



*Supplement of*

**A field-based thickness measurement dataset of fallout pyroclastic deposits in the peri-volcanic areas of Campania (Italy): statistical combination of different predictions for spatial estimation of thickness**

**Pooria Ebrahimi et al.**

*Correspondence to:* Fabio Matano ([fabio.matano@cnr.it](mailto:fabio.matano@cnr.it))

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Additional tables and figure:

**Table S1** The eruptions of Somma-Vesuvius used for elaborating isopach maps.

5 **Table S2** The eruptions of Phlegrean Fields considered for elaborating isopach maps.

**Figure S1** (a) Variation of the out of bag error against number of trees; (b) Variable importance based on the impurity; and (c) variable importance based on permutation.

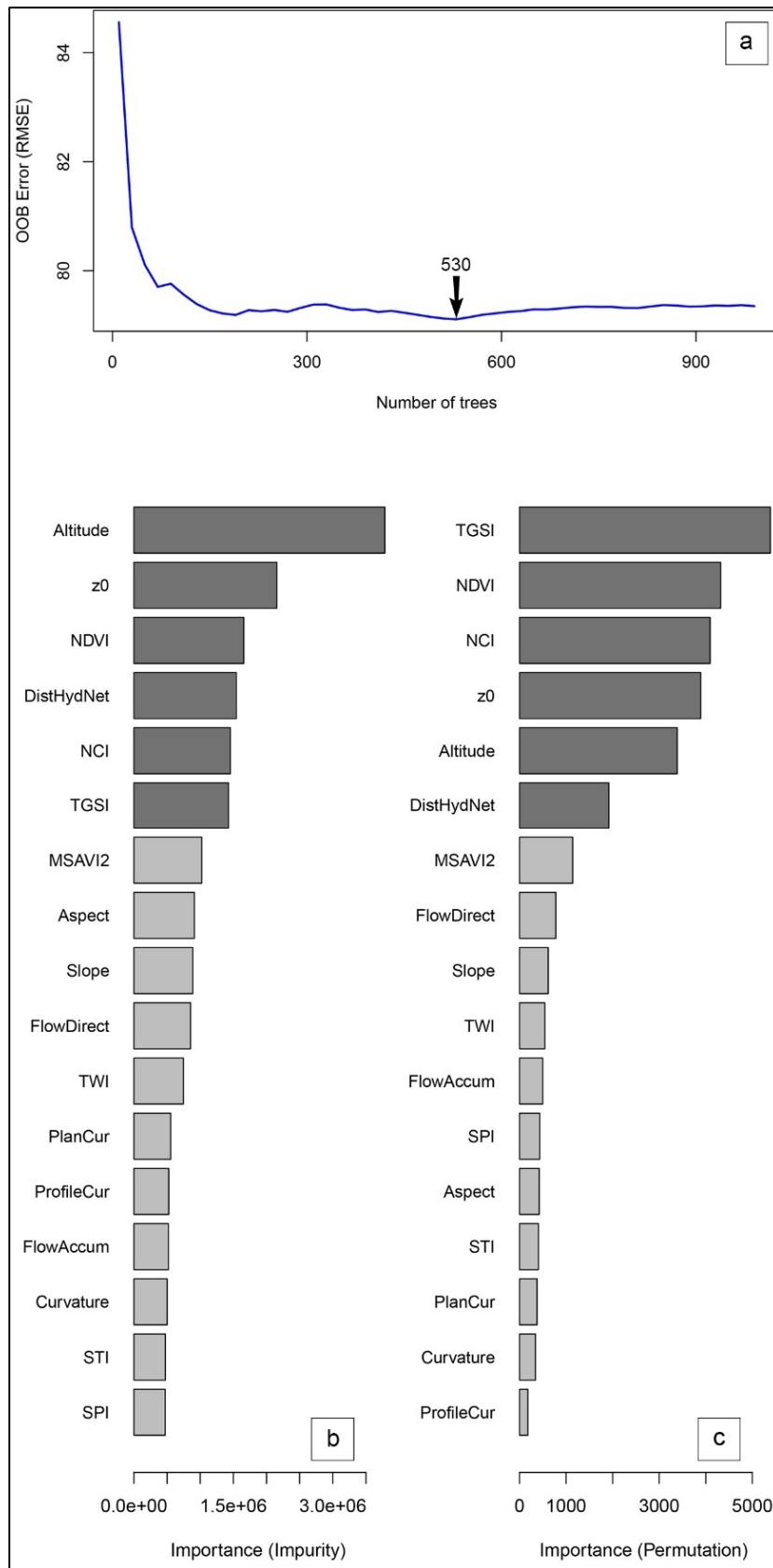
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**Table S1** The eruptions of Somma-Vesuvius used for elaborating isopach maps.

<b>Eruption</b>	<b>Age</b>	<b>Reference</b>
1944	1944 CE	Cole and Scarpati (2010); Cubellis et al. (2016)
1906	1906 CE	Arrighi et al. (2001); Cerbai and Principe (1996)
1822	1822 CE	
1730	1730 CE	
1723	1723 CE	
1707	1707 CE	
1682	1682 CE	
1631	1631 CE	
Third medieval eruption	1140±60 yr BP	Rolandi et al. (1998)
Second medieval eruption	1290±40 to 1440±60 yr BP	
First medieval eruption		
Pollena	472 CE	Rolandi et al. (2004); Sulpizio et al. (2007, 2005); Rosi and Santacroce (1983); Delibrias et al. (1979)
Pompeii	79 CE	Sigurdsson et al. (1985); Luongo et al. (2003a,b); Zanella et al. (2007)
AP6	203 BCE	Andronico and Cioni (2002); Rolandi et al. (1998); Somma et al. (2001)
AP5		
AP4		
AP3	2710±60 yr BP	
AP2	3000±200 yr BP 3225 to 1140 yr BP	
AP1	3220±65 yr BP 3420±100 yr BP	
Avellino	3.9 ka BP	
Mercato	9 ka BP	Rolandi et al. (1993b); Aulinas et al. (2008)
Pomici Verdoline	19 ka BP	Cioni et al. (2003); Arnò et al. (1987)
Pomici di Base	22 ka BP	Bertagnini et al. (1998); Andronico et al. (1995); Arnò et al. (1987)
Codola	25.10±0.40 ka BP 30.02±0.42 cal ka BP 33 ka BP inferred calendar age	Di Vito et al. (2008)
Taurano	33 to 36 cal ka BP	Di Vito et al. (2008)

15 **Table S2** The eruptions of Phlegrean Fields considered for elaborating isopach maps.

<b>Eruption</b>	<b>Age</b>	<b>Reference</b>
Averno 2	3.8 ka BP	Costa et al. (2009)
Astroni	3.8 ka BP	Costa et al. (2009); Di Vito et al. (2021)
Agnano Monte Spina	4.4 ka BP	De Vita et al. (1999); Costa et al. (2009)
PaleoAstroni 2	4.7 ka BP	Di Vito et al. (2021)
Agnano 3	5.2 ka BP	
Agnano Pomici Principali	12.5 ka BP	Orsi et al. (2004); Di Vito et al. (1999)
Neapolitan Yellow Tuff	15 ka BP	Scarpati et al. (1993)
TAU1-e	22 to 23 cal ka BP	Di Vito et al. (2008)
Masseria del Monte	29 ka BP	Albert et al. (2019)
SMP1-d	33 to 36 cal ka BP	Di Vito et al. (2008)
Campanian Ignimbrite	39 ka BP	Costa et al. (2012); Giaccio et al. (2008); Cappelletti et al. (2003)
Santa Lucia	47.5±2.6 cal ka BP 50.95±2.98 ka BP	Di Vito et al. (2008)
CA1-a	55 to 105 ka BP	Di Vito et al. (2008)



20 **Fig. S1** (a) Variation of the out of bag error against number of trees; (b) Variable importance based on the impurity; and (c) variable importance based on permutation.

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