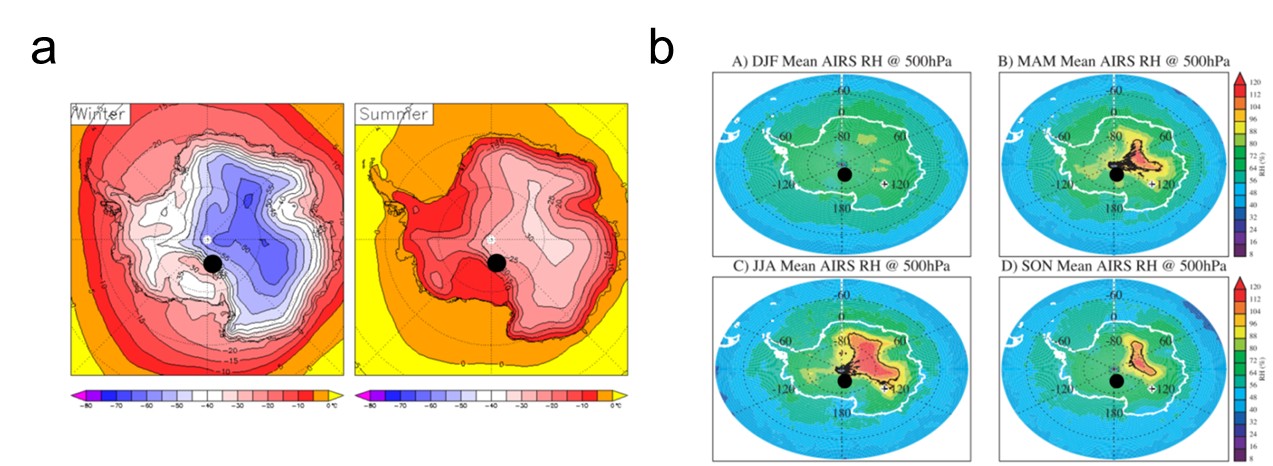
**Weathering alteration in Antarctica environment as seen in the MIL 090030 Martian Nakhlite**

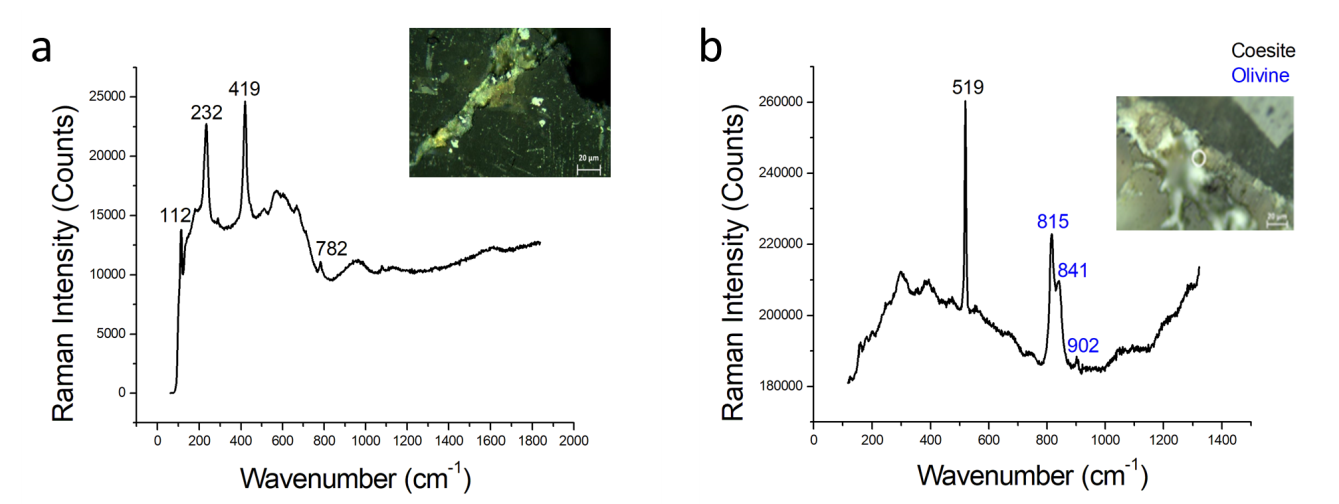
Leire Coloma\*, Julene Aramendia, Jennifer Huidobro, Iratxe Población, Cristina García-Florentino, Kepa Castro, Gorka Arana and Juan Manuel Madariaga

Department of Analytical Chemistry, University of the Basque Country UPV/EHU, P.O. Box 644, E-48080 Bilbao, Spain (\*correspondence: [leire.coloma@ehu.eus](mailto:leire.coloma@ehu.eus) )

**SUPPLEMENTARY MATERIAL**



**Fig. S1.** a) Antarctica’s average temperature in winter and summer (Razin, 2005); b) Antarctica’s average relative humidity from A) December-January-February, B) March-April-May, C) June-July-August and D) September-October-November (Gettelman and others, 2006). In both cases Miller Range region is indicated with a black spot.

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**Fig. S2.** a) Raman spectrum of cristobalite; b) Raman spectrum of coesite (black) with olivine (blue). Olivine is a primary Martian mineral.