BGRem: Background noise removal for astronomical images

Test Data
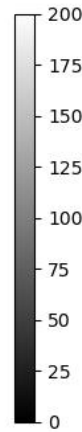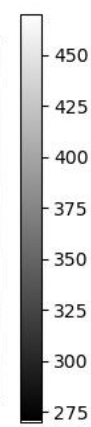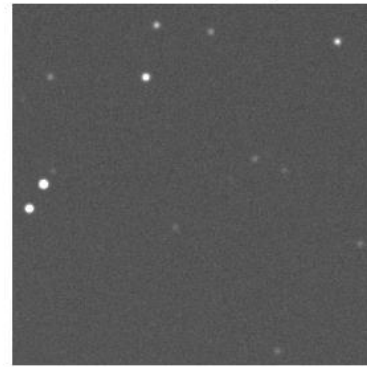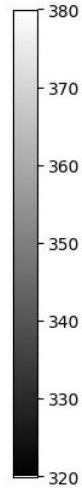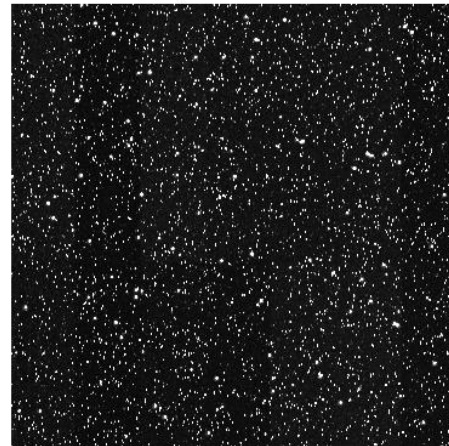

- Diffusion model with attention U-net
- Trained on simulated MeerLICHT images
- Can remove complex backgrounds

Real images

Source Localisation
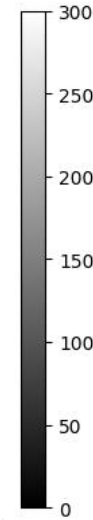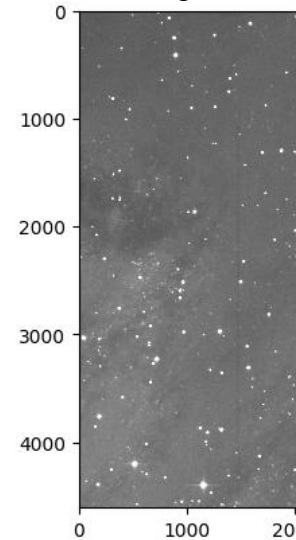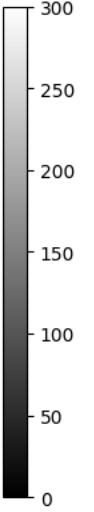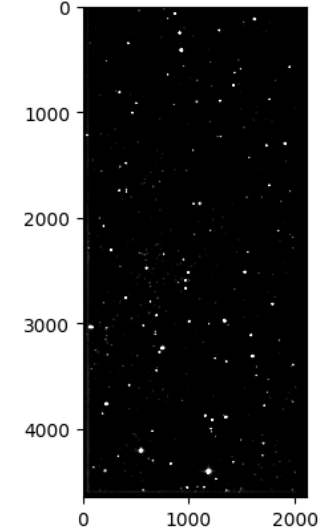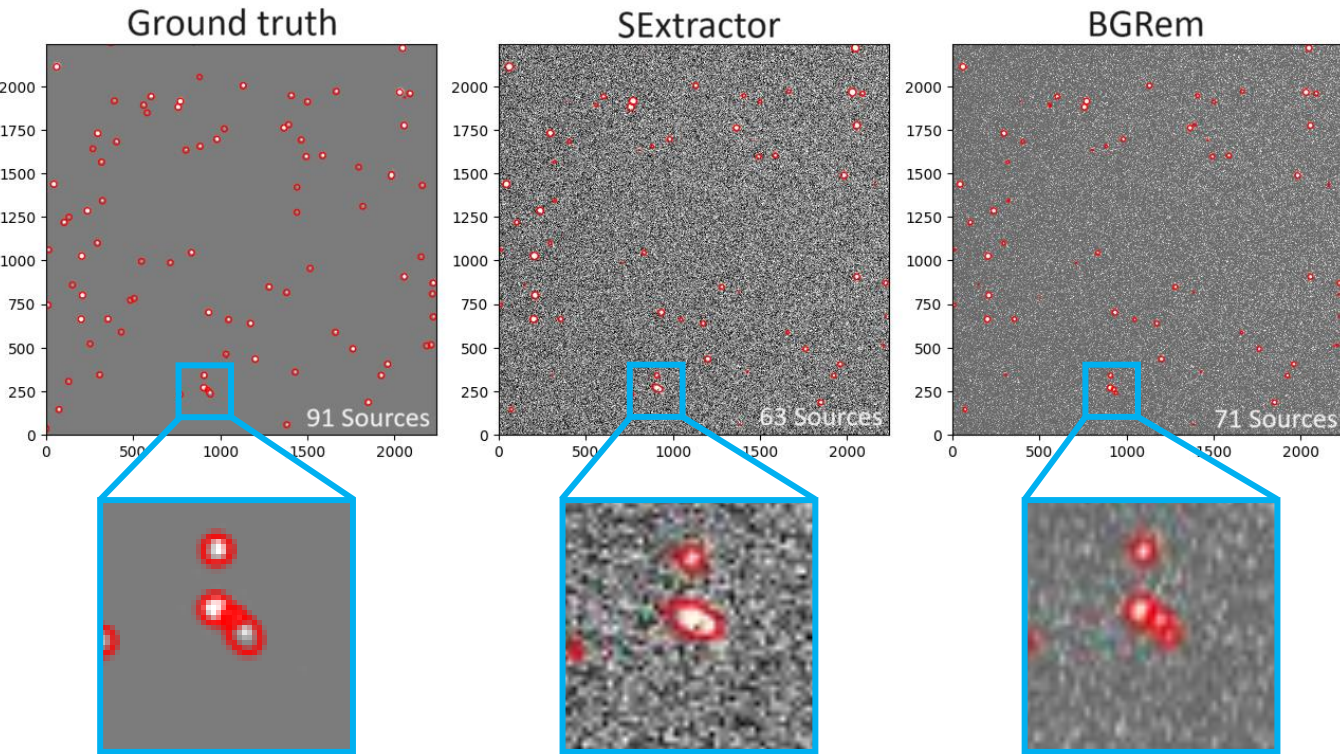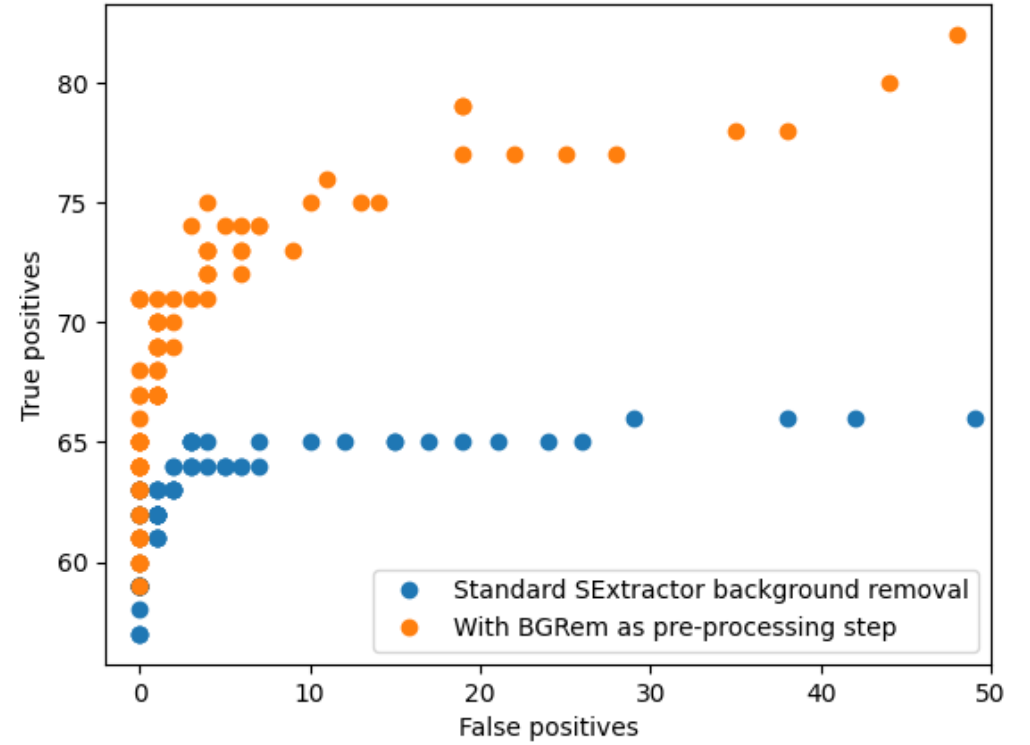
- Find more sources with Sextractor
- No increase in bogus sources
- Helps distinguish sources with close proximity

Ground truth — 91 Sources

SExtractor — 63 Sources

BGRem — 71 Sources

Number of true sources found as a function of number of bogus sources found

- Standard SExtractor background removal
- With BGRem as pre-processing step

Poster Thursday lunch
Location 88