Revision 1

Supplementary material for

Crystal-chemistry and thermal behavior of Fe-carpholite: a case of study from the Pollino Massif (southern Italy)

Ernesto Mesto[1], Salvatore Laurita[2], Maria Lacalamita[1], Rosa Sinisi[2],

Giovanna Rizzo[2], Emanuela Schingaro[1*], Giovanni Mongelli[2]

[1]*Dipartimento di Scienze della Terra e Geoambientali, Università di Bari Aldo Moro, via Orabona, 4, 70125 Bari, Italy*

[2]*Dipartimento di Scienze, Università degli Studi della Basilicata, viale Ateneo Lucano 10, 85100 Potenza, Italy*

*Corresponding author: Emanuela Schingaro, e-mail: *emanuela.schingaro@uniba.it*

RUNNING TITLE: Crystal-chemistry and thermal behavior of Fe-carpholite

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Contains:

-Table S1

-Caption for Figure S1a, S1b and S2

Additional files:

-Figure S1a

-Figure S1b

-Figure S2

Table S1. BVS analysis for the studied Carph4_1 crystal. Values expressed in valence units.

	M1*	Al(1)	Al(2)	Si	Σ
O1		$0.48^{\downarrow x2}$+$0.42^{\downarrow x2}$		1.01	1.91
O2	$0.32^{\downarrow x2}$		$0.58^{\downarrow x2}$	1.06	1.96
O3				0.98+0.96	1.94
OH(1)	$0.44^{\downarrow x2}$	$0.57^{\downarrow x2}$			1.01
OH(2)	$0.23^{\downarrow x2}$		$0.51^{\downarrow x2}$+$0.44^{\downarrow x2}$		1.18
Σ	1.98	2.94	3.06	4.01	

*The values are weighted considering the refined occupancies.

Figure captions

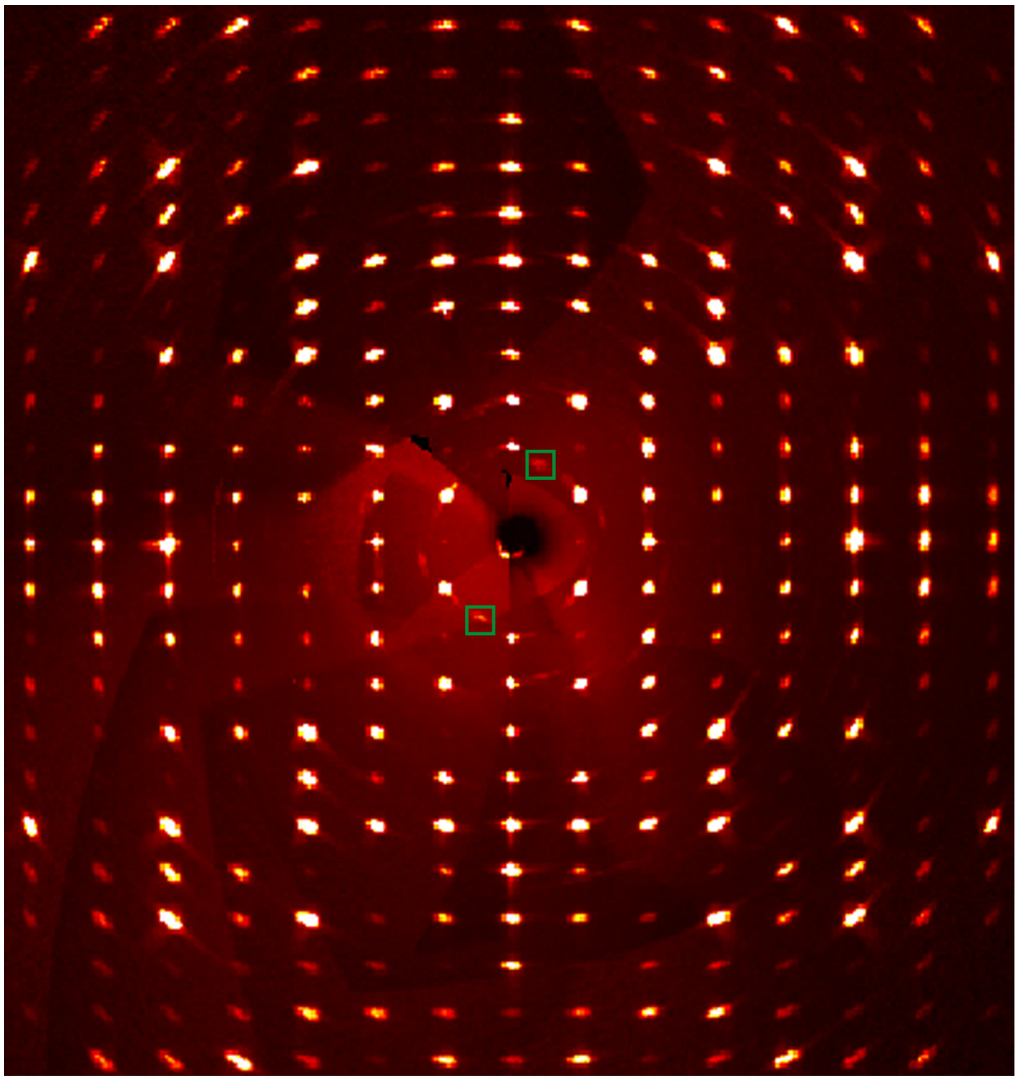

Fig. S1a

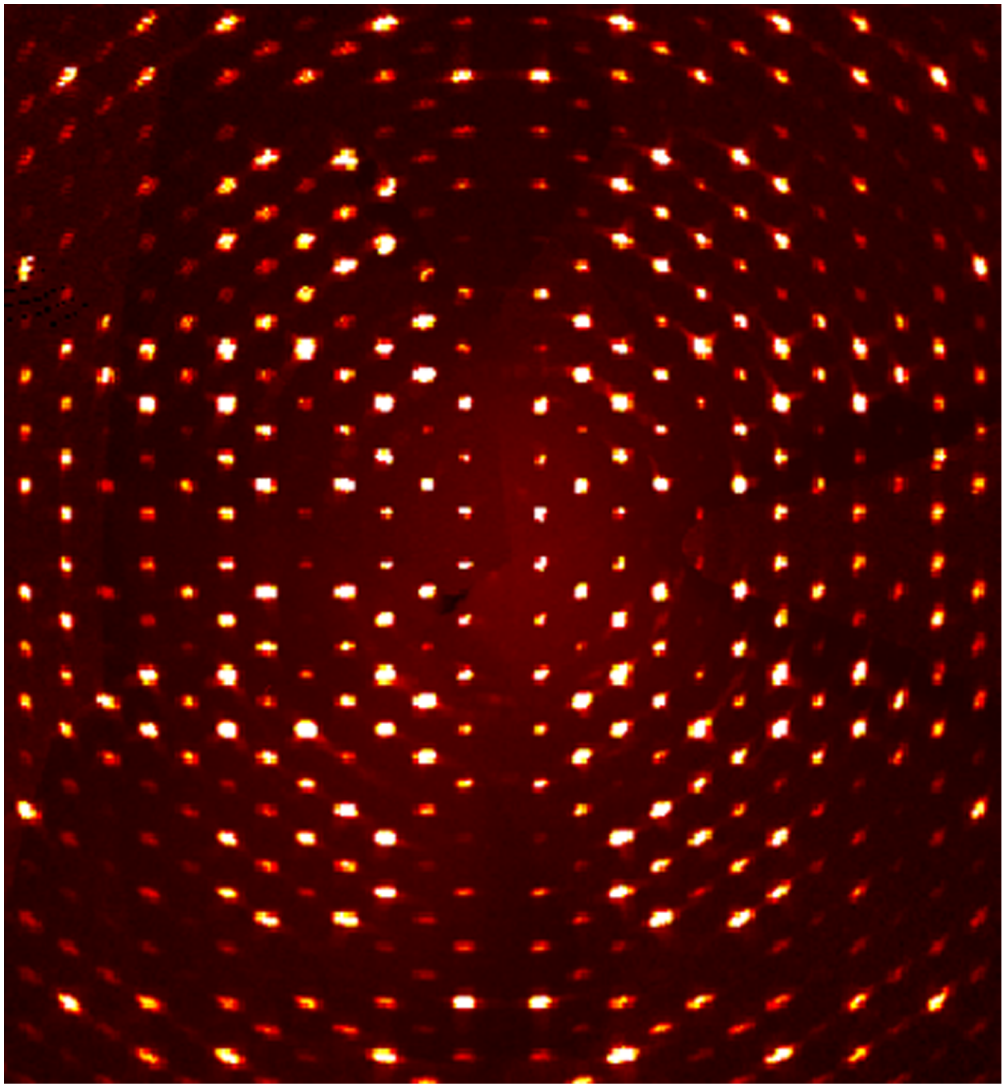

Fig. S1b

Figure S1. Reconstructed precession images for the studied Carph4_1 crystal. (**a**) and (**b**) represent the level *hk*0 and *hk*1, respectively. Artefacts "simulating" forbidden reflections for the *e* glide of the *Ccce* space group are shown within the green squares. See text.

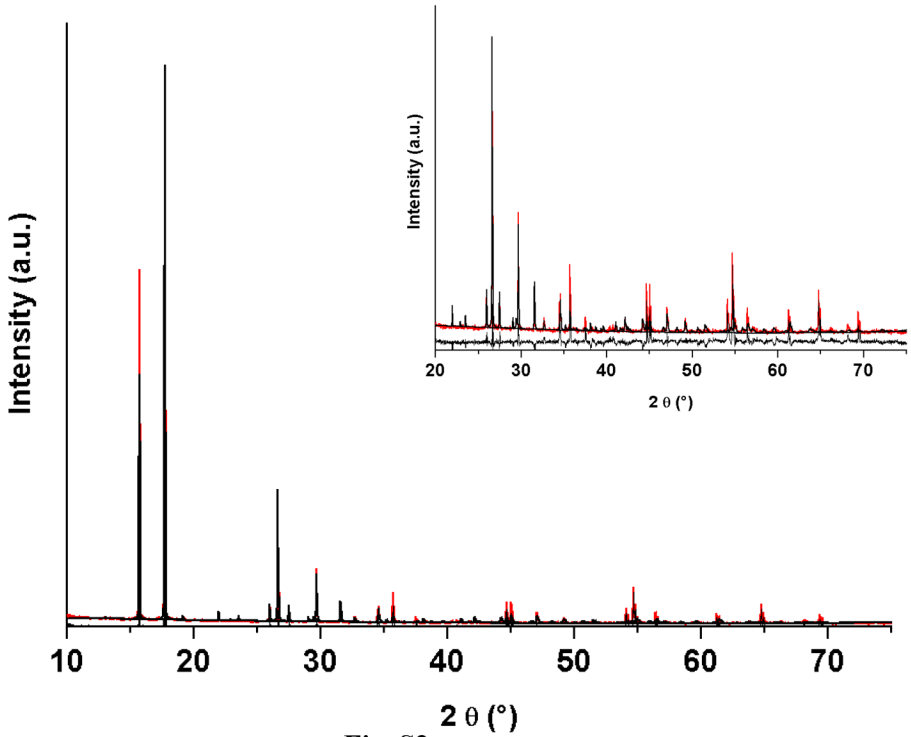

Fig. S2

Figure S2. Rietveld refinement of the RT pattern of the Fe-carpholite from the Pollino massif. The inset shows an enlargement of the 2θ range 20-75°. Red line: observed data; solid black line: calculated pattern; solid line at the bottom: residuals.