

Tracking caldera cycles in the Aso-4 magmatic system

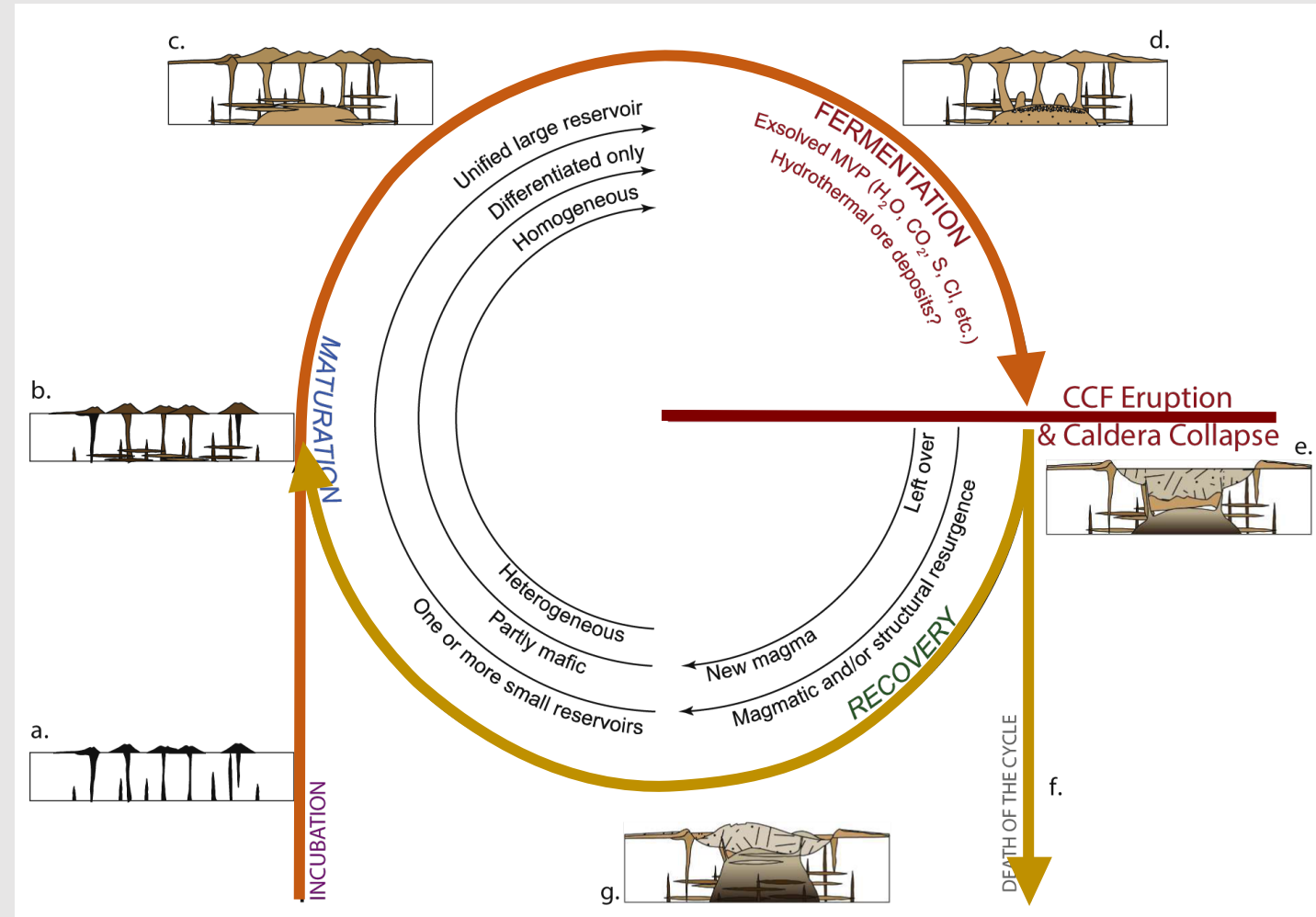
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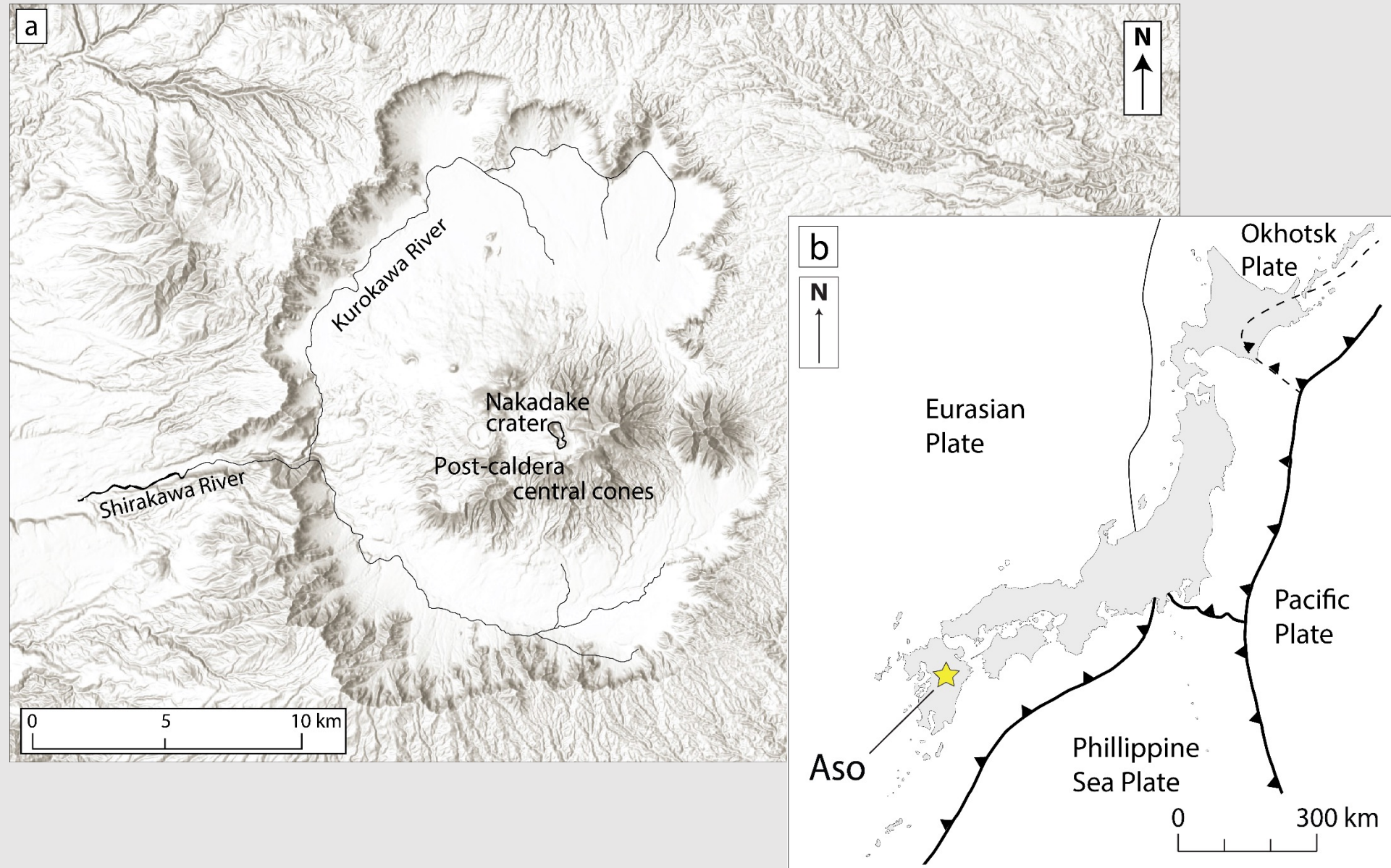
What are caldera cycles?

- Pre-collapse activity
- Caldera-forming eruption
- Post-collapse recovery or death of the system

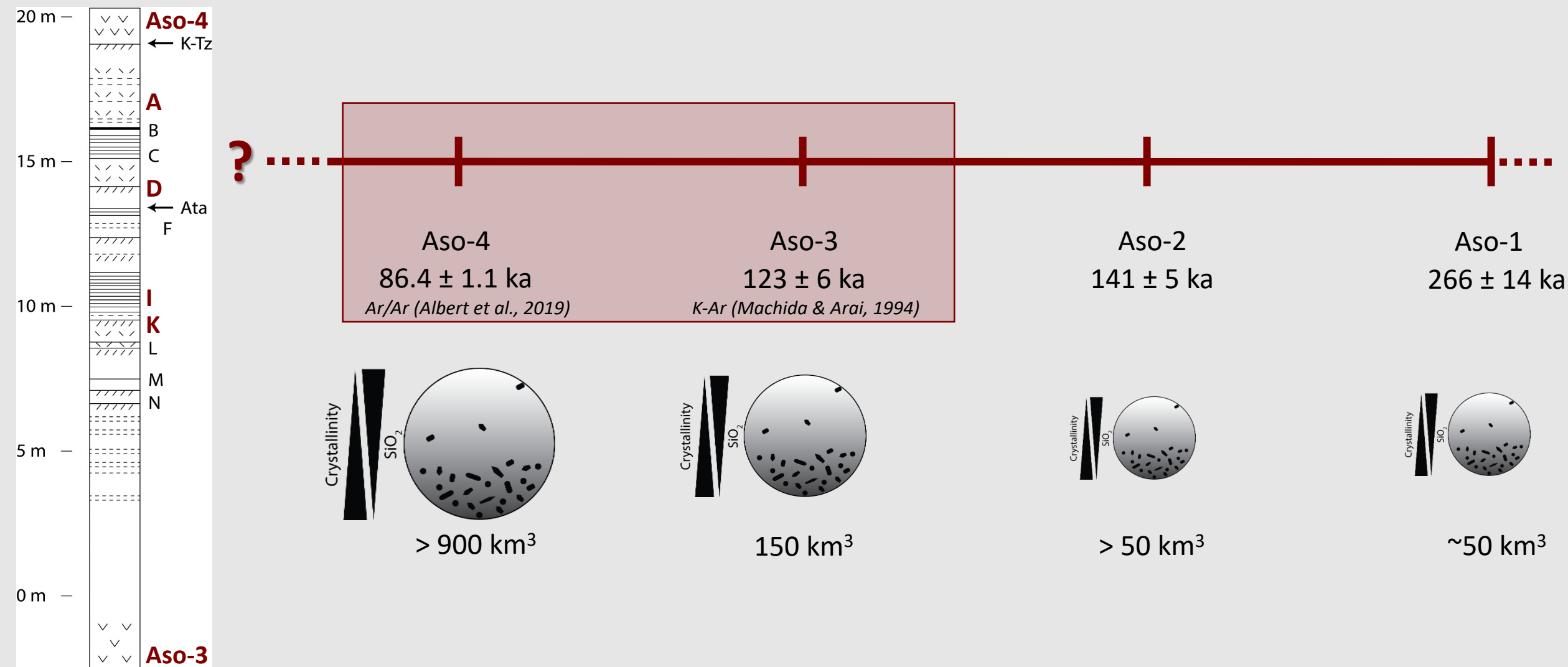


[modified after Bouvet de la Maisonneuve et al., 2021]

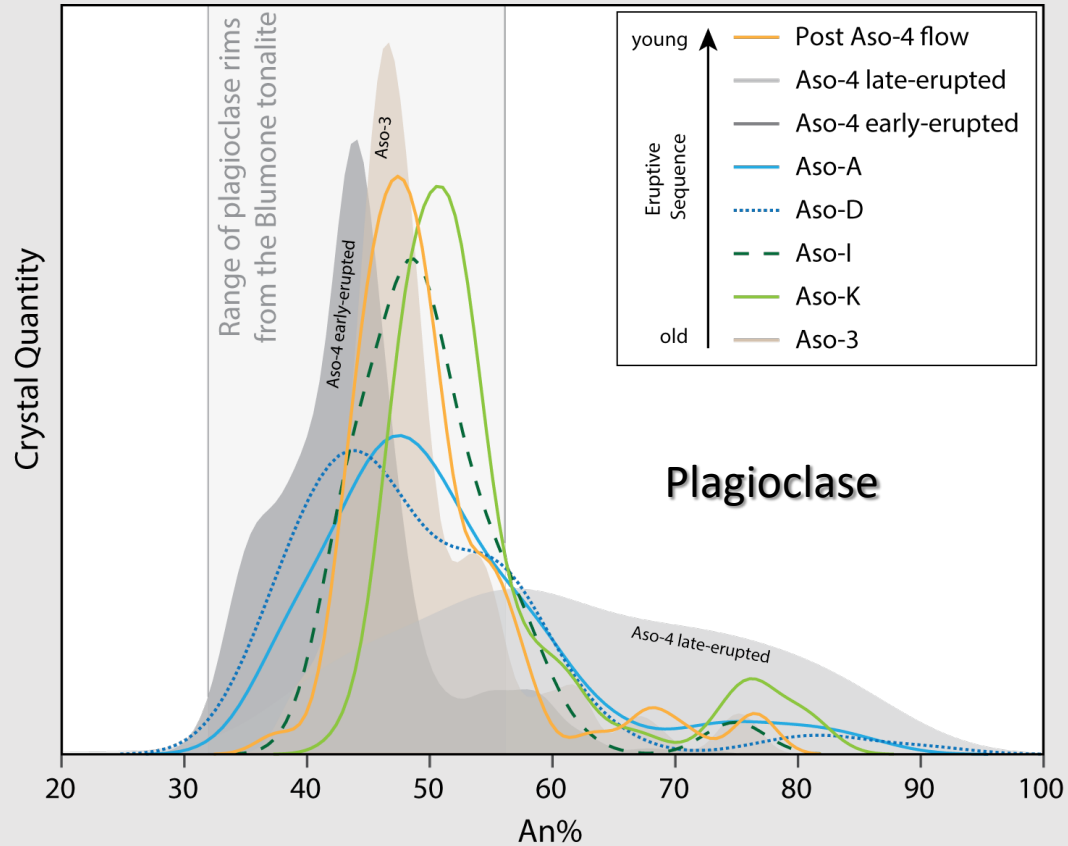
Aso Caldera System



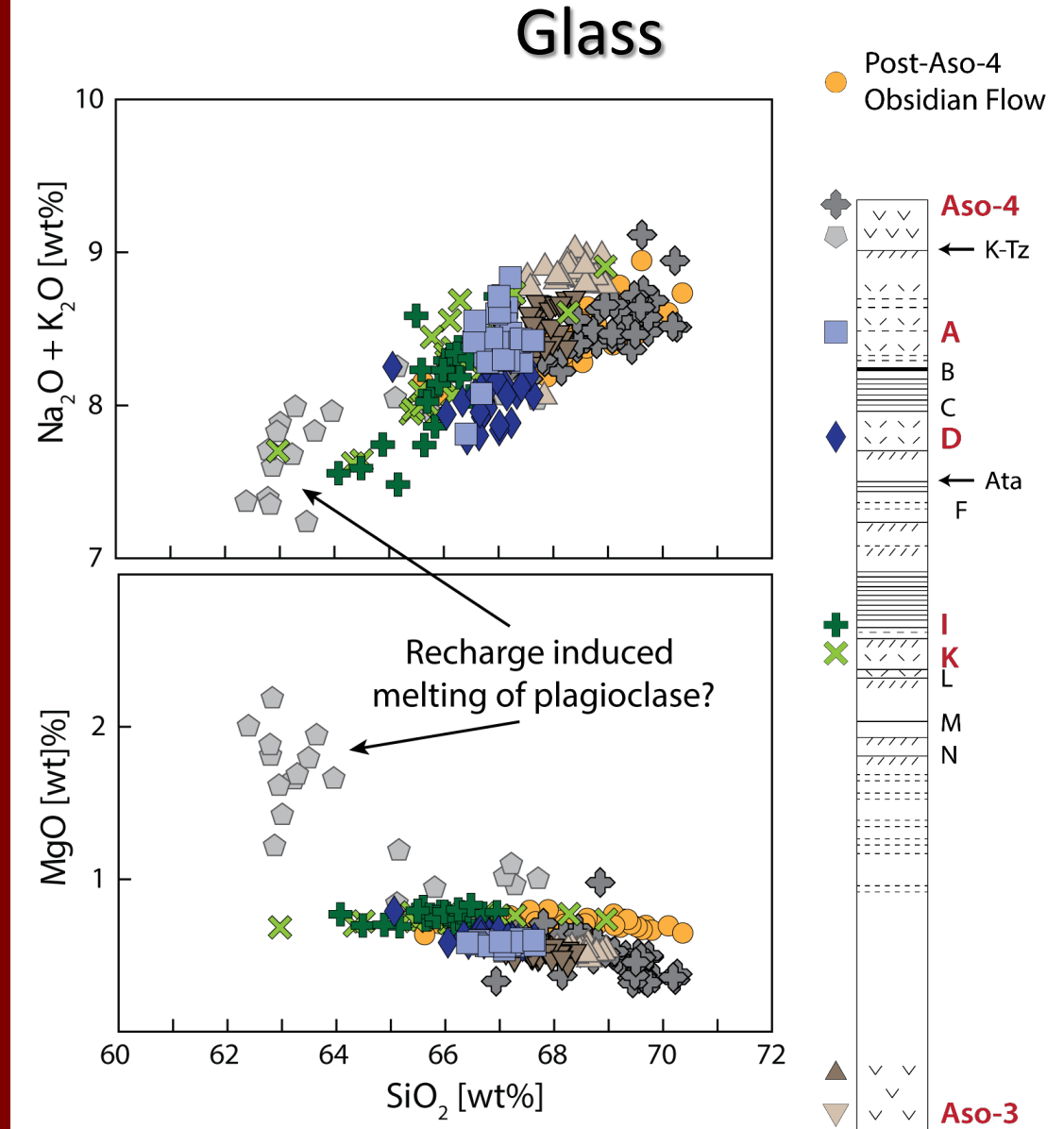
Aso Caldera System



Mineral & Glass chemistry

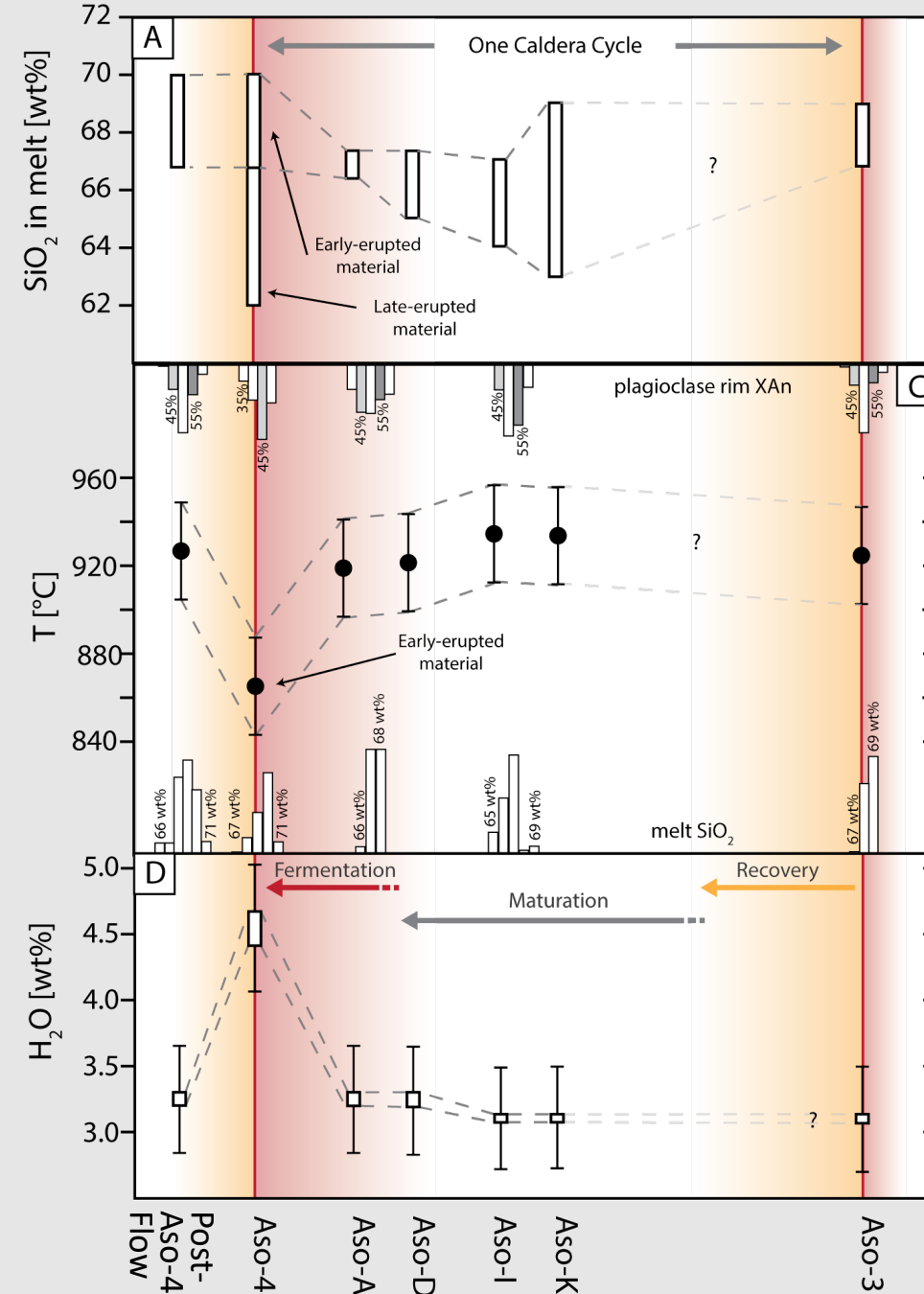


Unclear distinction between units
Difficult tracking of caldera cycles



Application of the caldera cycle model

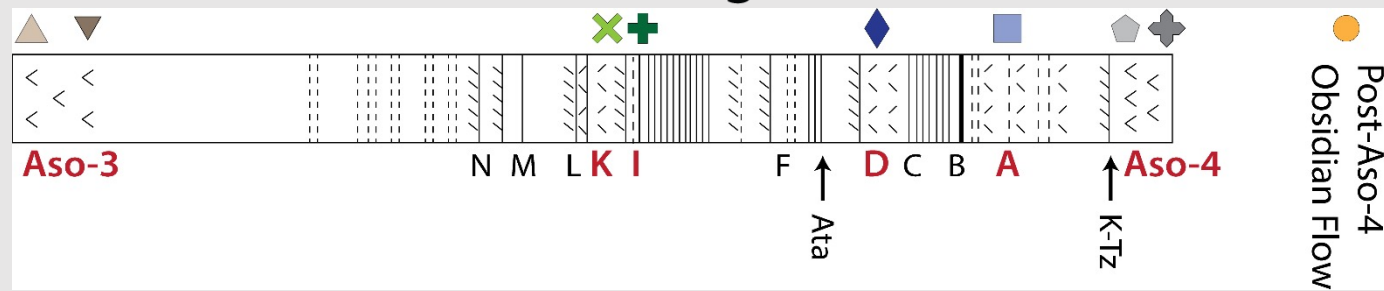
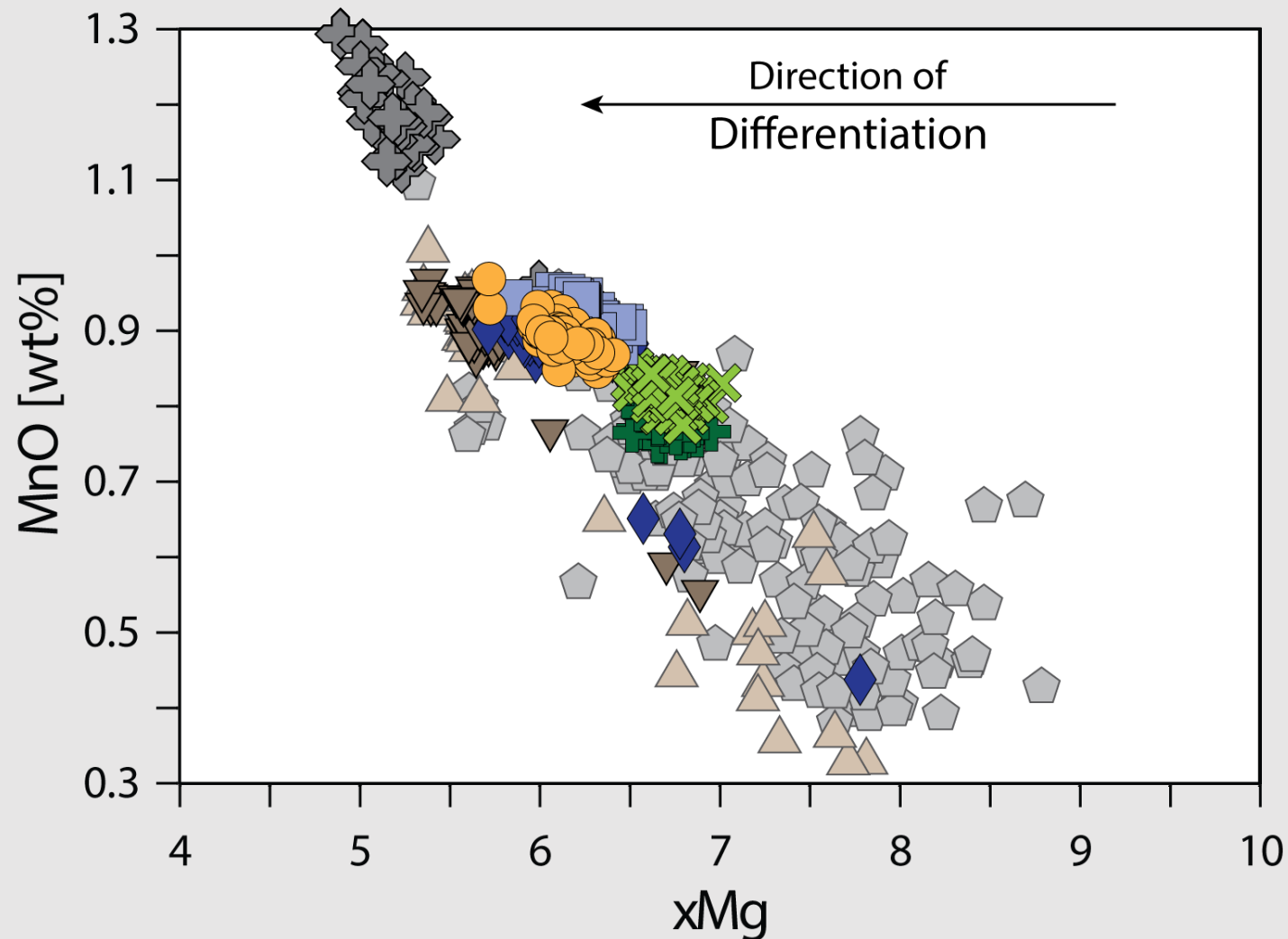
- Outstanding position of Aso-4
- **BUT** largely overlapping trends



Magnetite chemistry

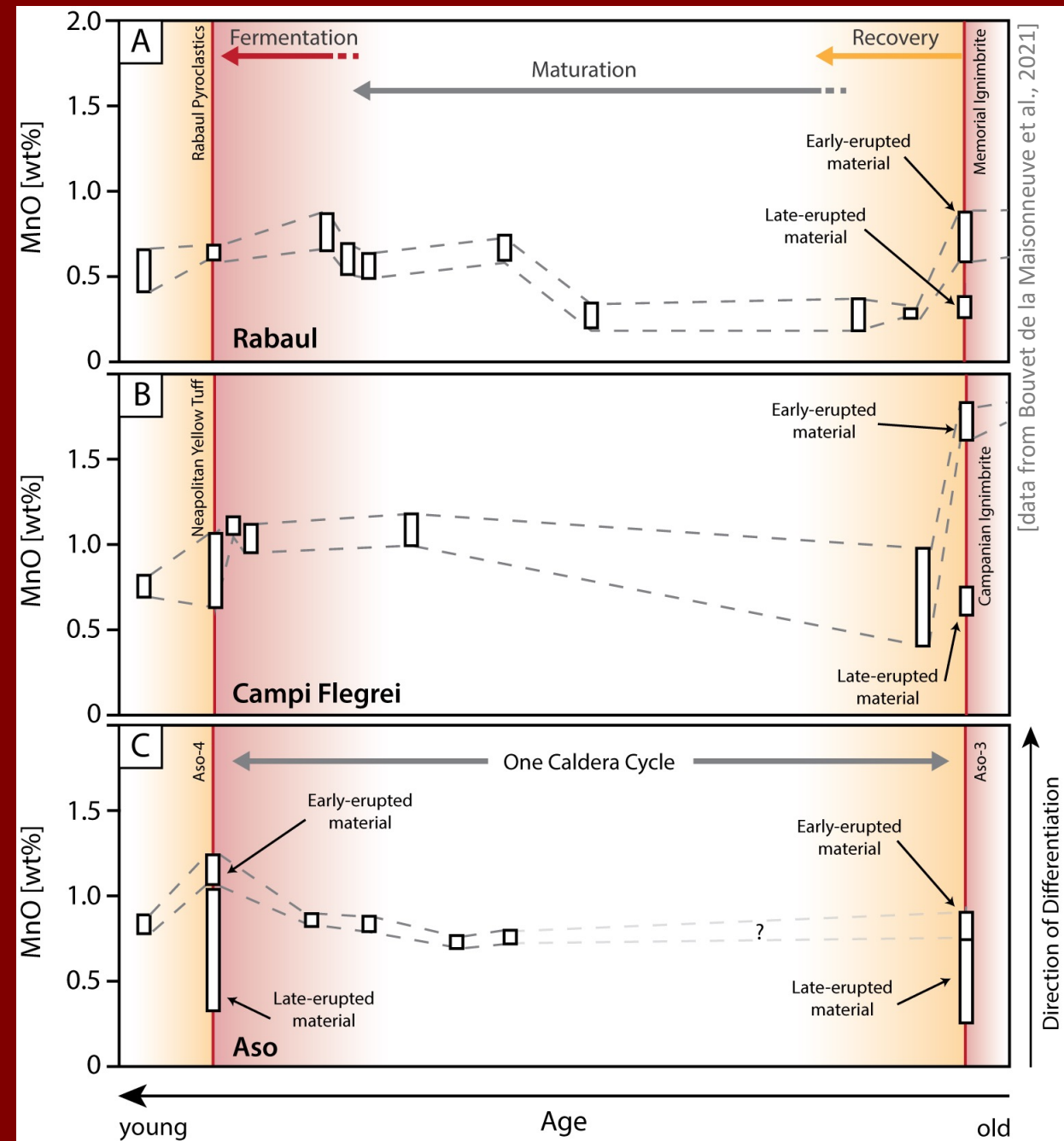
Clear distinction
between units

Increasing degree of
differentiation towards
Aso-4



Application of the caldera cycle model

- **Drop** in degree of differentiation **after** caldera formation
- Degree of differentiation **increases towards next** caldera formation



Thank you for your attention!

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