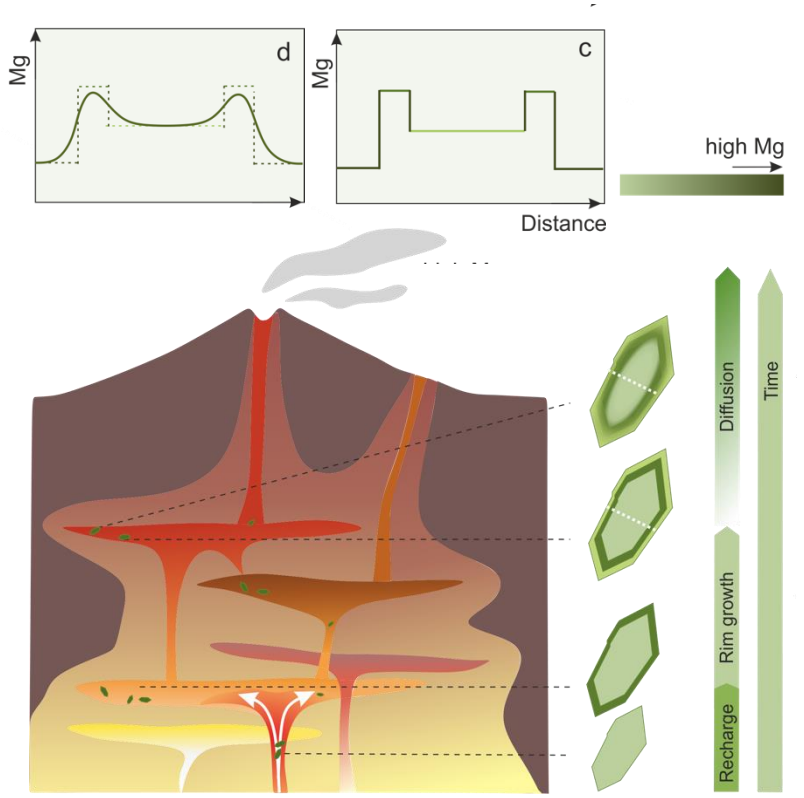
meeting link

EARTH SYSTEMS SEMINARS

FROM EXPERIMENTS TO DIFFUSION MODELLING: UNRAVELLING THE TIMESCALES OF GEOLOGICAL PROCESSES

WHAT'S THIS ABOUT?

Diffusion modelling is a growing field in geosciences, owing to the broad spectrum of interest in petrological studies. It allows to determine time information in magmatic systems, such as magma mixing events, cooling rates or crystal residence times in magma chambers. It is desirable to have a comprehensive data set of experimentally determined diffusion coefficients, measured as a function of the relevant thermodynamic parameters. The experimental determination of diffusion coefficients and the determination of time scales from diffusion modeling ("diffusion chronometry"), rely on the measurement of concentration profiles or maps in minerals with concentration gradients. It is then possible to determine timescales (or diffusion coefficients) by fitting modelled diffusion profiles to measured compositional gradients. The direct implication of the results of this study is that previous parameterizations can introduce significant errors in the derived timescales if the influence of these parameters is not considered.



Maria Antunes Dias
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December 17
Wednesday: 13h00
in IDL room 1.1.37 (C1) or online
Teams Meeting ID: 347 677 275 084 0
Passcode: HS6Yg2Cz

calendar link

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FCT Fundação para a Ciência e a Tecnologia

2020
Support of the Portuguese Foundation for Science and Technology through the project UIDB/50019/2020, Instituto Dom Luiz (IDL)