Referee's report on "Look-Ahead Screening Rules for the Lasso" 22^{nd} EYSM meeting

This study proposes new screening rules for computing the Lasso regularization path in linear models. Time benchmarks based on simulations show that the proposed method outperforms the active warm start version of the Gap Safe rule. Overall, this short-paper is well-written and the results are interesting.

Remarks

The author states in the abstract:

> In experiments we show that these look-ahead screening rules improve the performance of existing screening strategies.

However, in Section 3, just one method (active warm start version of the Gap Safe rules) is used to compare the performance of the proposed strategy. The author should rephrase the last sentence of the abstract accordingly, e.g.: "In experiments we show that these look-ahead screening rules outperform the active warm start version of the Gap Safe rules."

Below I list some points that the author may briefly discuss, perhaps in the Discussion section.

- Only the Gaussian case is considered. Is the method applicable to Generalized Linear Models?
- There are two options in the `glmnet` package for computing the path to Gaussian linear models: `type.gaussian="covariance"` and `type.gaussian="naive"`. Depending on the setting, these options have a large impact on timing. The latter can be far more efficient for $p > n$ situations, or when $p > 500$. Are the results reported in simulations consistent under both settings?