



Supplement of

Impacts of hydrofacies geometry designed from seismic refraction tomography on estimated hydrogeophysical variables

Nolwenn Lesparre et al.

Correspondence to: Nolwenn Lesparre (lesparre@unistra.fr), Sylvain Pasquet (sylvain.pasquet@sorbonne-universite.fr), and Philippe Ackerer (ackerer@unistra.fr)

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11. Table S1 : Set of Parameters Used in Seismic Tomography Inversions.

This supplementary information file provides figures and tables completing the parent article. Seismic refraction data were acquired in May 2018 and August 2019 on the Strengbach catchment, Vosges mountains, France.

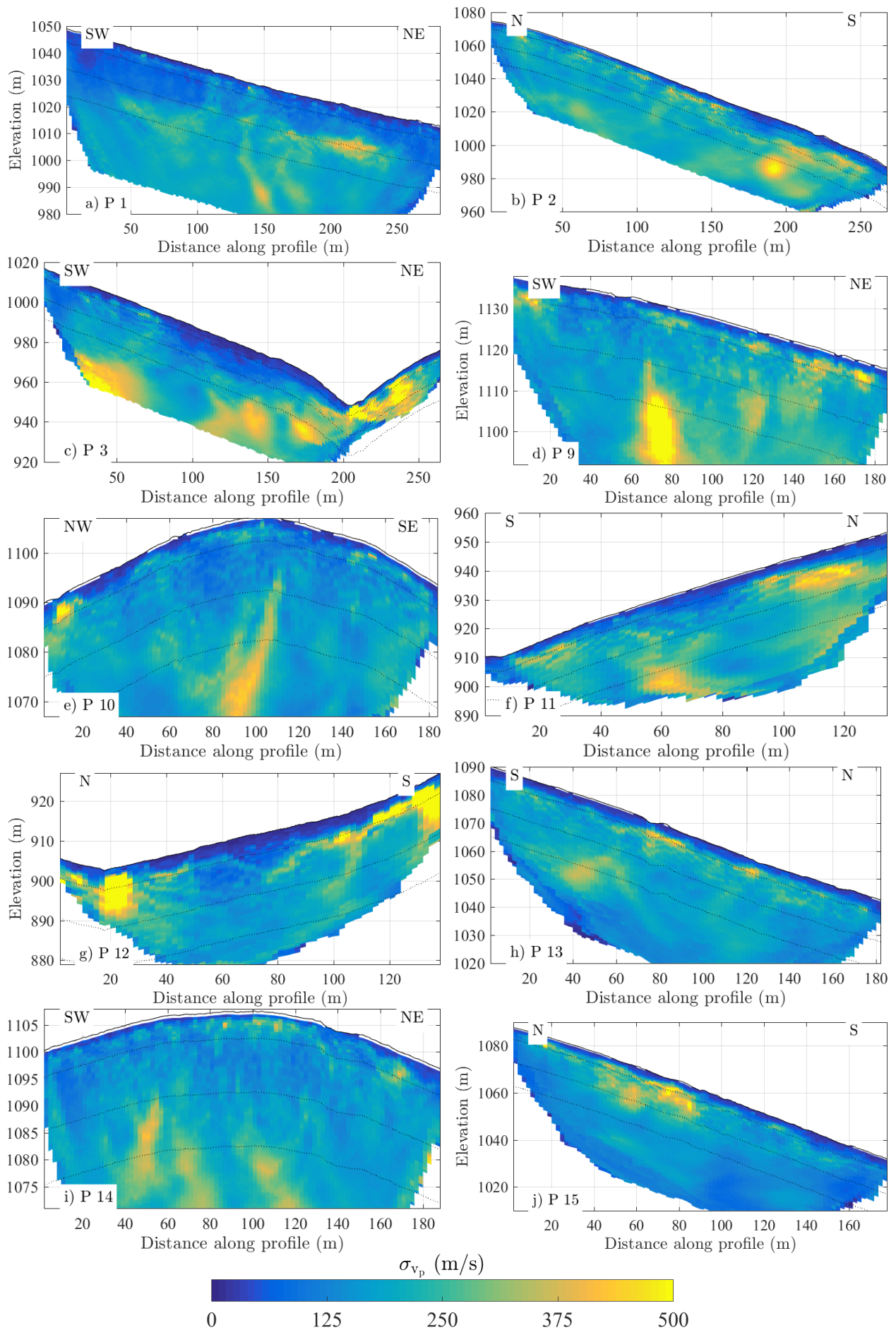


FIGURE S.1 – Standard deviation of the seismic velocity of the whole SRT profiles acquired on the Strengbach. The dotted lines correspond to the surface elevation minus 5, 15 and 25 m.

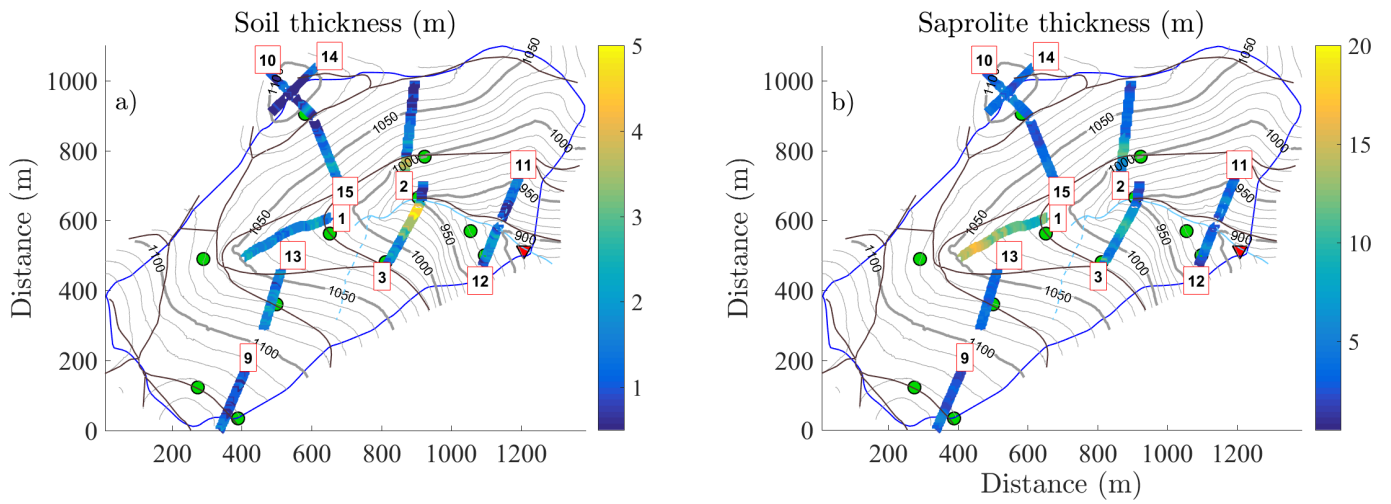


FIGURE S.2 – Estimated thicknesses of the soil (a) and the saprolite (b) along the acquisition profiles. The maximum v_p value in the soil (saprolite) is set to 700 m/s (2000 m/s).

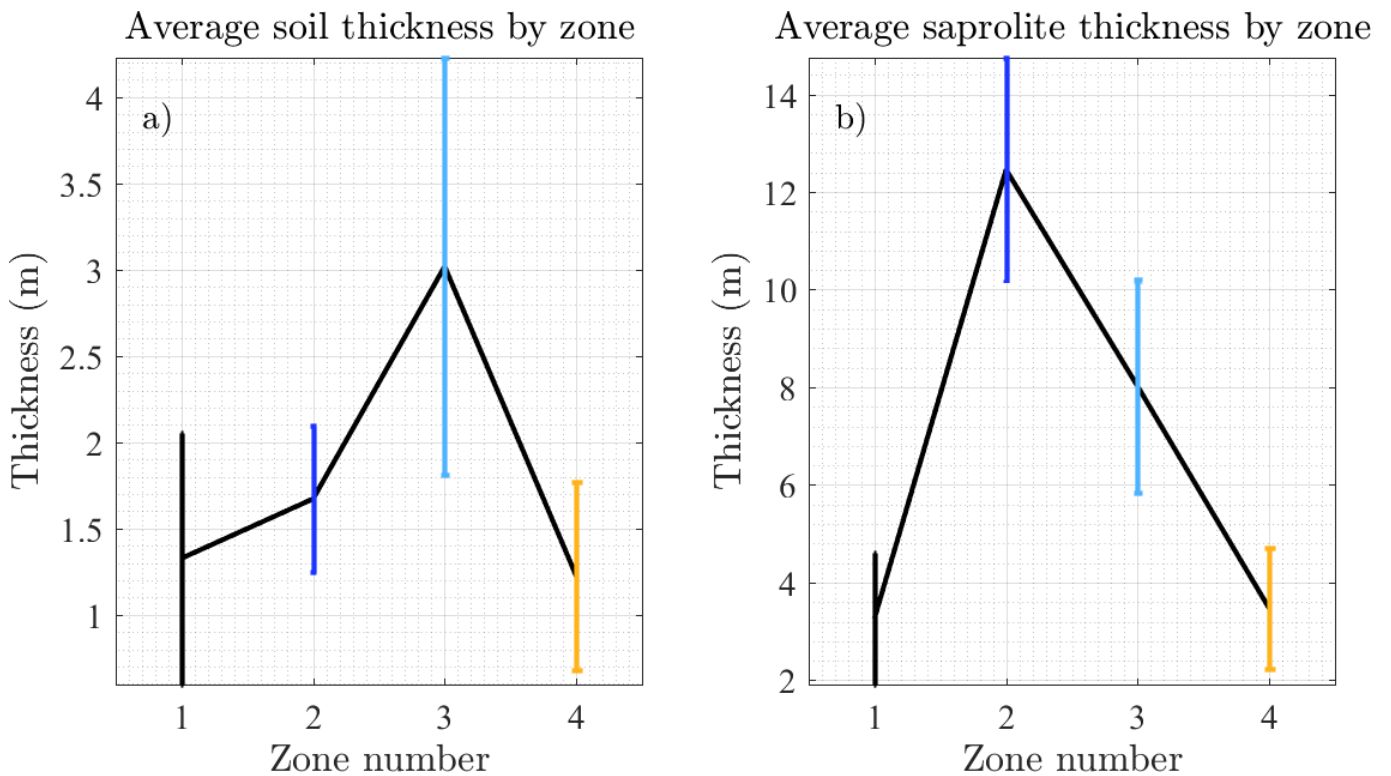


FIGURE S.3 – Average thicknesses of the soil (a) and saprolite (b) media by zone and their corresponding standard deviation for a soil (saprolite) maximum v_p threshold set to 700 m/s (2000 m/s).

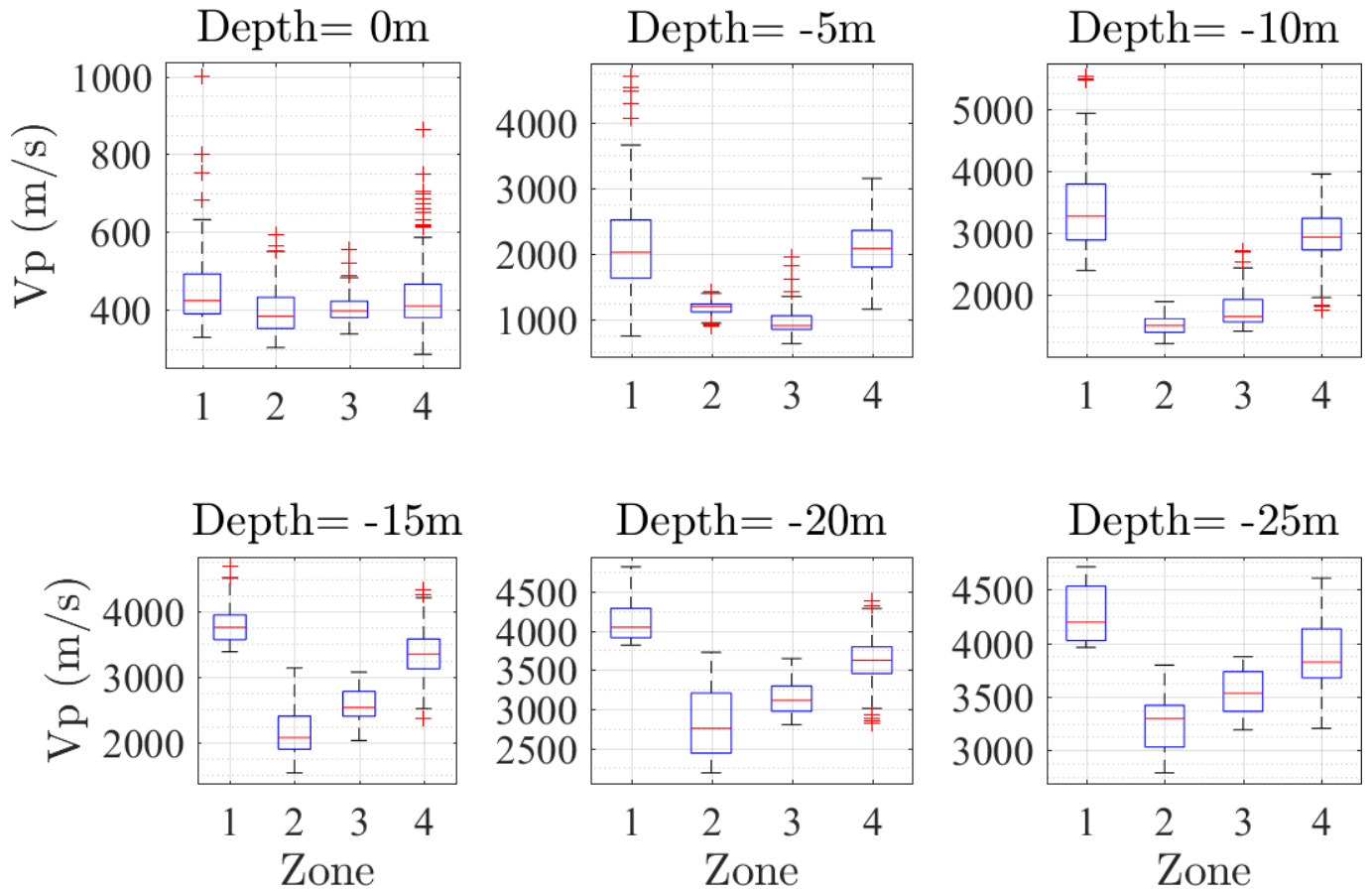


FIGURE S.4 – Distribution of v_p in each zone at different depths. In each box, the red line corresponds to the median of the distribution, the edges of the box represent the 25th and 75th percentiles, the whiskers extend to the most extreme datapoints that are not considered as outliers, indicated by the red plus.

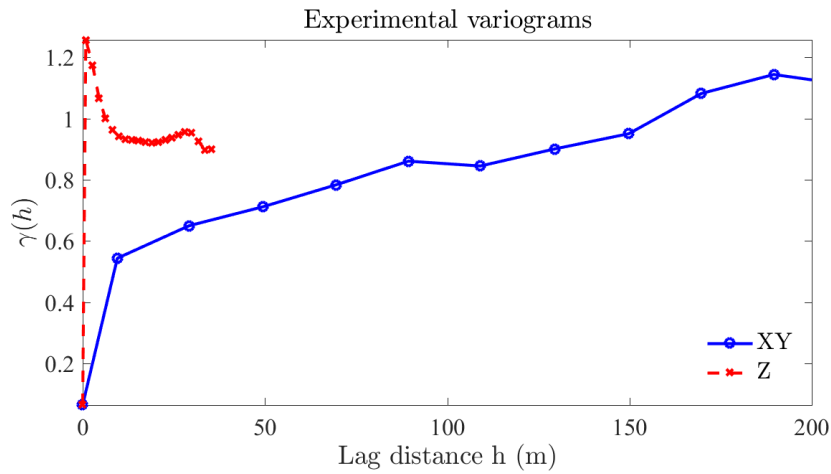


FIGURE S.5 – Variograms computed with the whole data set considering only the horizontal coordinates (XY blue curve) or only the vertical coordinates (Z, red curve).

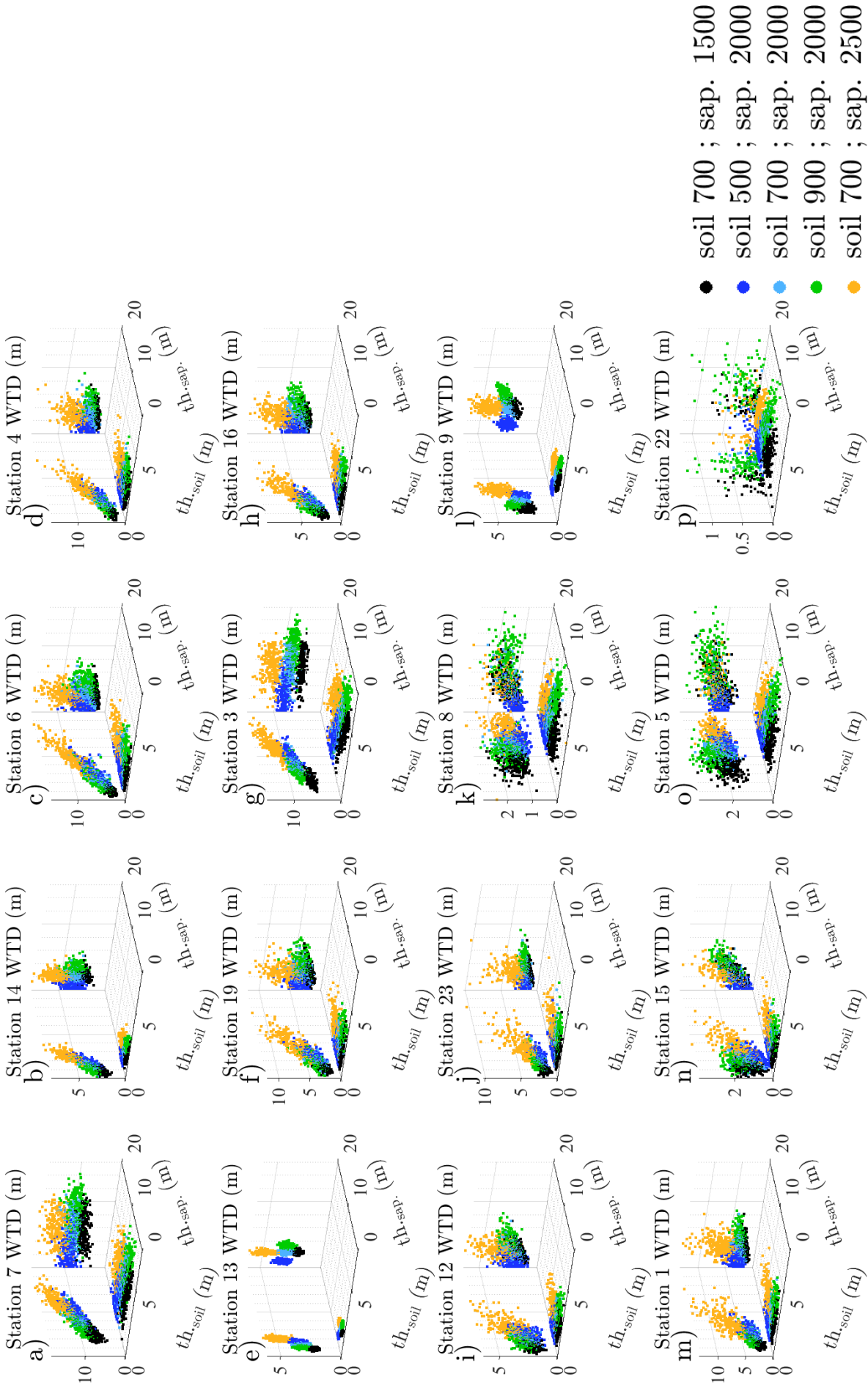


FIGURE S.8 – Distribution of WTD data as a function of the soil and saprotite thickness under each measurement stations. Data are estimated the 19th of April 2013 for different velocity thresholds and the fixed set of parameter B.

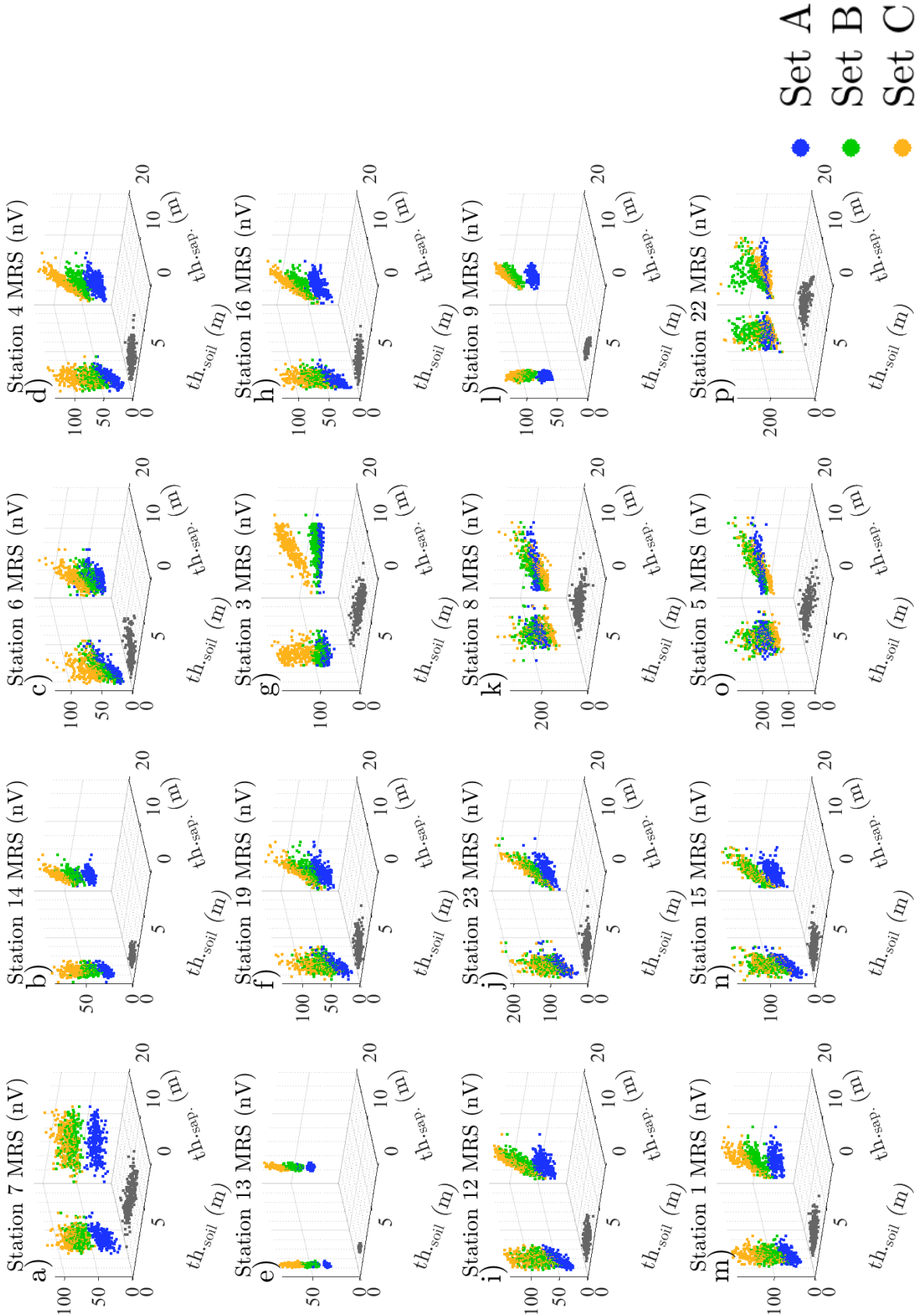


FIGURE S.9 – Distribution of MRS data as a function of the soil and saprolite thickness under each measurement stations. Data are estimated the 19th of April 2013 for different set of parameters and fixed velocity thresholds of 700 m/s for the soil and 2000 m/s for the saprolite.

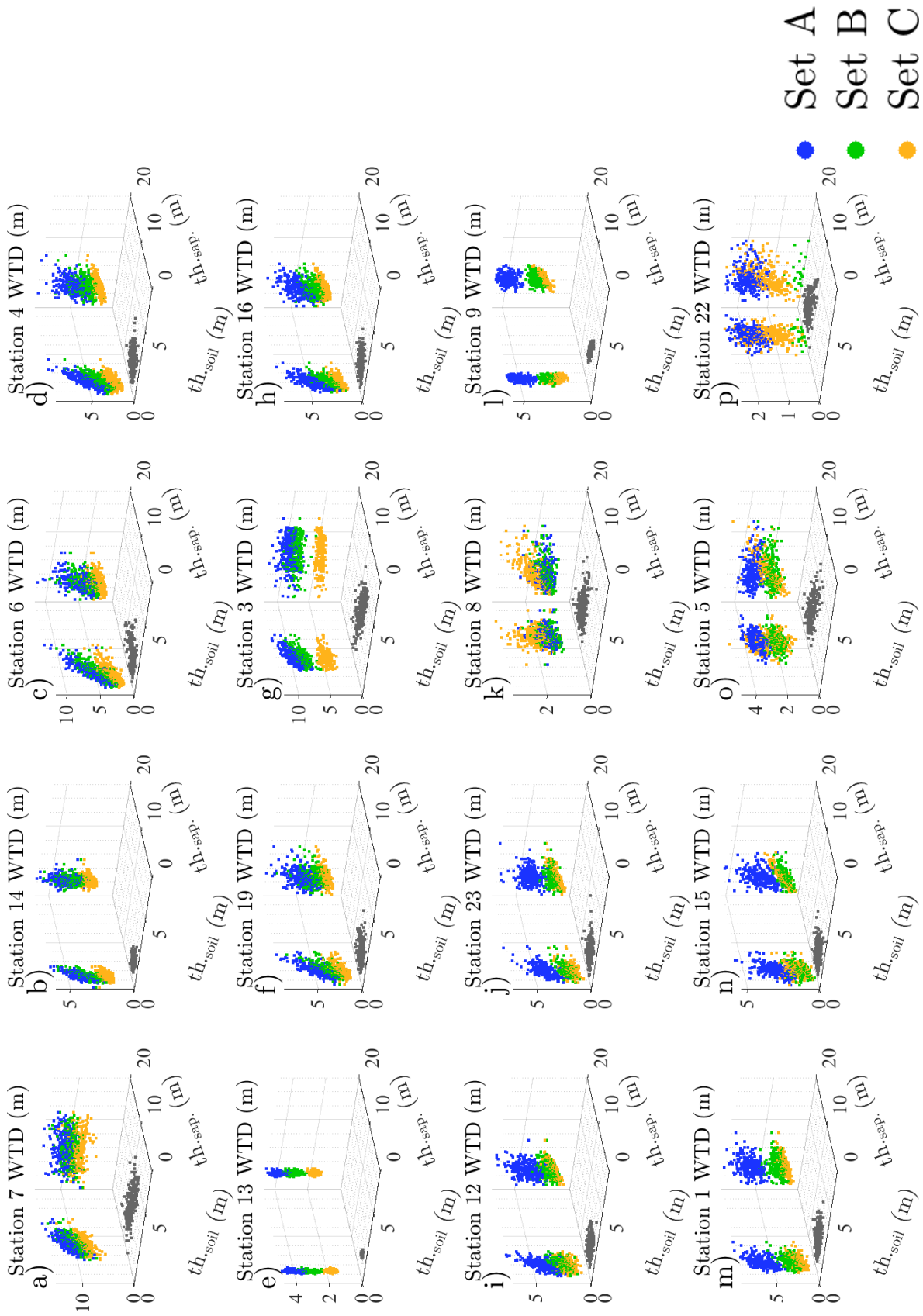


FIGURE S.10 – Distribution of WTD data as a function of the soil and saprolite thickness under each measurement stations. Data are estimated the 19th of April 2013 for different set of parameters and fixed velocity thresholds of 700 m/s for the soil and 2000 m/s for the saprolite.

TABLE S.1 – Set of Parameters Used in Seismic Tomography Inversions.

Top velocity (m/s)	250, 500, 750
Bottom velocity (m/s)	2000, 3000, 4000, 5000
z_weight	0.25, 0.5, 0.75, 1
lambda	2, 20, 200