

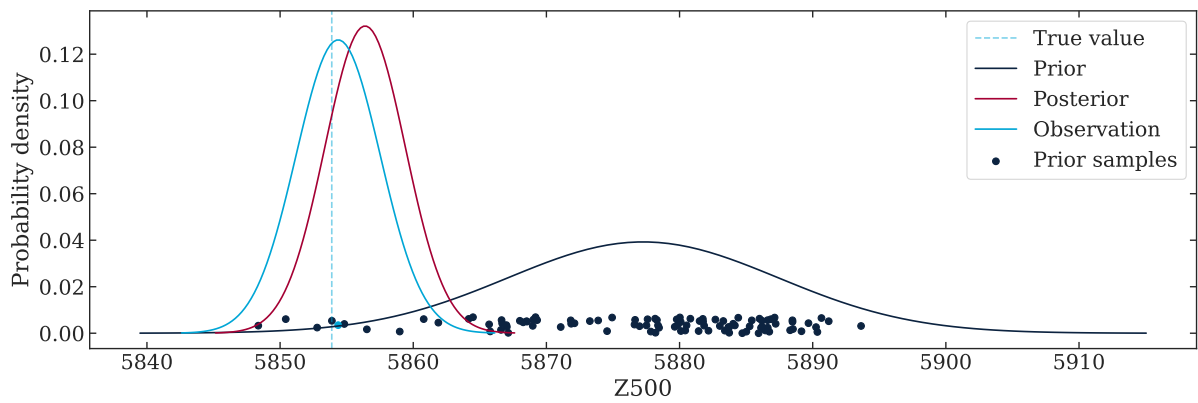
Lab assignment 3

ATM S 544

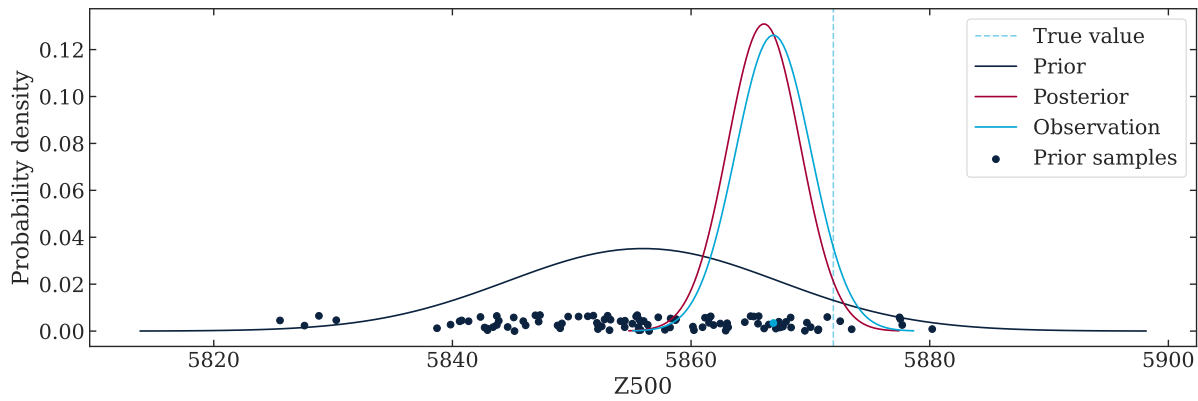
Dominik Stiller

October 20, 2023

1 Single observation

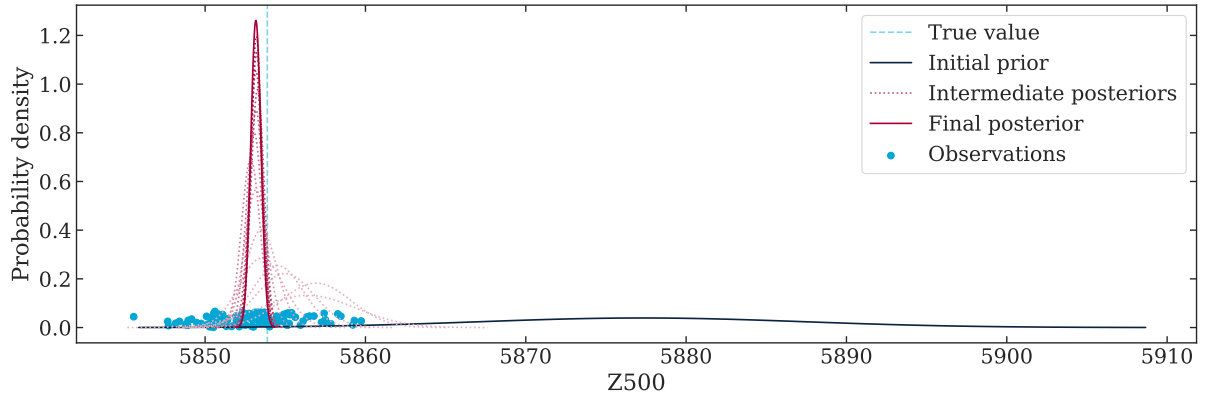


(a) Point 1 (40° N)

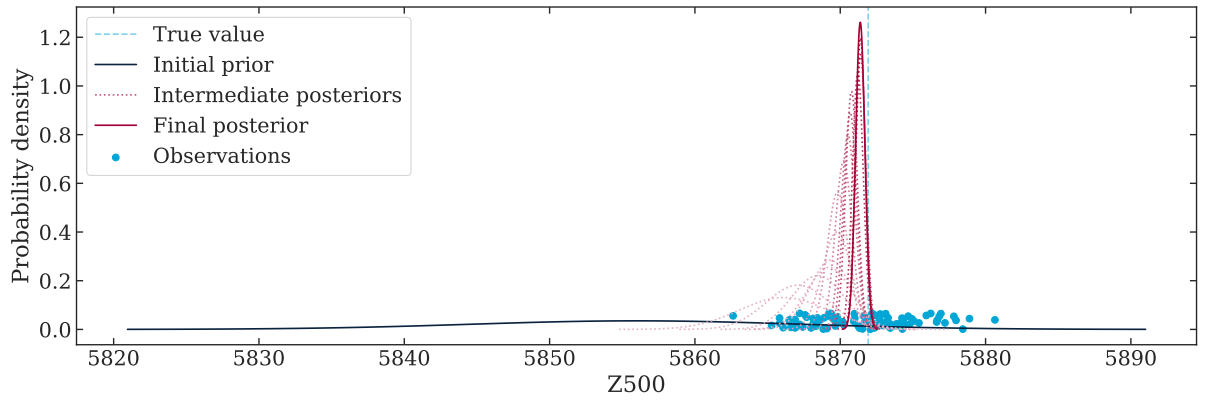


(b) Point 2 (20° N)

Figure 1: Assimilation of a single observation.



(a) Point 1 (40° N)



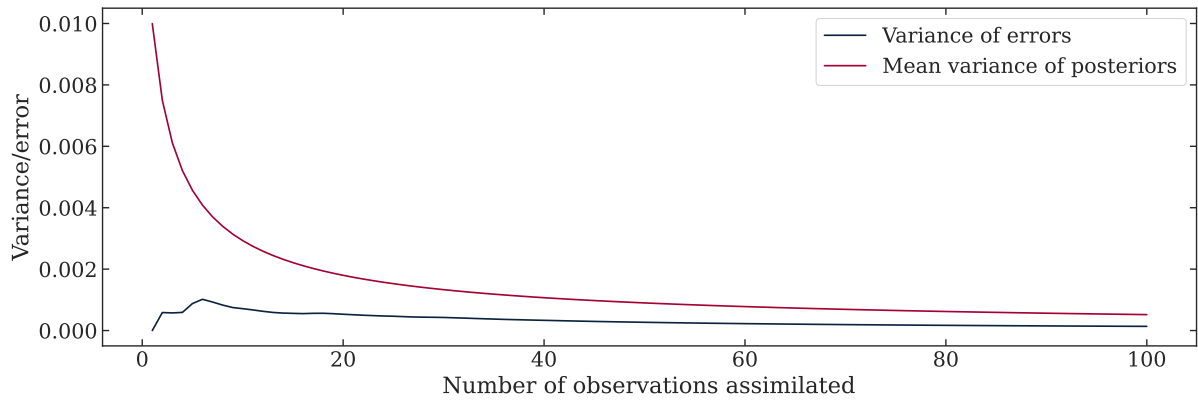
(b) Point 2 (20° N)

Figure 2: Assimilation of 100 observations.

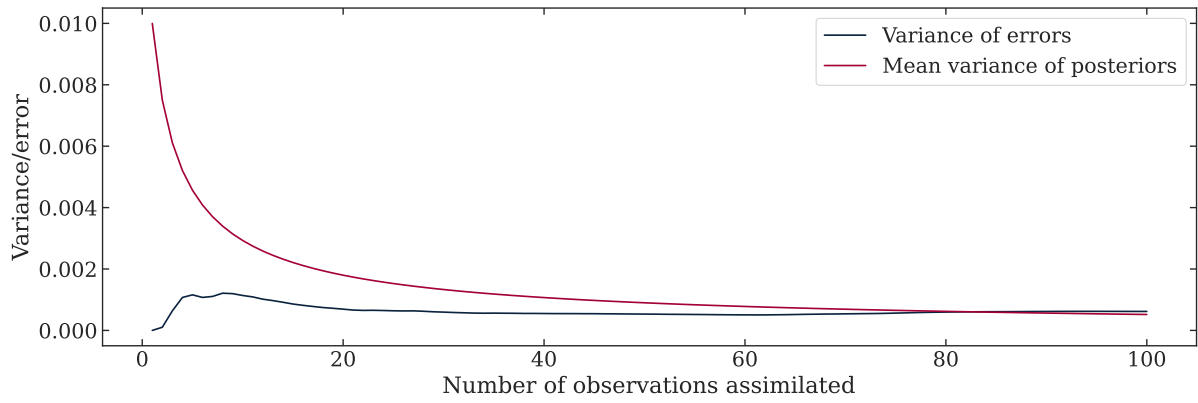
2 Multiple observations

no cos lat weighting because we're only comparing values at the same latitude, and we are only interested in the relative magnitude of error and variance

2.1 Evolution of error and variance



(a) Point 1 (40° N)



(b) Point 2 (20° N)

Figure 3: Evolution of statistics for assimilation of 100 observations.