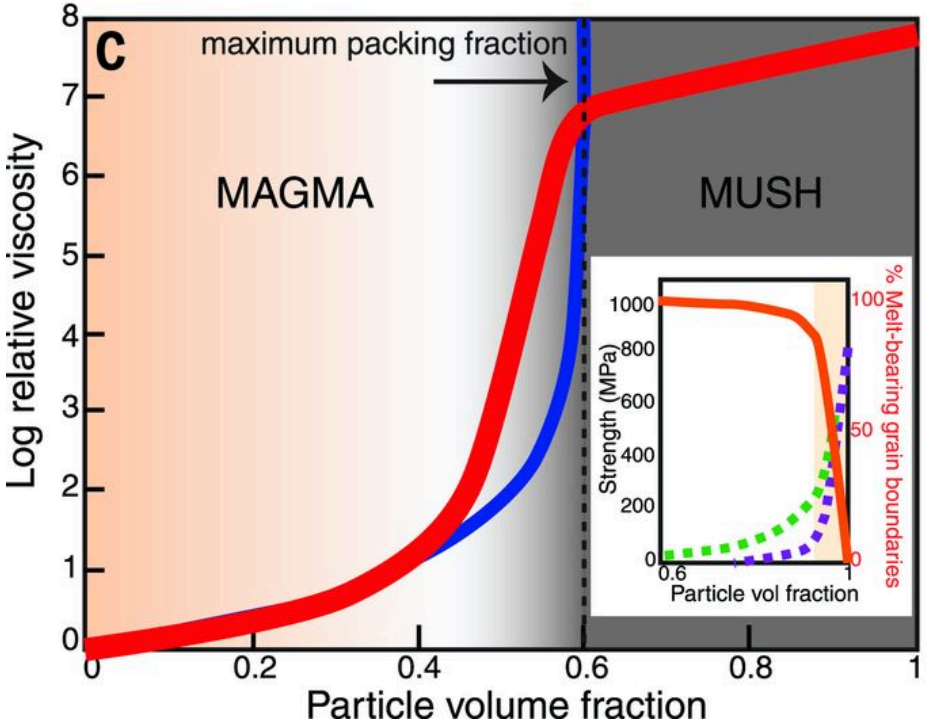
Magma ascencion and storage at the base of the crust.

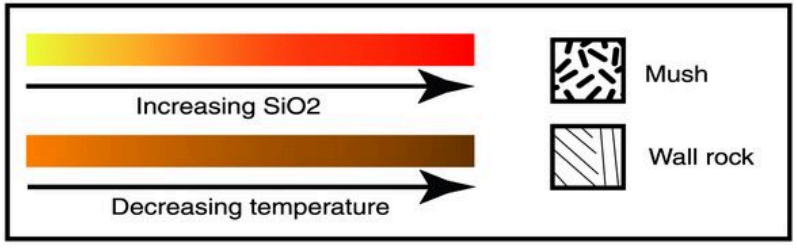
'tps://magmamovesinfits.files.wordpress.com

Cashman et al. (2017; Science)



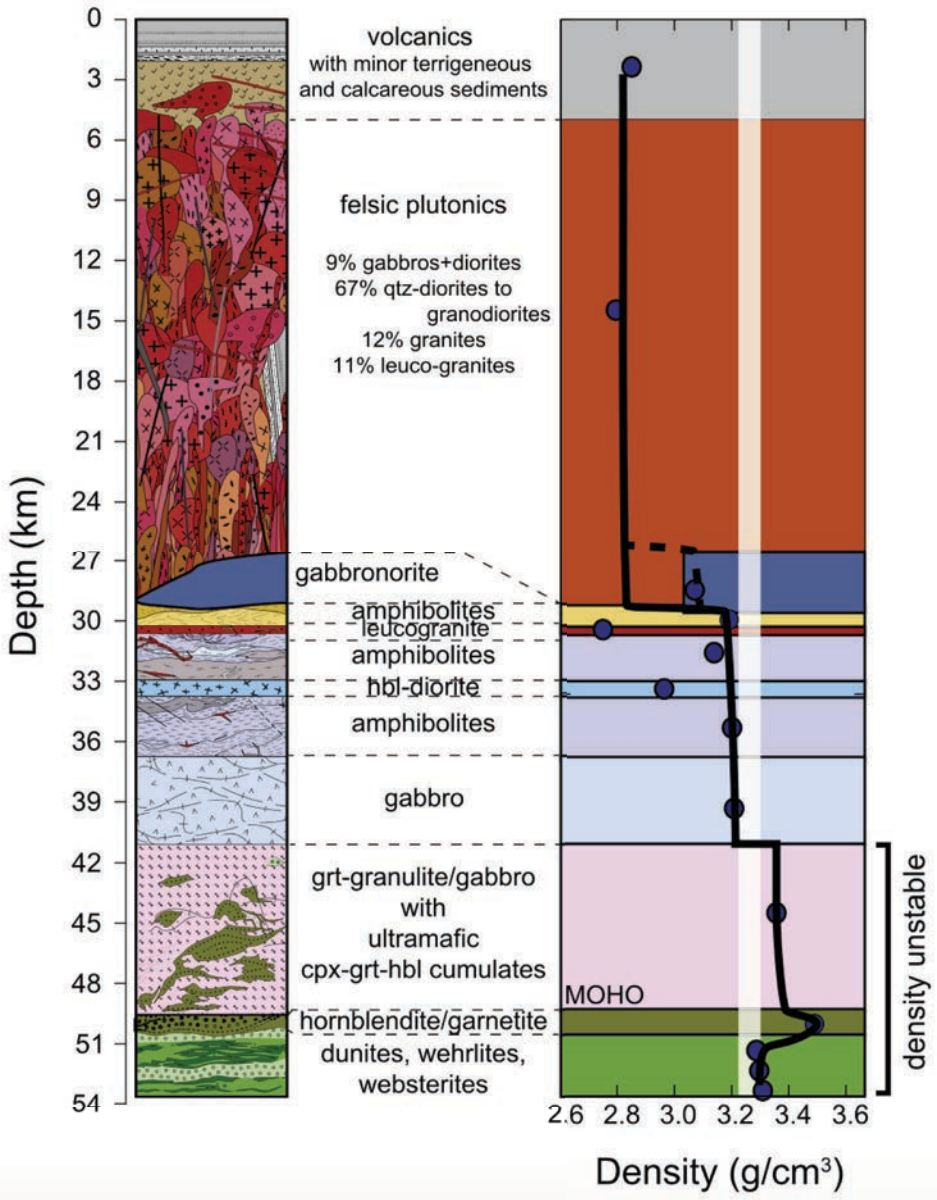






Cashman et al. (2017; Science)

...per comprendere la natura e l'evoluzione del mantello e della crosta terrestre



Jagoutz & Schmidt (2013; EPSL)

Hacker et al (2015; AREPS)

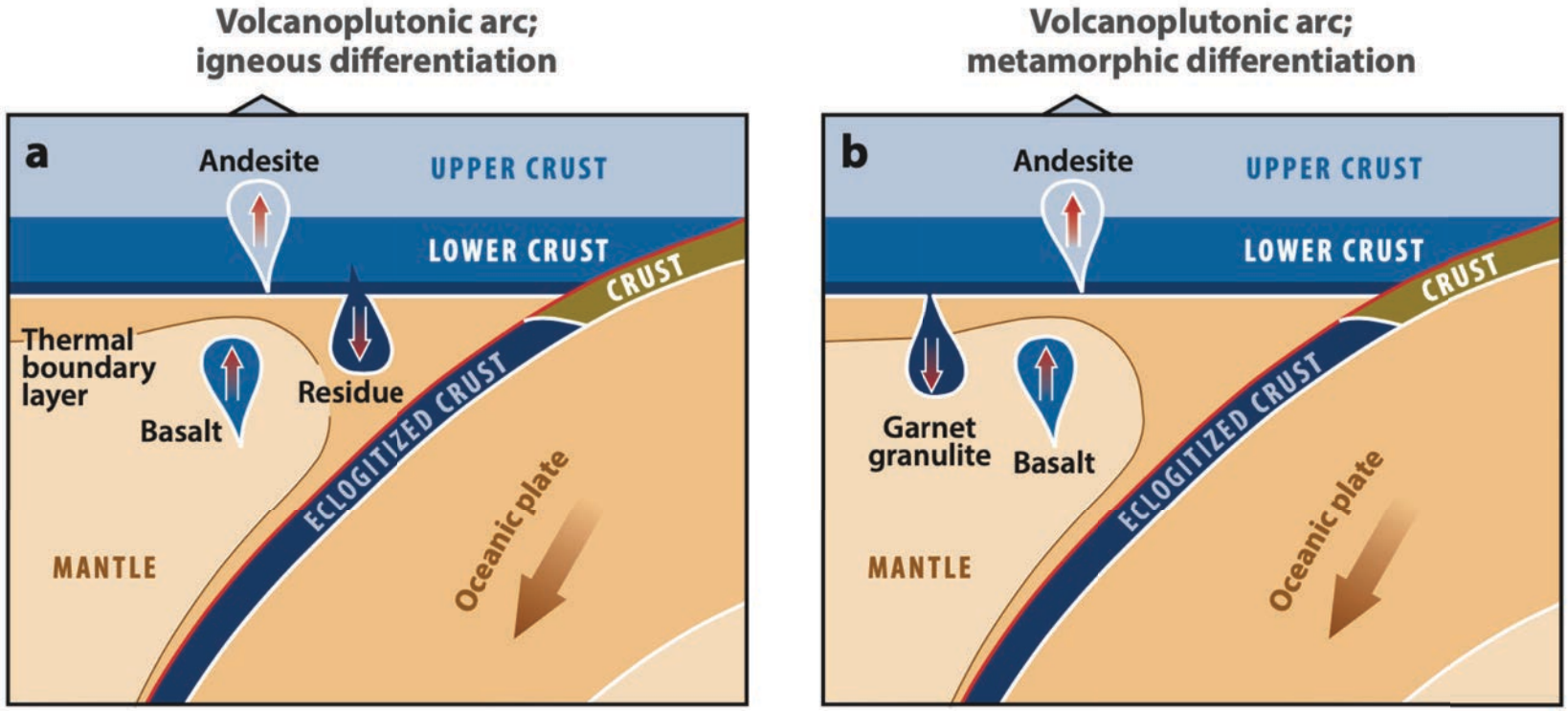
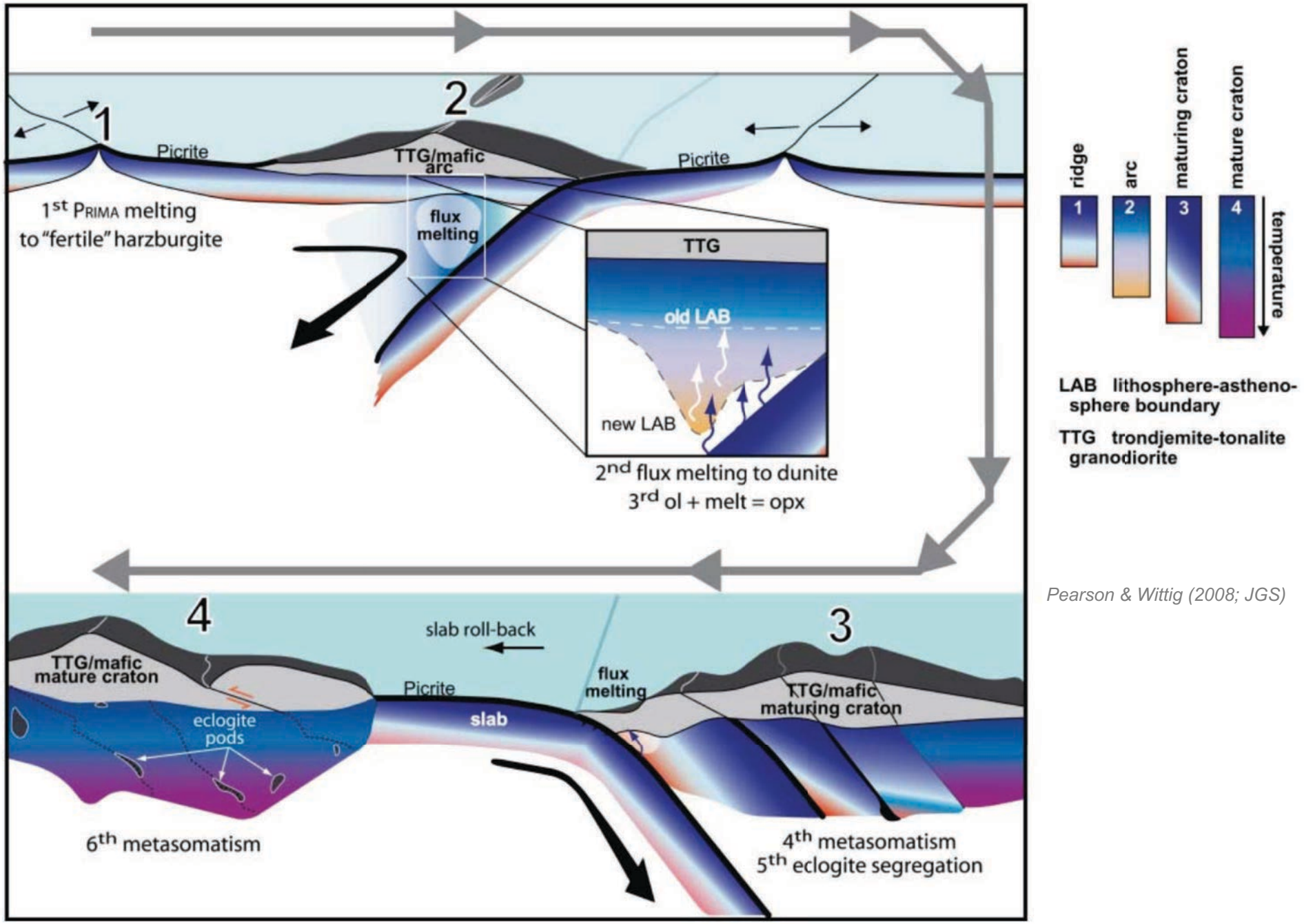


Figure 12

Long-term change in the composition of the continental crust has conventionally been viewed as the result of two major subduction factory processes. (*a*) Mantle-derived magma introduced into volcanoplutonic arcs differentiates into an andesitic fraction that is retained in the crust and an ultramafic cumulate that becomes part of the mantle (Arndt & Goldstein 1989). (*b*) Mafic rock at the base of a thick volcanoplutonic arc is converted into garnet granulite and sinks into the mantle (Herzberg et al. 1983).



Pearson & Wittig (2008; JGS)