PSF Findings :

* MAE does not work as well as MSE
* MSE works well with and without weights. Add weight good thing ?
* PSF tiling works well with the base version of Unet.
* Batch Norm is slowing learning
* PSF tiling artifacts show when using   
  a. Dropout   
  b. Multi level fusion in Unet   
  c. Attention networks
* More efficient ways of PSF fusion ? Injection at U-Net bottleneck works. But whats the best way ? Why it works ?
* Consistency check i.e. Blur(Predicted) = Original Blurred image . But self referencing and prone to collapse.

Current state of the Art :

* Wiener deconv (Tickon… ) and then denoising with ML . Huh ?

Ideas to try:

* Key is how to best incorporate PSF . PSF can be very weird at times. Incorporation needs to be robust ?
* How do normal deblurs work so well without blur kernel ? DeblurGan , Unet deblur etc? Is it also possible in astronomy ? If yes, would it hinder “interesting” object detection because these learn about the world ?
* Use a block input form ALL different Psf correction methods such as Rich-Lucy , Wiener etc to Unet. It can do the rest ?

Simulate Using PhoSim → Sextract sources → Use sextractor map to give base+ block weight → Train