
Electronic Supplementary Information

nDTomo: A Modular Python Toolkit for X-ray Chemical Imaging and Tomography

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S1 PeakFitCNN and prms-only performance in real-space

S1.1 Peak area

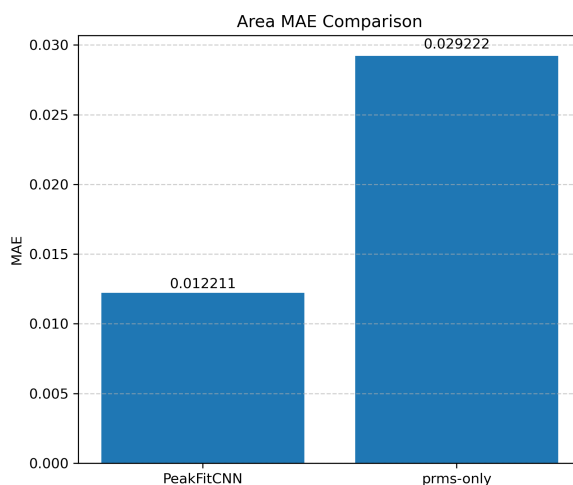


Figure S1: MAE peak area comparison between PeakFitCNN and prms-only approaches.

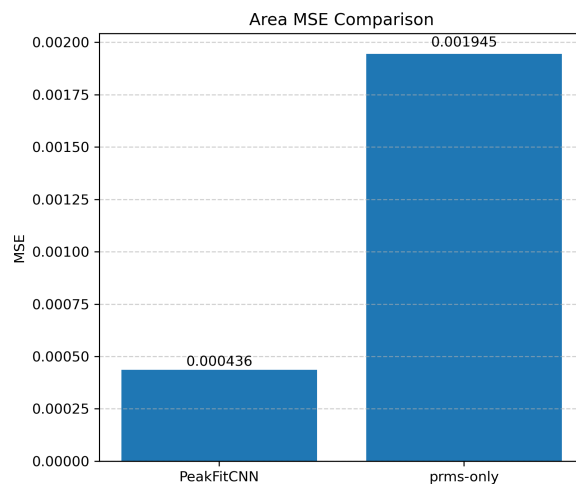


Figure S2: MSE peak area comparison between PeakFitCNN and prms-only approaches.

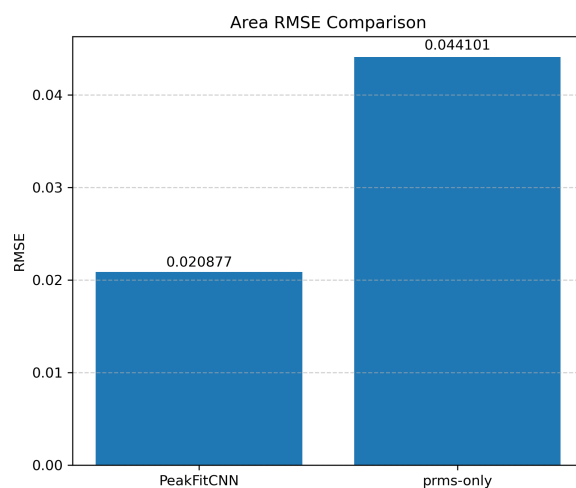


Figure S3: RMSE peak area comparison between PeakFitCNN and prms-only approaches.

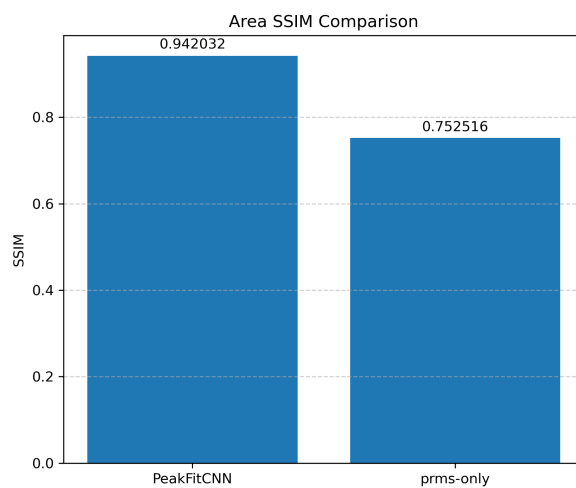


Figure S4: SSIM peak area comparison between PeakFitCNN and prms-only approaches.

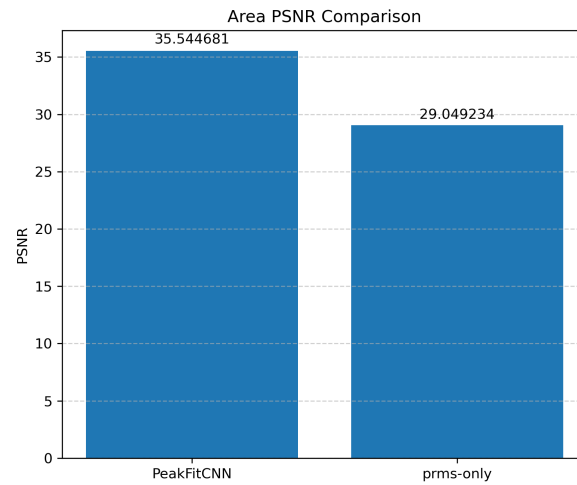


Figure S5: PSNR peak area comparison between PeakFitCNN and prms-only approaches.

S1.2 Peak position

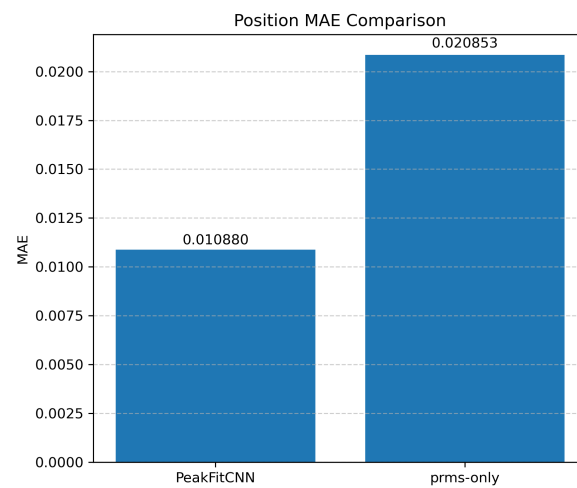


Figure S6: MAE peak position comparison between PeakFitCNN and prms-only approaches.

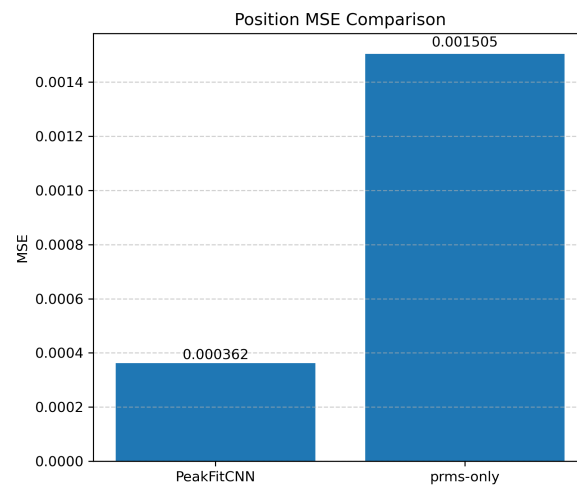


Figure S7: MSE peak position comparison between PeakFitCNN and prms-only approaches.

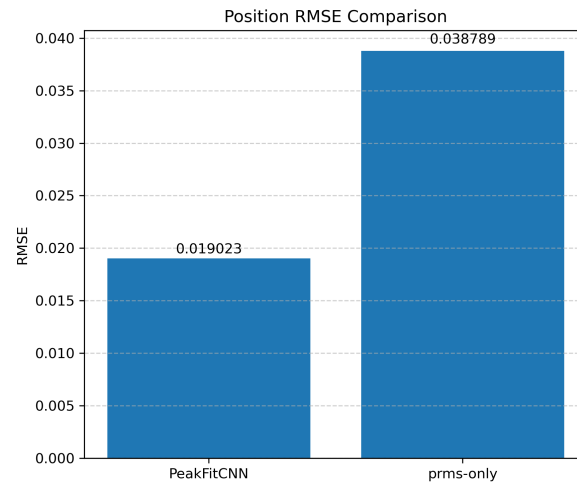


Figure S8: RMSE peak position comparison between PeakFitCNN and prms-only approaches.

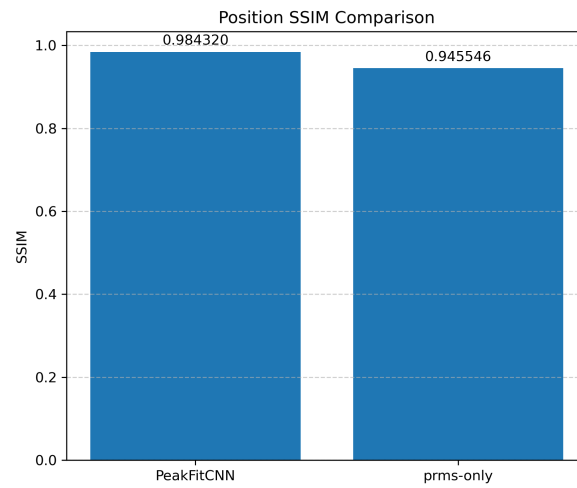


Figure S9: SSIM peak position comparison between PeakFitCNN and prms-only approaches.

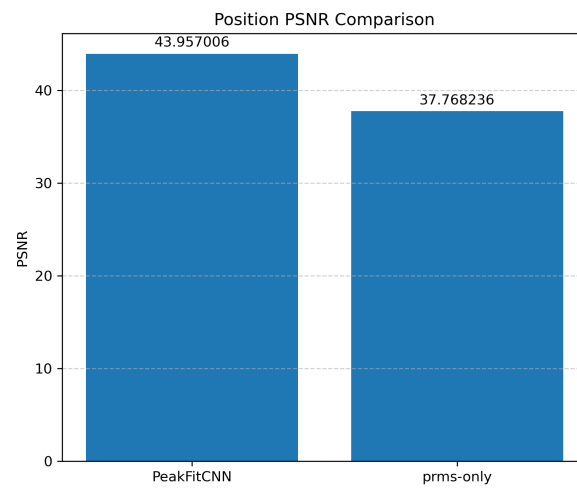


Figure S10: PSNR peak position comparison between PeakFitCNN and prms-only approaches.

S1.3 Peak FWHM

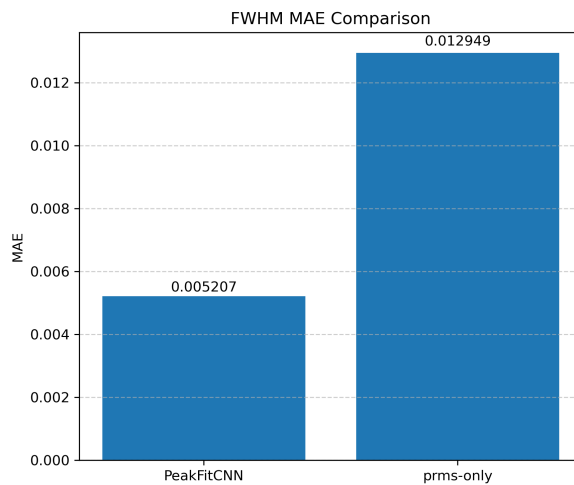


Figure S11: MAE peak FWHM comparison between PeakFitCNN and prms-only approaches.

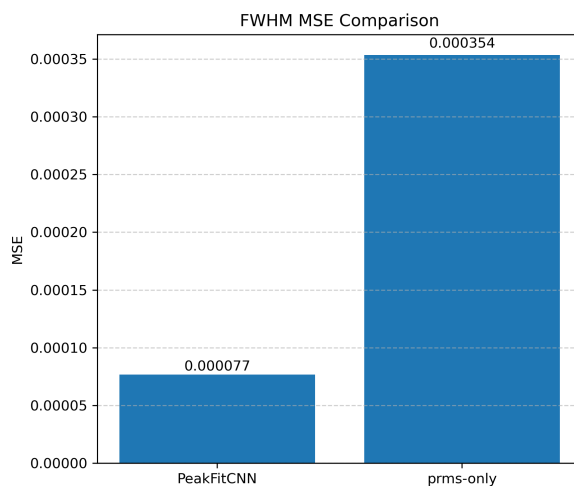


Figure S12: MSE peak FWHM comparison between PeakFitCNN and prms-only approaches.

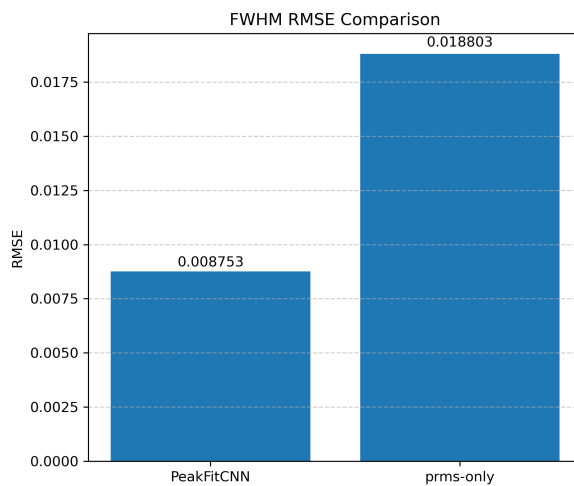


Figure S13: RMSE peak FWHM comparison between PeakFitCNN and prms-only approaches.

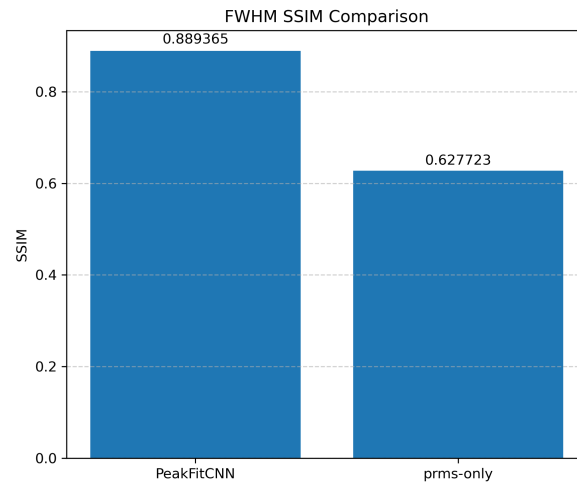


Figure S14: SSIM peak FWHM comparison between PeakFitCNN and prms-only approaches.

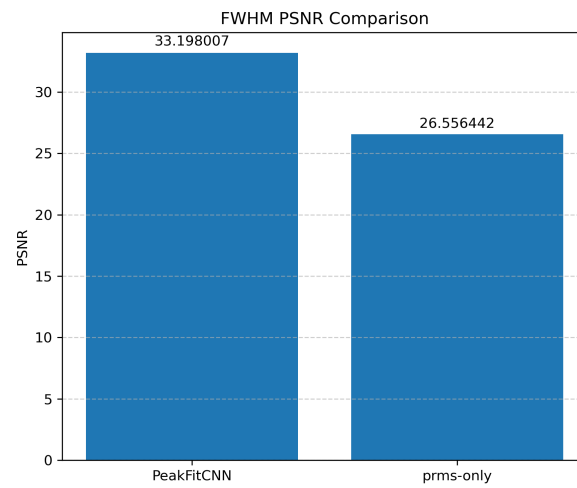


Figure S15: PSNR peak FWHM comparison between PeakFitCNN and prms-only approaches.

S1.4 Slope

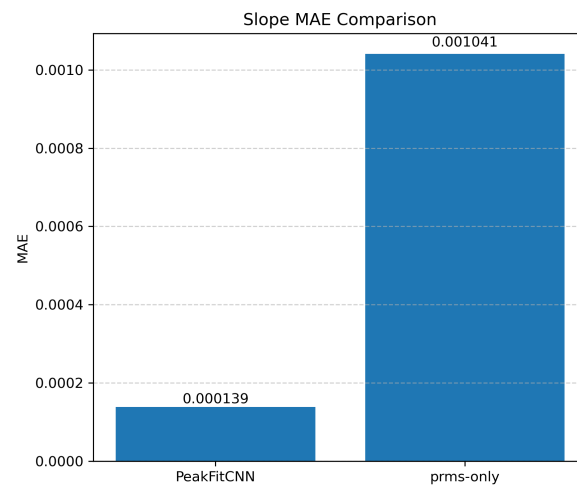


Figure S16: MAE slope comparison between PeakFitCNN and prms-only approaches.

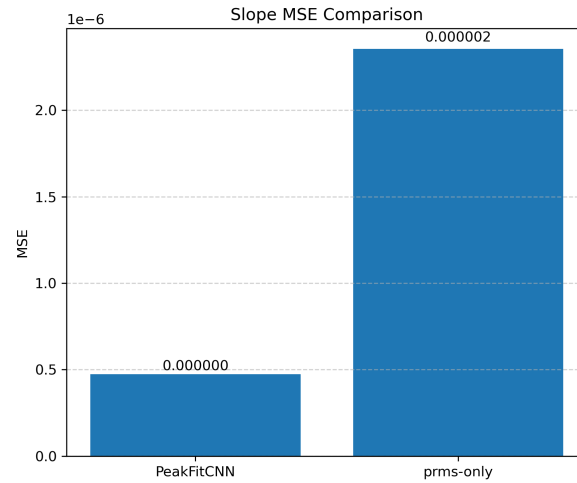


Figure S17: MSE slope comparison between PeakFitCNN and prms-only approaches.

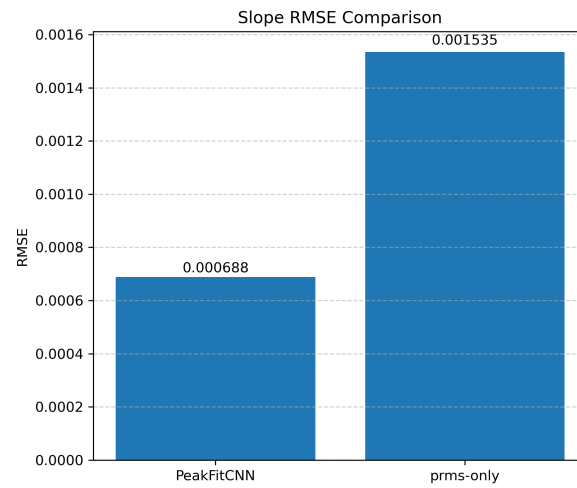


Figure S18: RMSE slope comparison between PeakFitCNN and prms-only approaches.

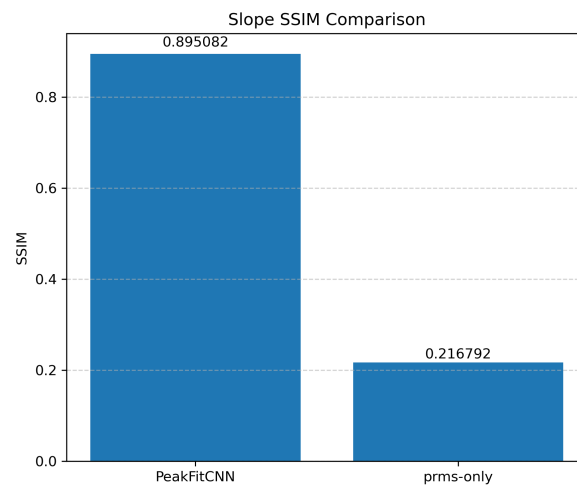


Figure S19: SSIM slope FWHM comparison between PeakFitCNN and prms-only approaches.

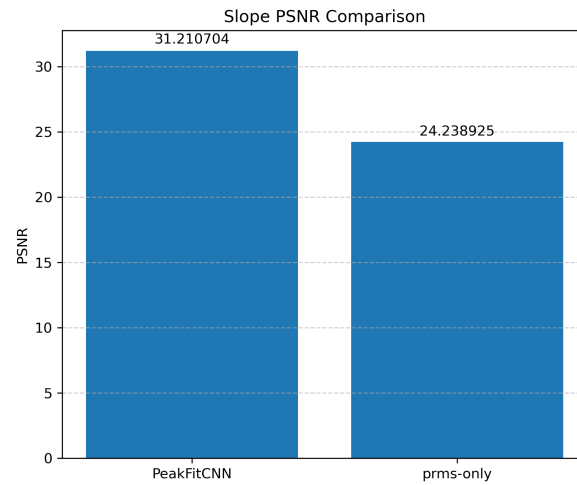


Figure S20: PSNR slope comparison between PeakFitCNN and prms-only approaches.

S1.5 Intercept

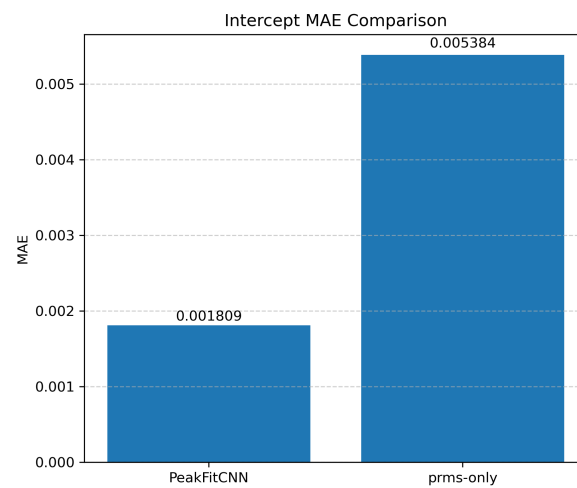


Figure S21: MAE intercept comparison between PeakFitCNN and prms-only approaches.

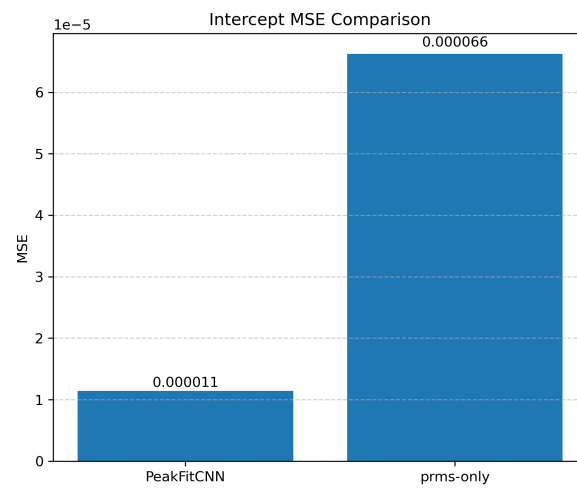


Figure S22: MSE intercept comparison between PeakFitCNN and prms-only approaches.

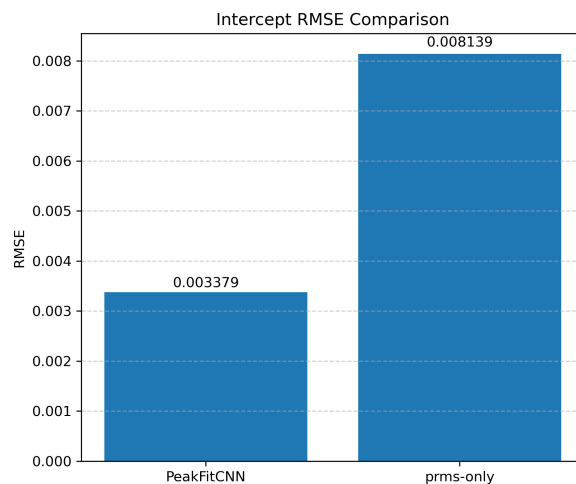


Figure S23: RMSE intercept comparison between PeakFitCNN and prms-only approaches.

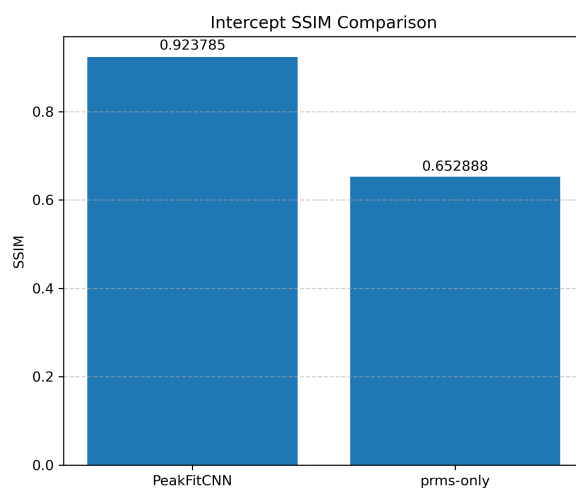


Figure S24: SSIM intercept FWHM comparison between PeakFitCNN and prms-only approaches.

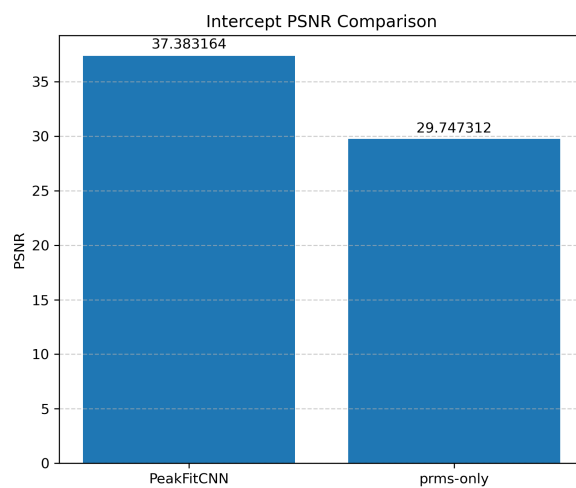


Figure S25: PSNR intercept comparison between PeakFitCNN and prms-only approaches.

S2 DLSR: Comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms

S2.1 Peak area

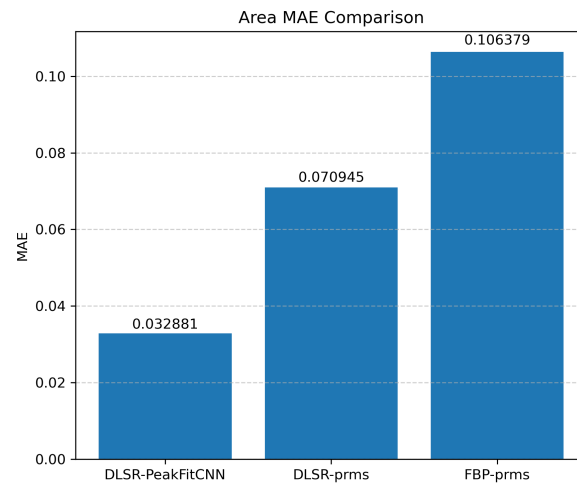


Figure S26: MAE peak area comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

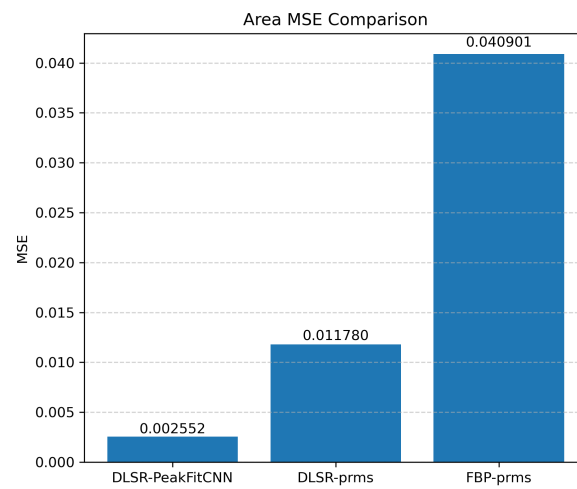


Figure S27: MSE peak area comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

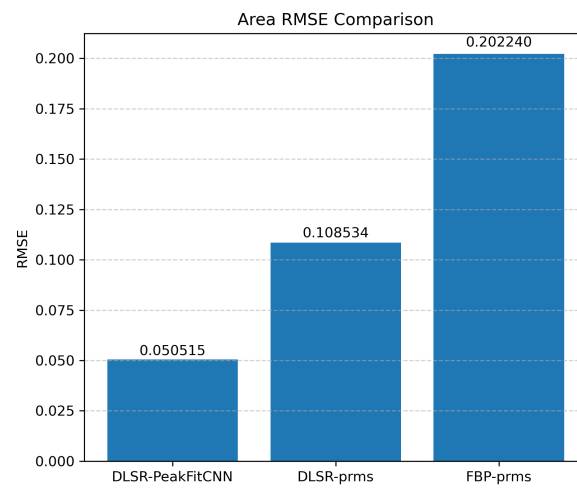


Figure S28: RMSE peak area comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

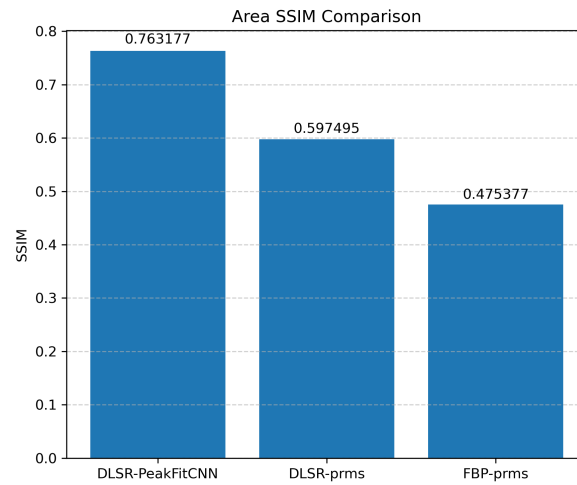


Figure S29: SSIM peak area comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

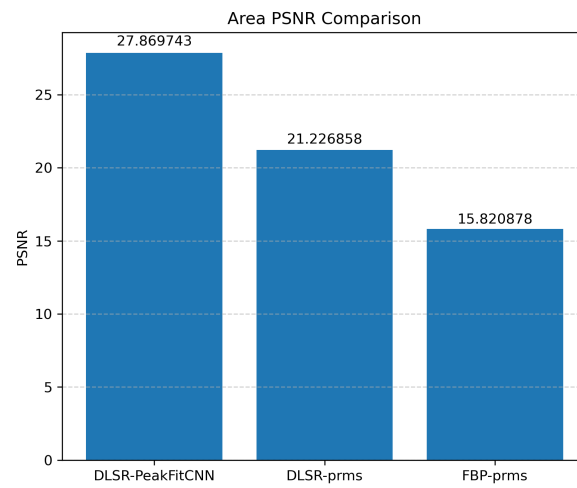


Figure S30: PSNR peak area comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

S2.2 Peak position

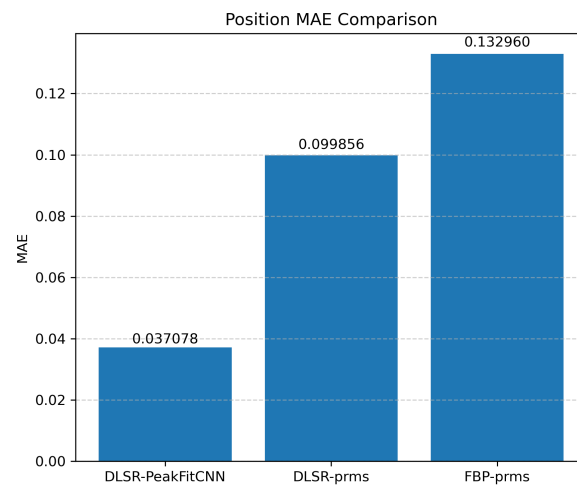


Figure S31: MAE peak position comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

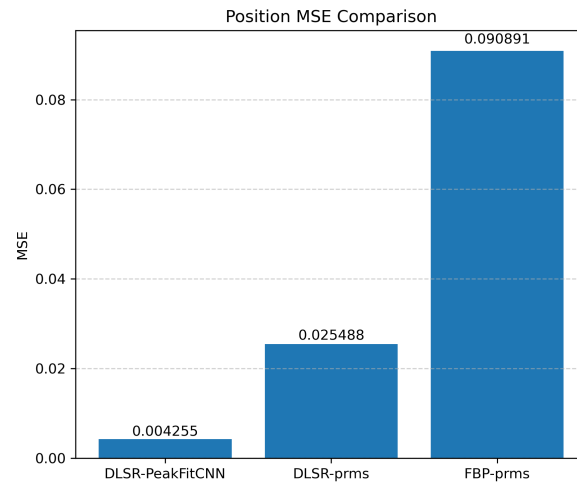


Figure S32: MSE peak position comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

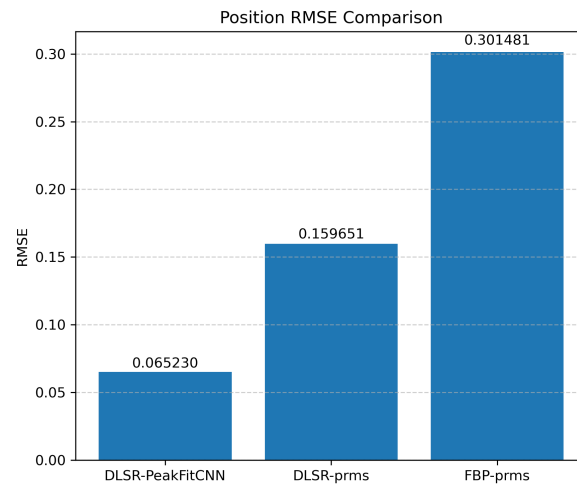


Figure S33: RMSE peak position comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

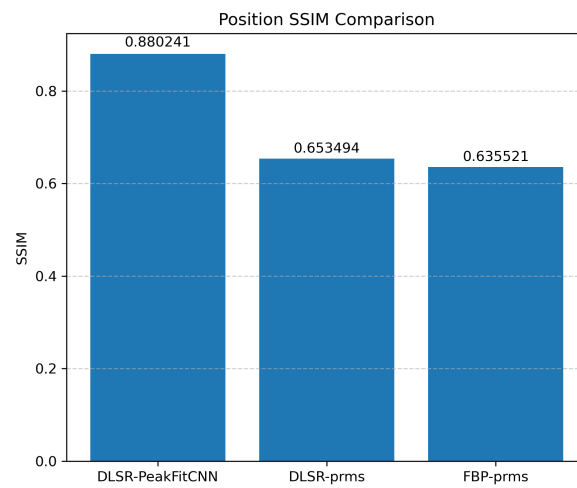


Figure S34: SSIM peak position comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

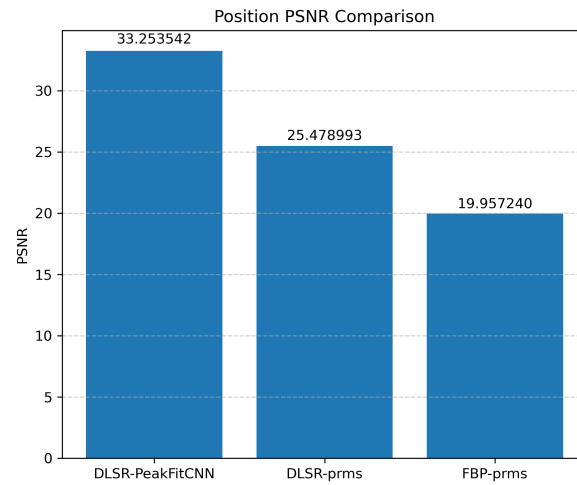


Figure S35: PSNR peak position comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

S2.3 Peak FWHM

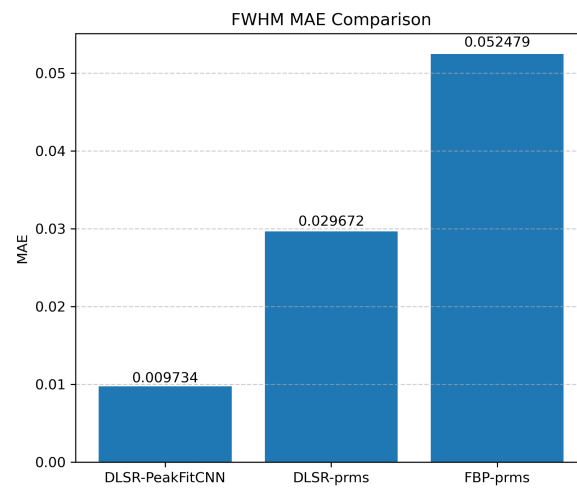


Figure S36: MAE peak FWHM comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

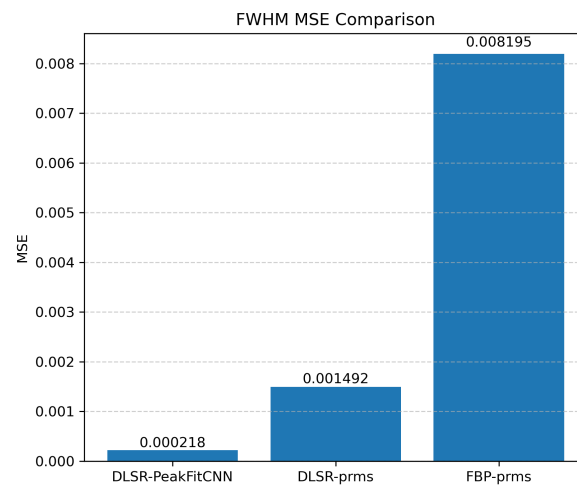


Figure S37: MSE peak FWHM comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

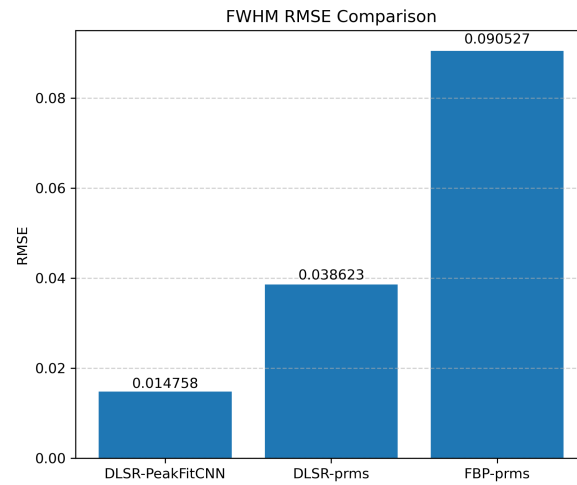


Figure S38: RMSE peak FWHM comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

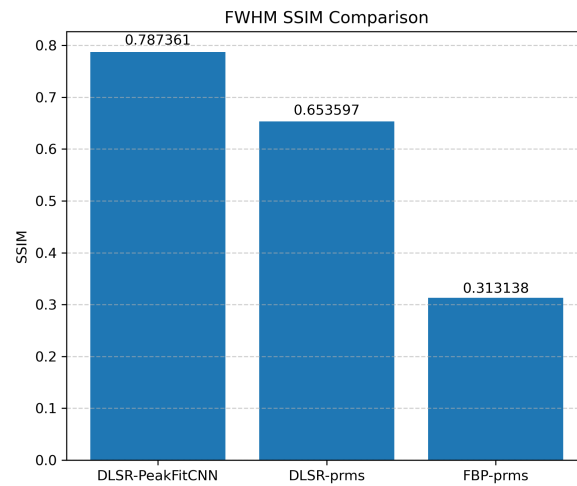


Figure S39: SSIM peak FWHM comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

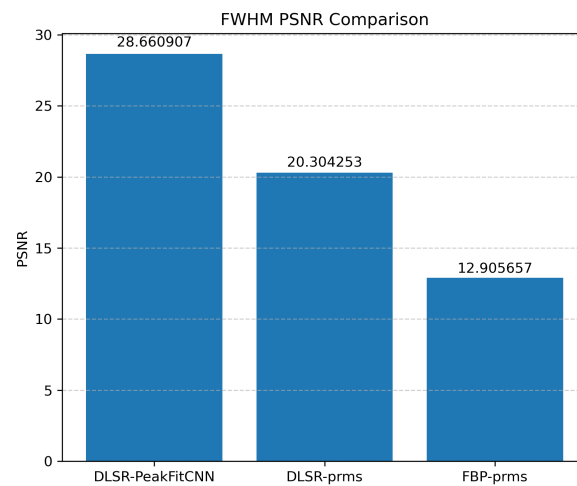


Figure S40: PSNR peak FWHM comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

S2.4 Slope

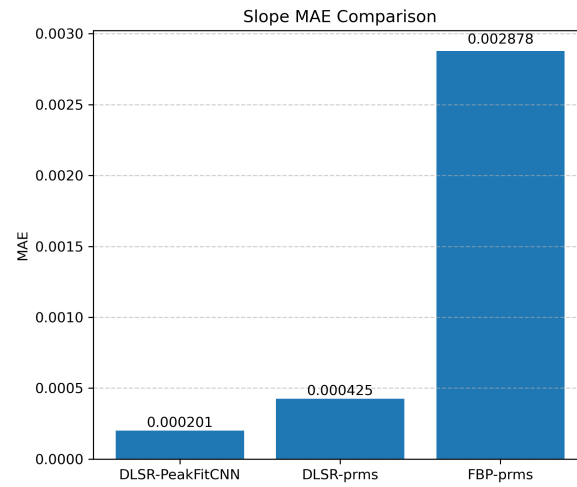


Figure S41: MAE slope comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

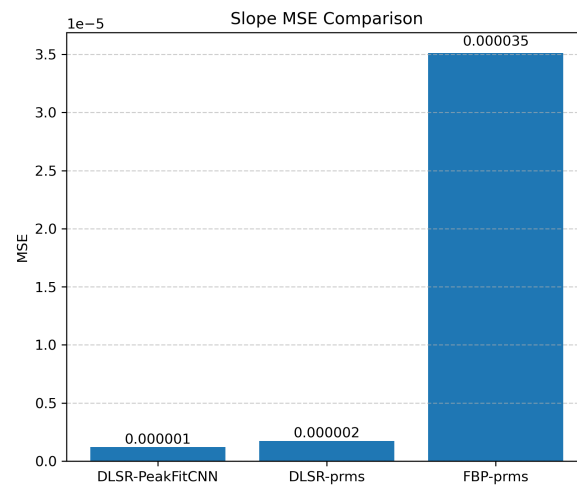


Figure S42: MSE slope comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

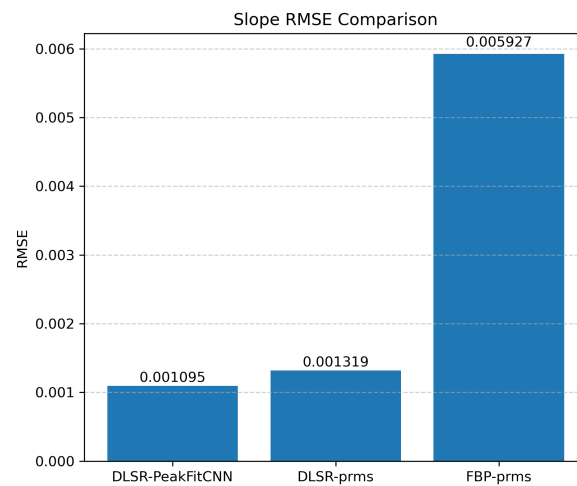


Figure S43: RMSE slope comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

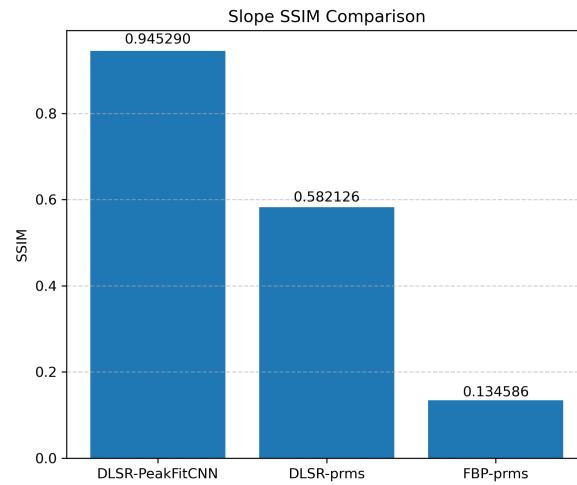


Figure S44: SSIM slope FWHM comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

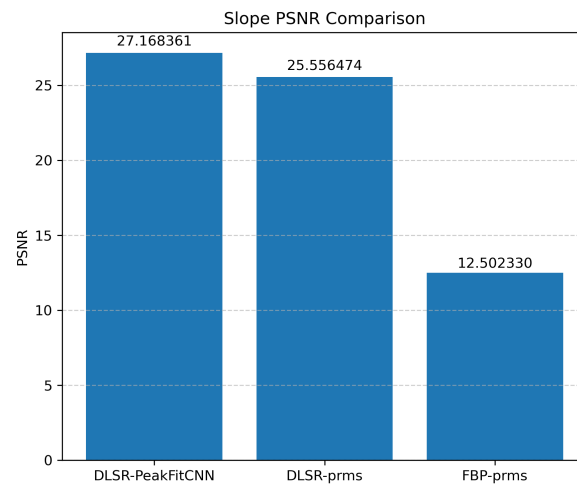


Figure S45: PSNR slope comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

S2.5 Intercept

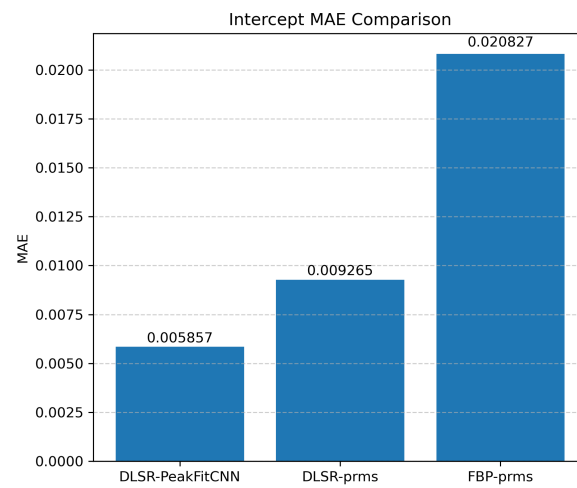


Figure S46: MAE intercept comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

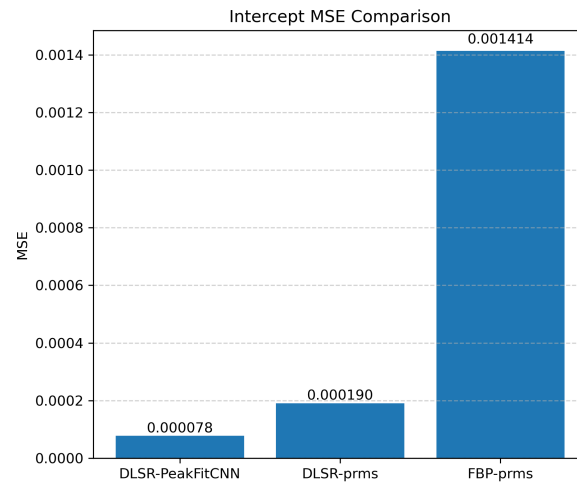


Figure S47: MSE intercept comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

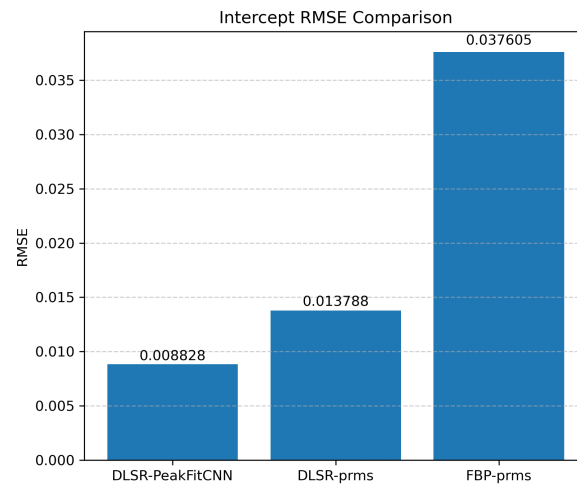


Figure S48: RMSE intercept comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

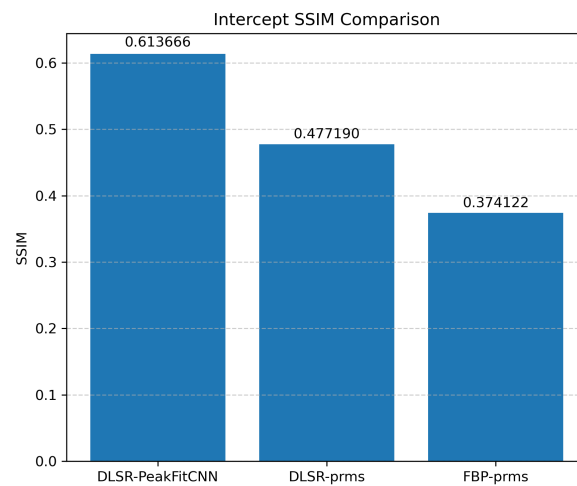


Figure S49: SSIM intercept FWHM comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.

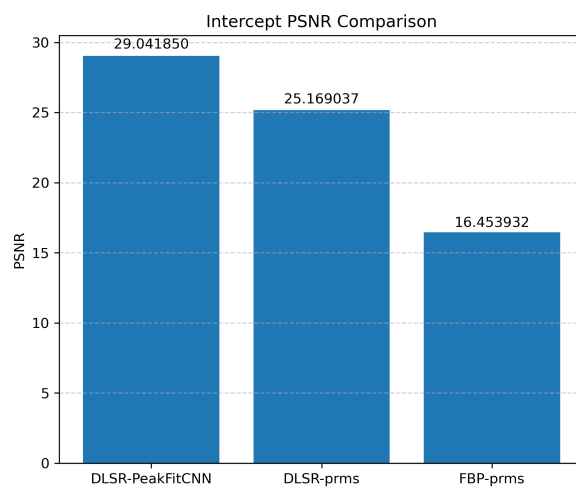


Figure S50: PSNR intercept comparison between DLSR-PeakFitCNN, DLSR-prms and FBP-prms approaches.