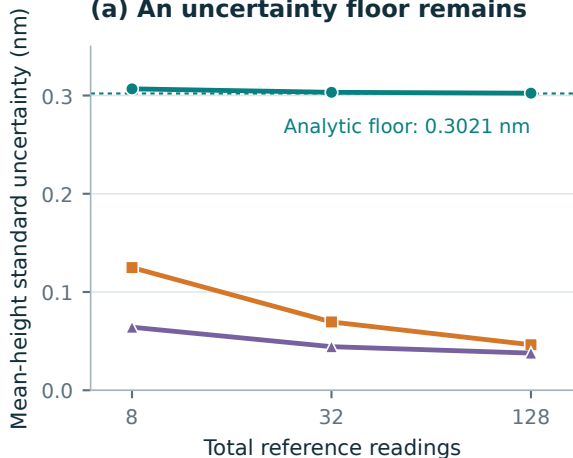


# More readings. A shared error remains.

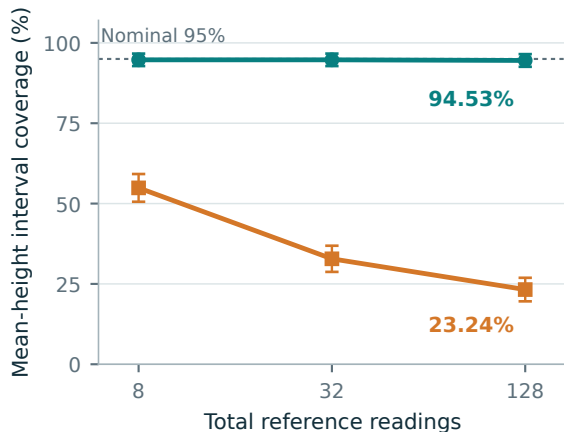
AFM-inspired metrology model | 512 independently calibrated synthetic trials

Common calibration Wrong independence Known zero

(a) An uncertainty floor remains



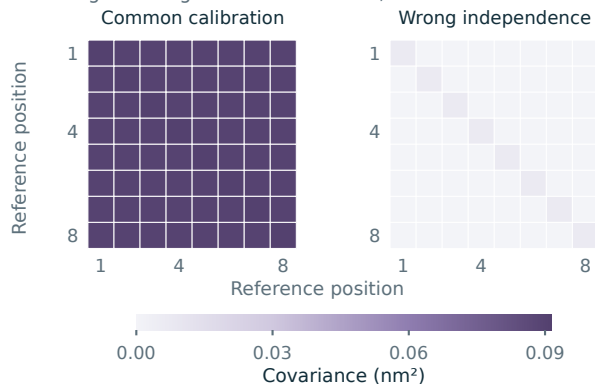
(b) False precision loses coverage



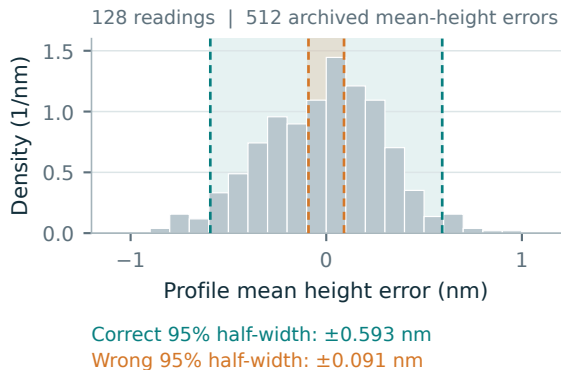
Bars: approx. 95% Monte Carlo intervals

(c) Shared error is correlated

Eight averaged reference values, 16 reads each



(d) Same errors, different intervals



Synthetic numerical study. Same estimates; only the uncertainty model changes. Not physical AFM calibration.