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# ABSTRACT BOOK

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**Metamorphic evolution of the Saka Unit (Central Pontides, Northern Turkey):  
new implications for the Mesozoic convergence-related processes  
in the Intra-Pontide suture zone**

Frassi C.<sup>1</sup>, Rebay G.\*<sup>2</sup>, Pandolfi L.<sup>1-3</sup>, Marroni M.<sup>1-3</sup>, Göncüoğlu C.M.<sup>4</sup>, Ellero A.<sup>3</sup>, Ottria G.<sup>3</sup> & Sayit K.<sup>4</sup>

<sup>1</sup> Dipartimento di Scienze della Terra, Università di Pisa

<sup>2</sup> Dipartimento di Scienze della Terra e dell'Ambiente, Università di Pavia

<sup>3</sup> Istituto di Geoscienze e Georisorse - CNR

<sup>4</sup> Department of Geological Engineering, Middle East Technical University, Ankara, Turkey

\* Corresponding email: [gisella.rebay@unipv.it](mailto:gisella.rebay@unipv.it)

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In Northern Turkey, the Intra-Pontide suture (IPS) zone represents an east-west trending belt of deformed and/or metamorphic rocks bounded by the Istanbul-Zonguldak Terrane (IZ) to the north and the Sakarya Composite Terrane (SK) to the south (e.g. Göncüoğlu et al., 1997). Despite its importance for the geodynamics reconstructions of the Black Sea and Eastern Mediterranean areas during the Mesozoic, the IPS zone has been poorly investigated; only recently the role of its metamorphic units during the syn-collisional evolution was explored (Marroni et al., 2014; Frassi et al., 2016; 2017)

In order to provide new insights on the Mesozoic-Tertiary geodynamic reconstruction of the southern margin of the Laurasia, we present new data from the Saka Unit from the eastern portion of the IPS. Using a multidisciplinary approach that includes lithological, structural, metamorphic and petrographic investigations, we constrained the P-T-t path during the Mesozoic subduction and consequent exhumation and accretion to Laurasia. Following the determination of mesostructures, we analysed a series of samples of metabasite and metapelite. Mineral chemistry of phases at equilibrium in the pervasive S2 foliation was determined, and PT determinations were performed through pseudosection calculation of three samples. PT conditions are within the epidote-amphibolite facies, with pressures of  $1.2 \pm 0.15$  GPa and Temperatures  $600 \pm 50$  °C, thus higher than those determined previously, suggesting that S2 could be a composite foliation where a progressive evolution acquired during onset of exhumation was recorded. A comparison with the PT evolutions of the nearby Daday and Domuz-Dag units, shows that they record lower T at D2 at different ages, and that the pre-D2 conditions, when they are preserved, are different in the three units.

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