We would like to thank all reviewers for their time and feedback.

Reviewer #1: We will add the theorem statement from [21] to the appendix. You are right, this should be Eq. (5). From Eq. (5) we bound

$$\text{stab}_t(X_t, \eta) \leq \text{ess sup (stab(\mathcal{A}'))}$$

and plug in the learning rate according to Eq. (8).

Reviewer #2: We would like to thank the reviewer again for their detailed comments and observations.

Reviewer #7:

- In TS, the posterior distribution of the losses is used to compute the posterior of $A^*$ from which the algorithm samples. In MTS, there is an extra step where we calculate the mean of the posterior and then potentially use a different sampling rule with the same mean. This remark basically says that if the selected sampling rule is actually the posterior of $A^*$, then we can skip the calculation of the mean and the algorithm reduces to regular TS.
- We will clarify Line 80.
- The functions $g_t$ and $f_t$ after Line 133 are intentionally defined for any $x \in \mathcal{X}$ and not only $X_t$, this is necessary to properly define the stability coefficients.
- You are correct, we will add the clarification for Figure 1.