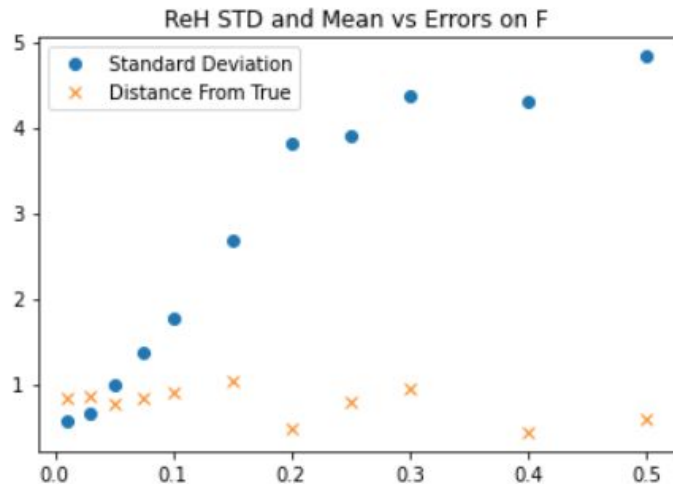
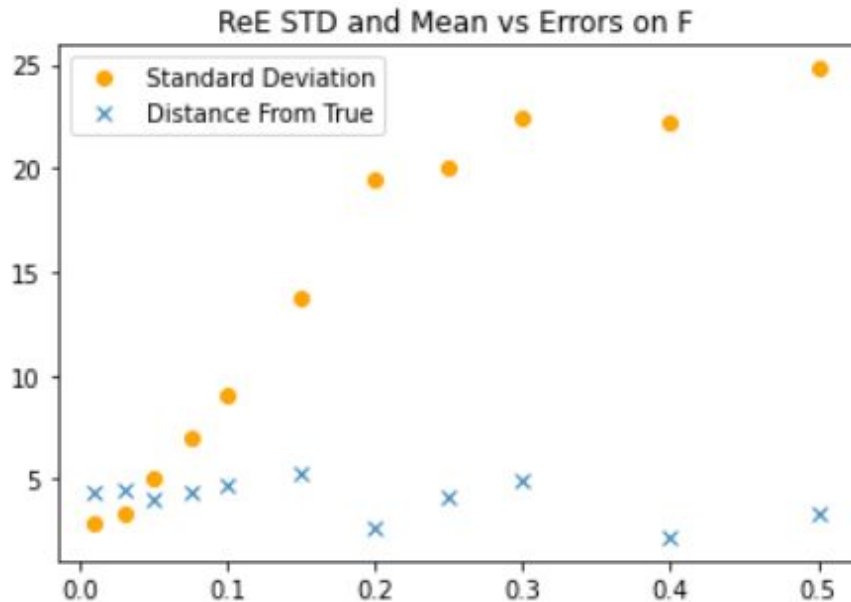


03/04/2022

Aaryan

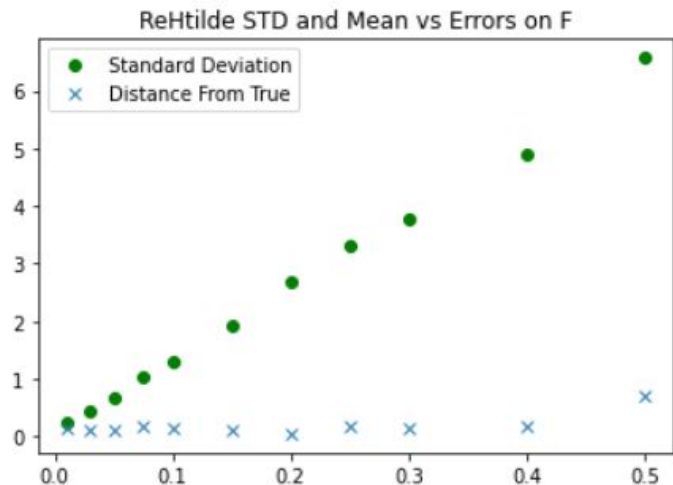


Last Week Recap

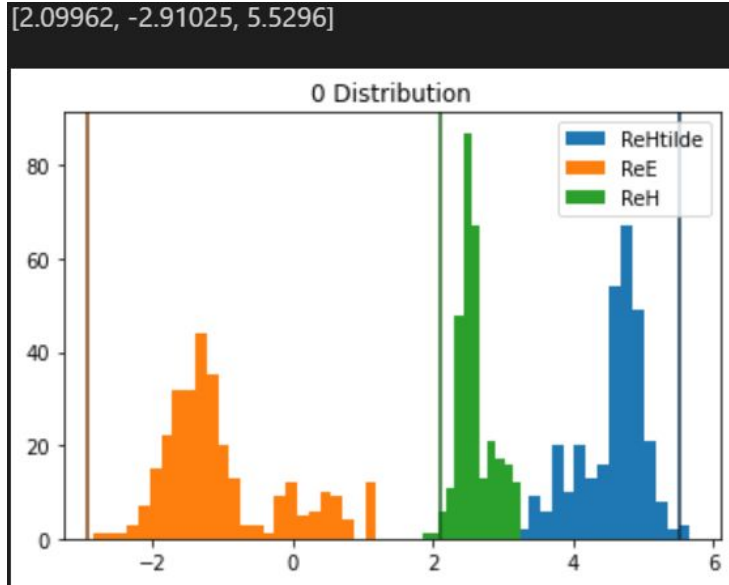
- Found for Set 0 that accuracy was not dependant of error on F

What More Needed To Be Done:

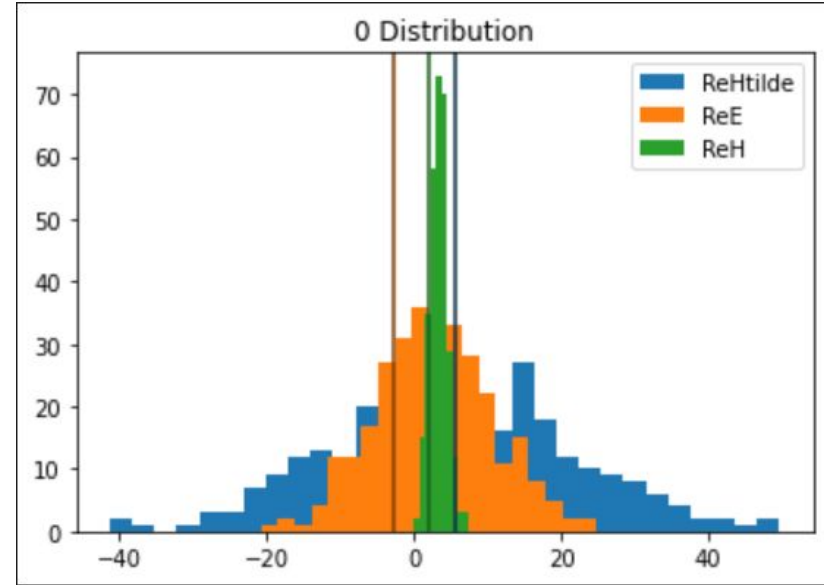
- Pseudo Data already had a 5% uncertainty on F applied
- Was this pattern special to Set 0 or all sets?
- Observation was found on old formalism, requested to do this for BKM02



Observations with new BKM02 Formalism Predictions



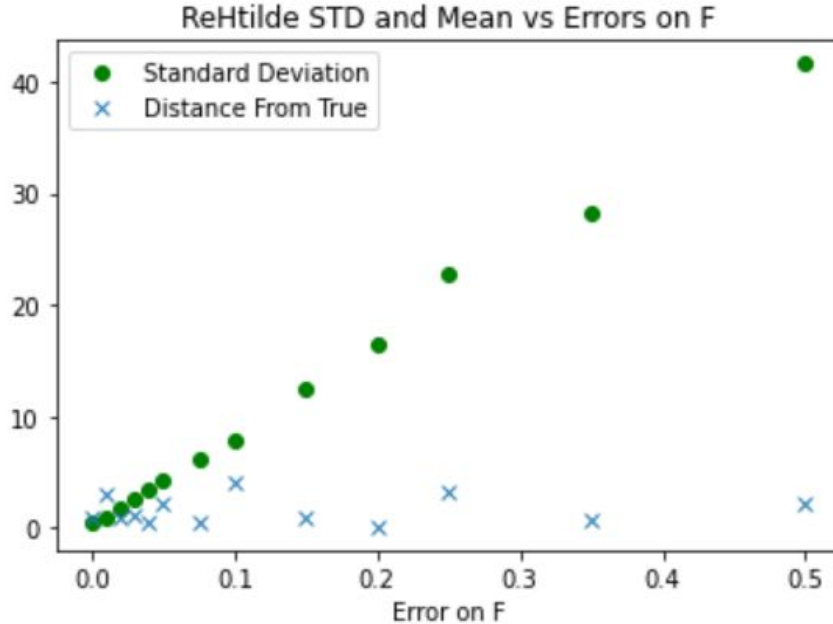
0% Error



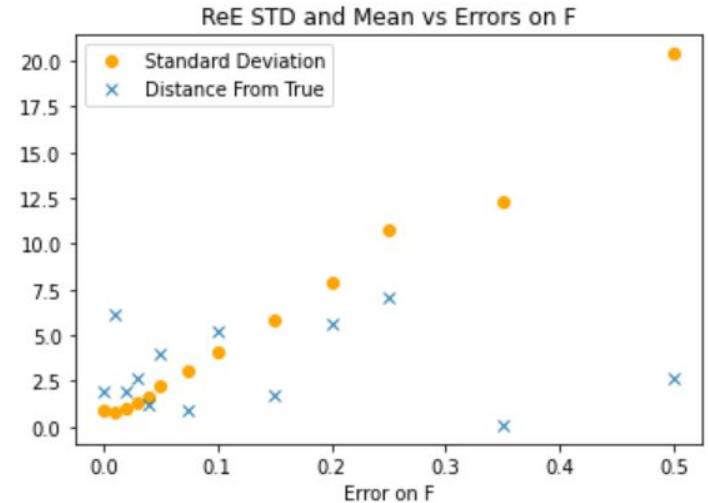
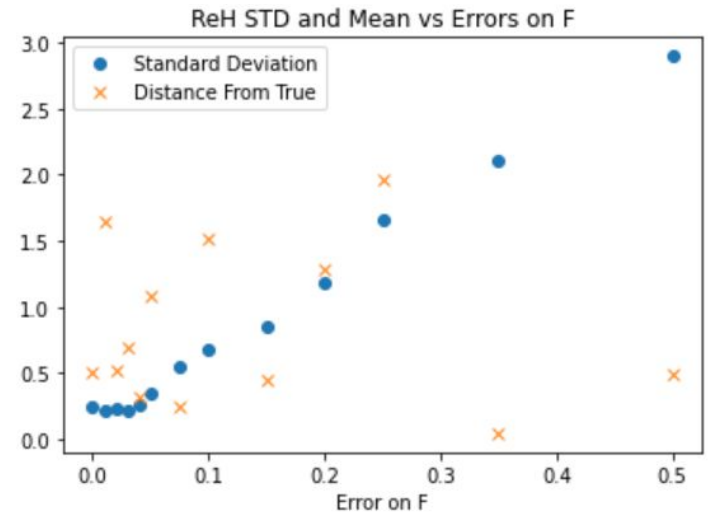
20% Error

- Spread of ReHtilde is significantly larger compared to the VA formalism
- At first glance it seems that accuracy is preserved while spread/deviation is not

Accuracy/Spread v ErrF for Set 1



- Seems that pattern (for set 1) is the same
 - Accuracy is not hurt by increasing error on F
- Deviation/Spread in data has a direct and positive relation with the error on F

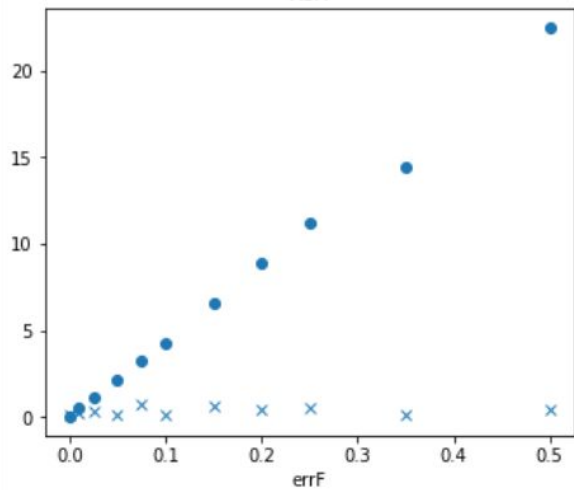


Does this Pattern Hold For Other Sets?

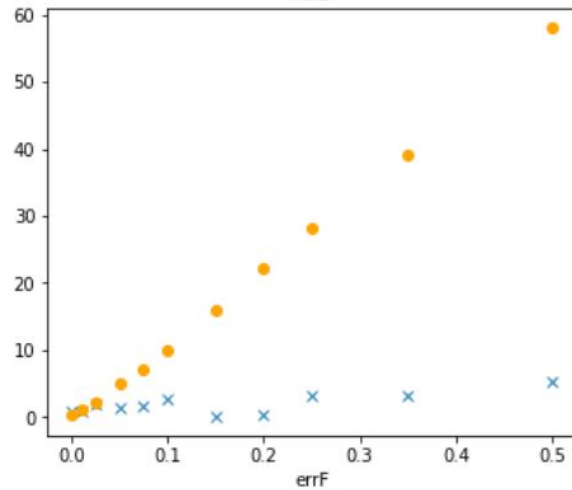
- Randomly took 6 sets (out of a possible 403) and did the same experiments on those kinematic sets
 - Sets Chosen: 12, 99, 138, 265, 312, 403
- Compared spread/accuracy with varying errors on F for sets and saw whether the same pattern was seen for set 1

Set 12

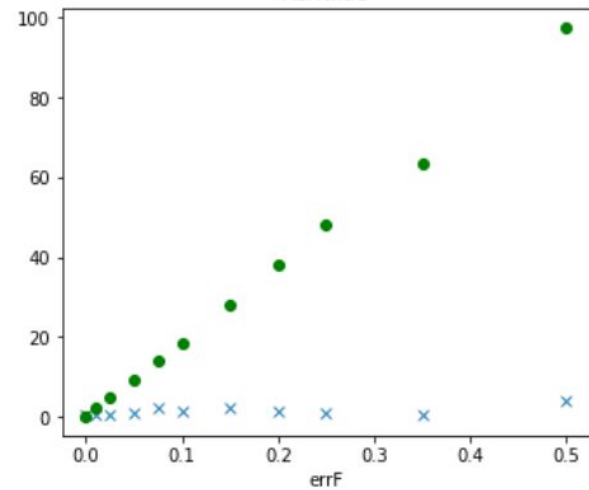
ReH



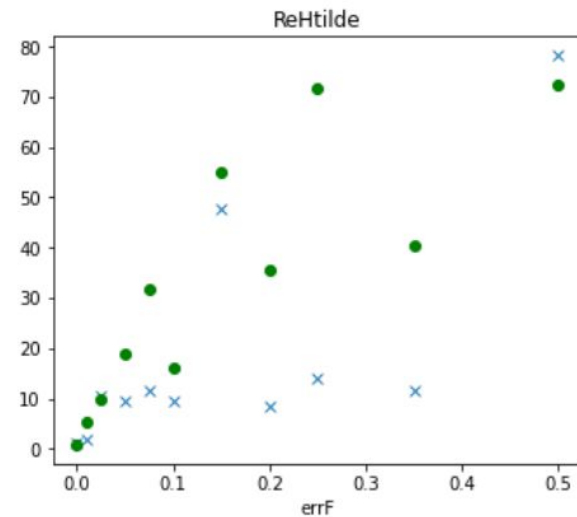
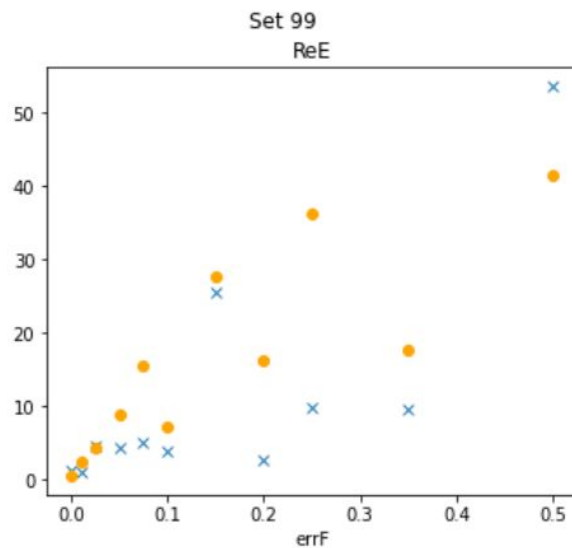
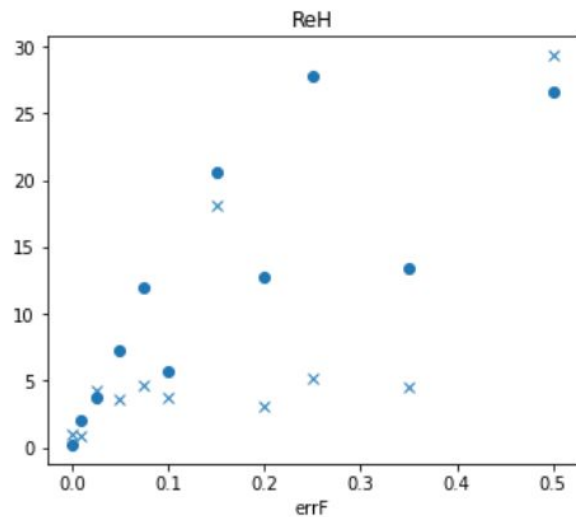
Set 12
ReE



ReHtilde



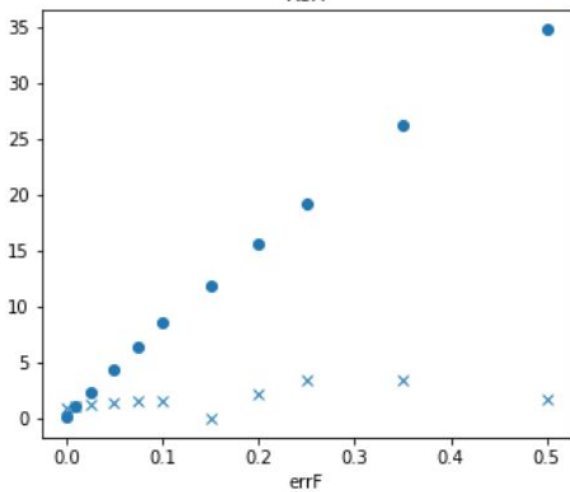
Set 99



- Accuracy does not seem to be preserved
- Deviation also seems to be more messy/sporadic compared to before

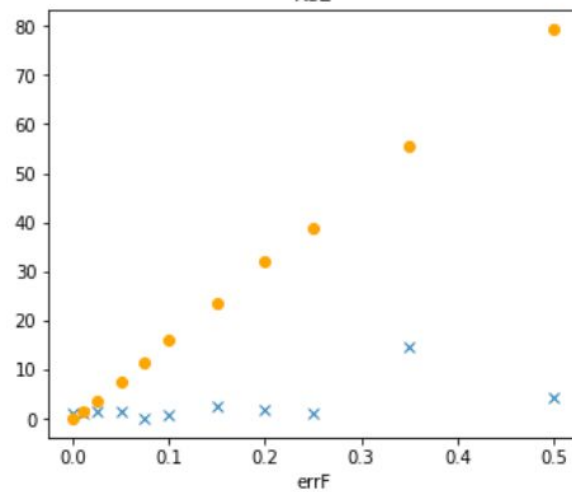
Set 138

ReH

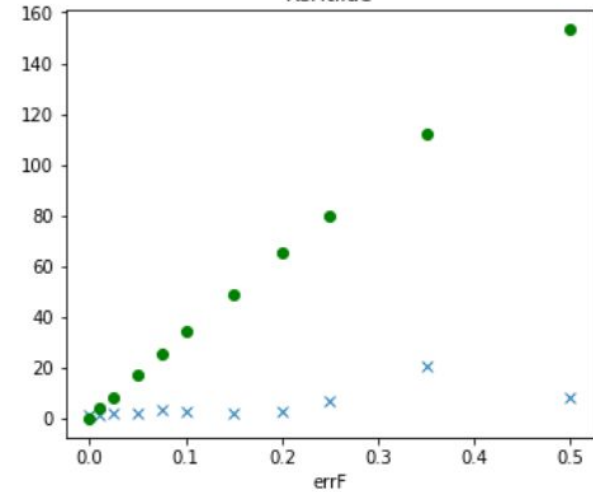


Set 138

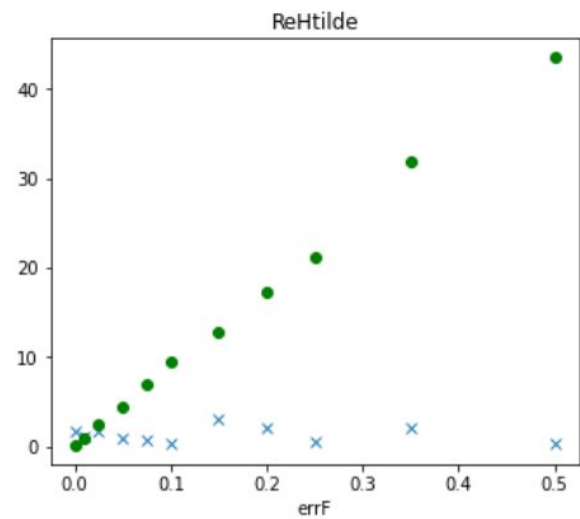
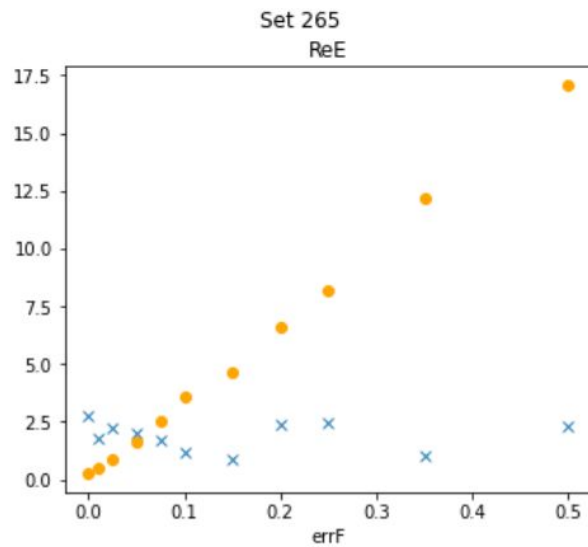
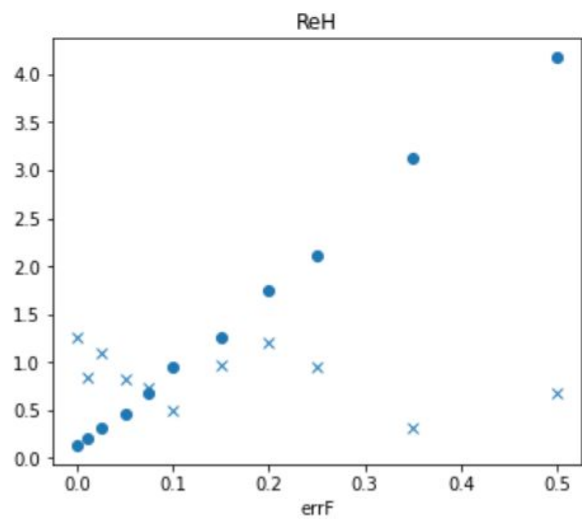
ReE



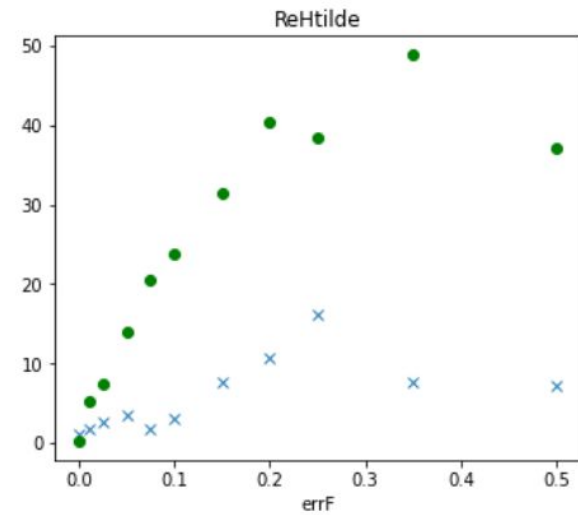
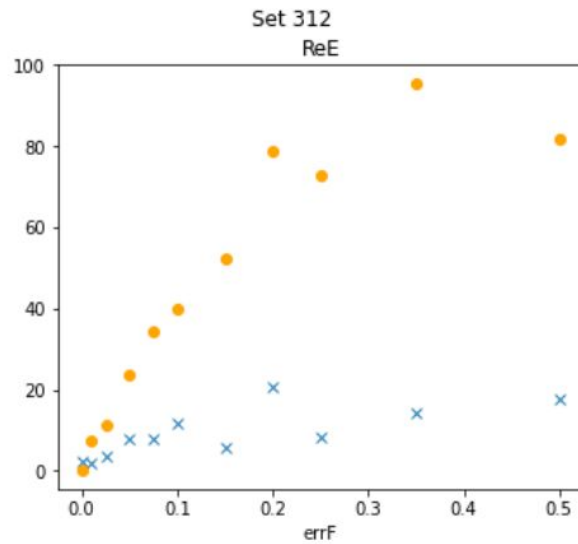
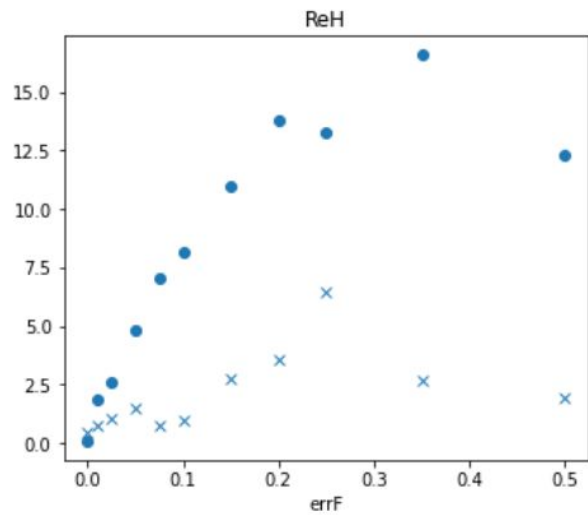
ReHtilde



Set 265

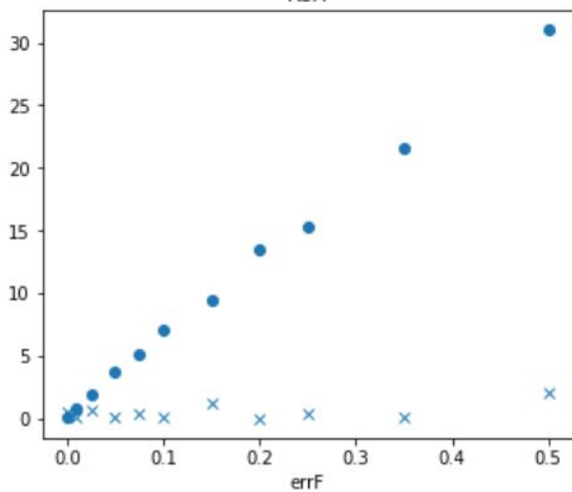


Set 312



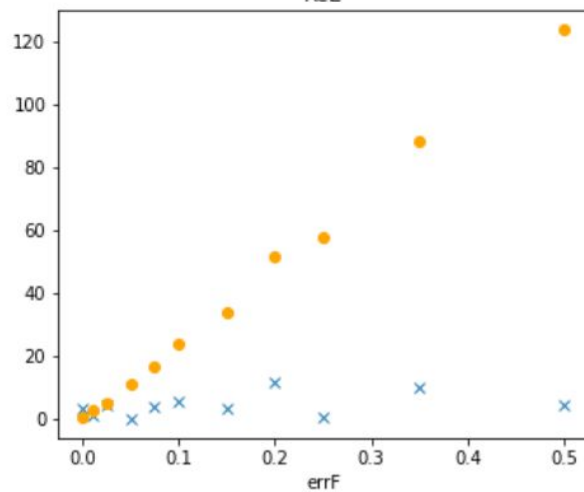
Set 403

ReH

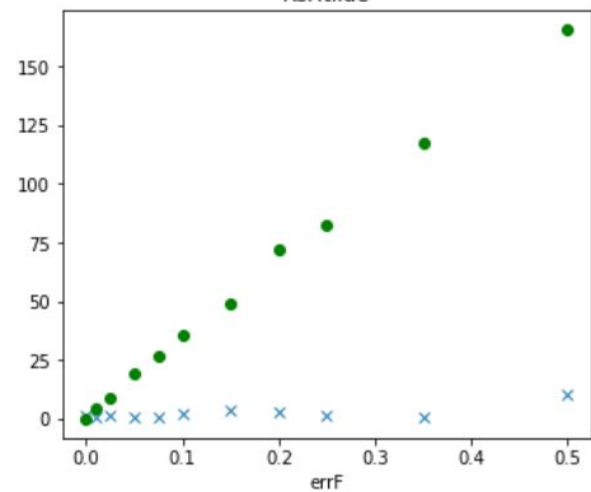


Set 403

ReE



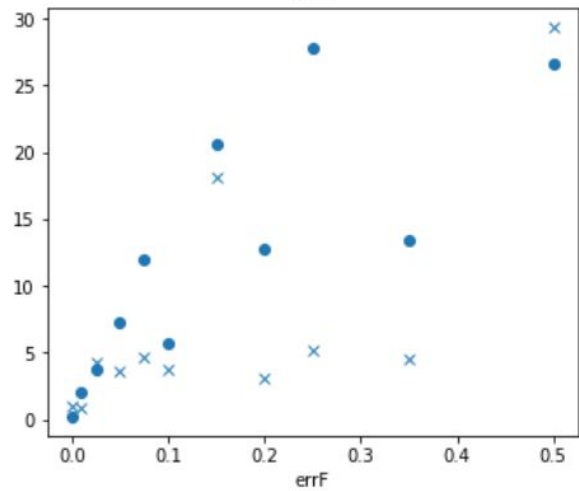
ReHilde



Checking Again

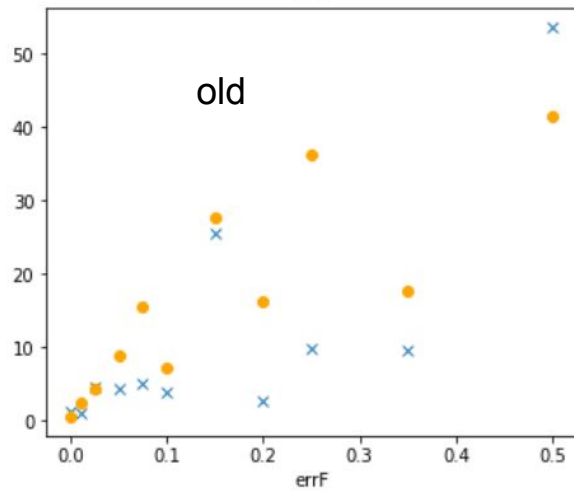
- Set 99 and 312 showed very different results compared to the other sets
 - Accuracy was not preserved and spread was not as 'linear' looking compared to the other sets
- Reran set 99 and 312 to see if those results were consistent or just a fluke

ReH

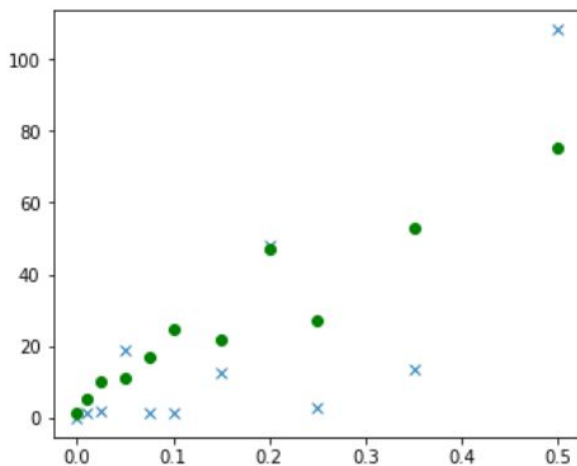
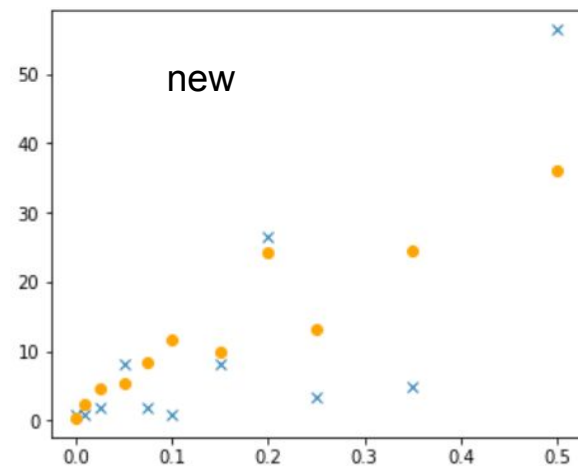
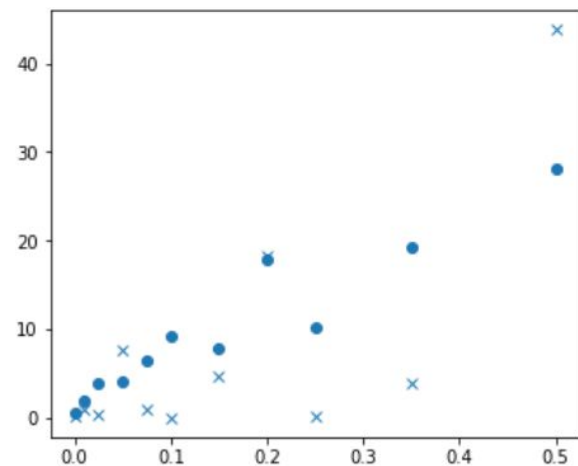
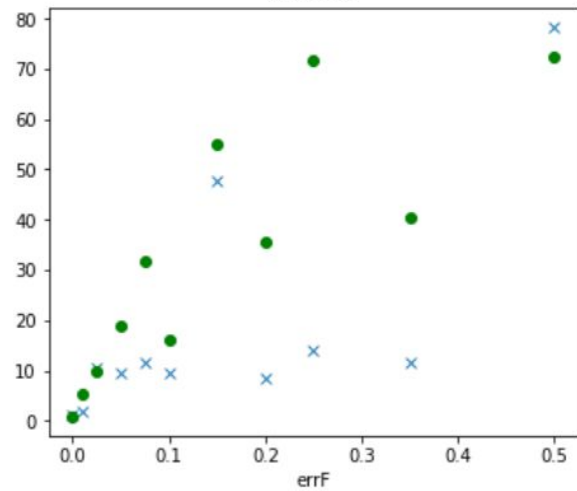


Set 99

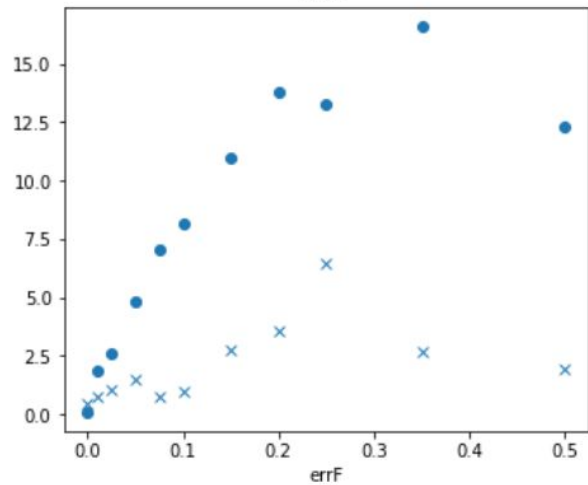
ReE



ReHtilde

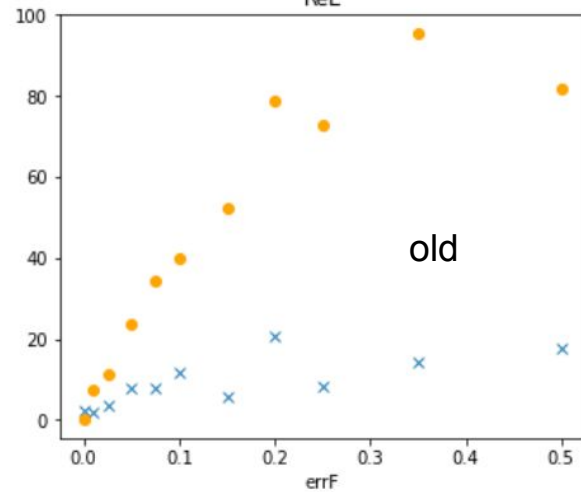


ReH

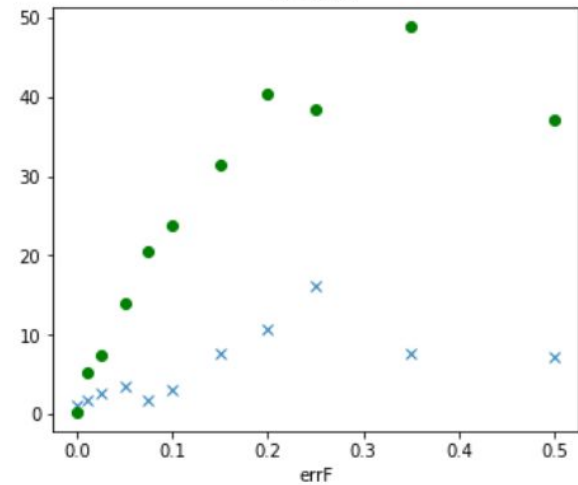


Set 312

ReE



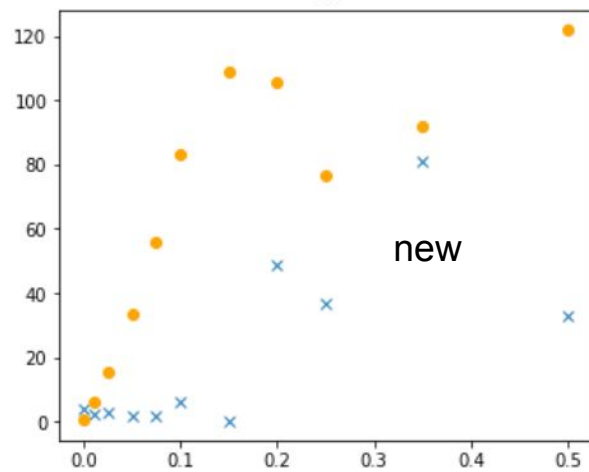
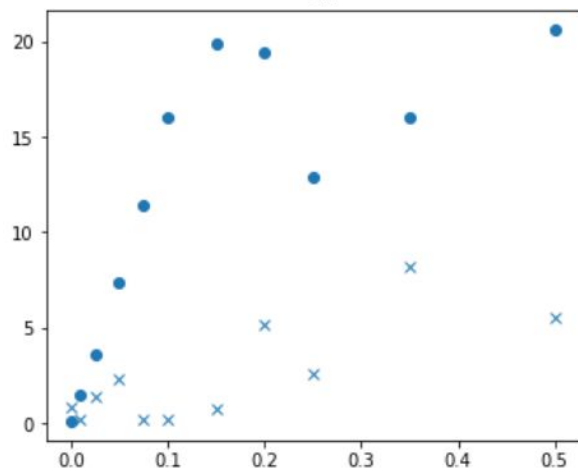
ReHtilde



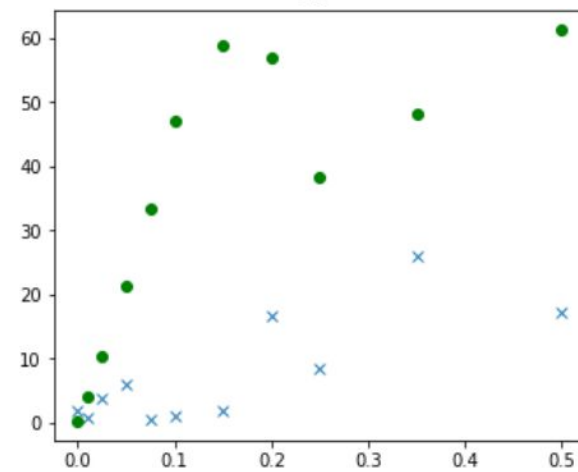
errF

errF

errF



new



Observations

- For many sets the error on F does not impact the accuracy of the predictions (even if the predictions may not be the best)
- Some sets are odd and their accuracy in predictions are dependant on the error on F
 - This is consistent as well regardless of initialization