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Accurate dating of tropical South Pacific stalagmites using physical and chemical cycles

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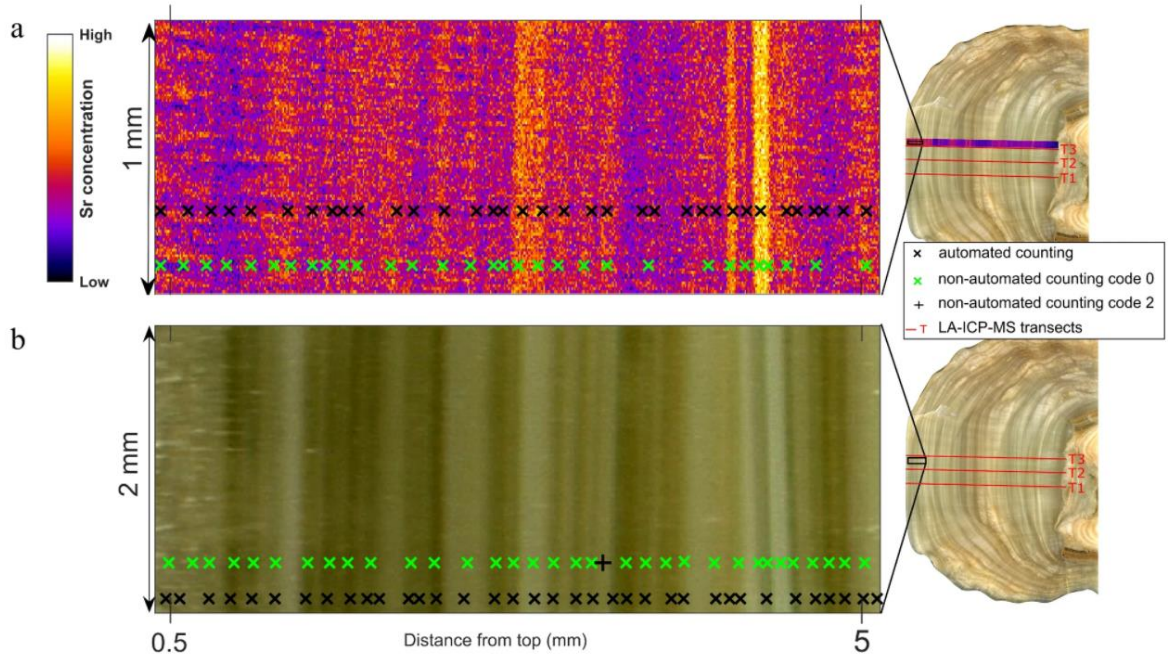
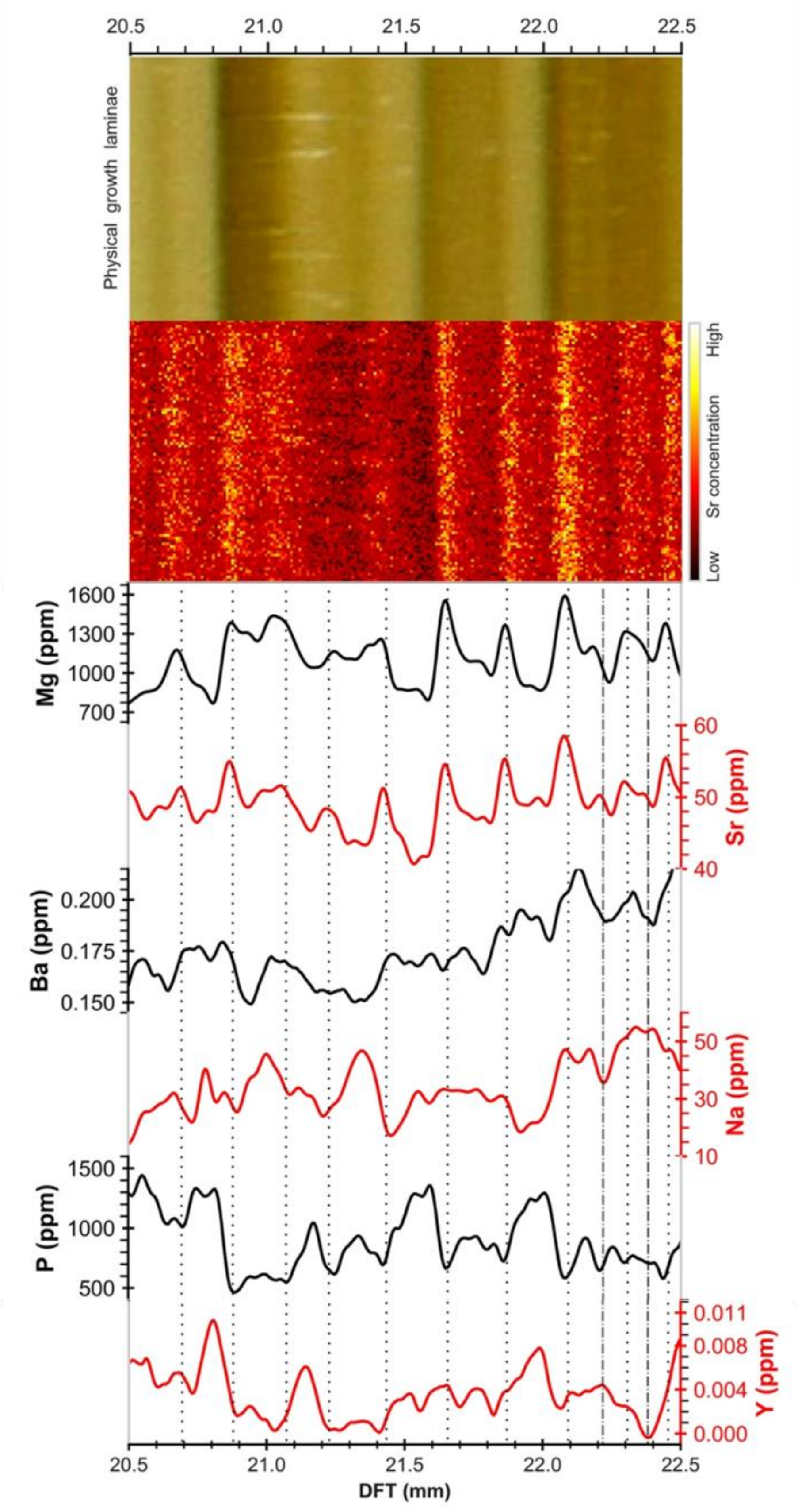


Locations of laminae on (**a**) the Sr synchrotron µXRF map, and (**b**) the high resolution scan of stalagmite, as identified by automated and non-automated counting in the topmost section of the stalagmite.



Annually laminated section of Pu17 between 20.5 and 22.5 mm from the top. The dotted vertical lines mark likely annual cycles identified by maximum Sr values on the synchrotron map. These generally correspond to maximum values for Mg, Sr, Ba, Na, U and minima for P and Y on the LA-ICP-MS record. The dashed lines are dubious cycles identified by peaks in only few elements (sub- or double-laminae). Translucent laminae on the physical sample usually correspond to Sr-enriched laminae on the synchrotron map.