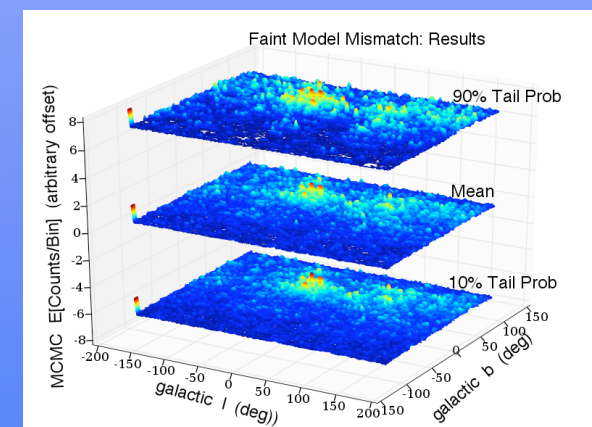
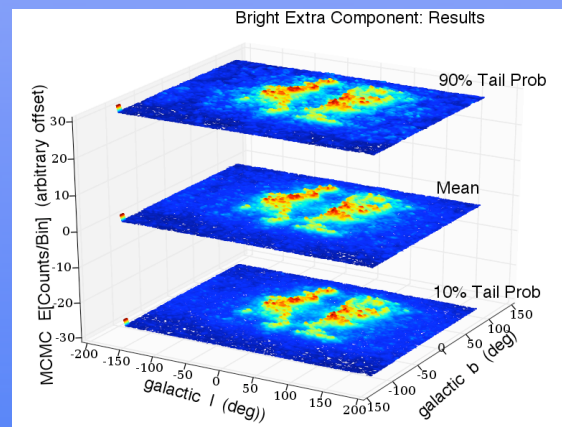
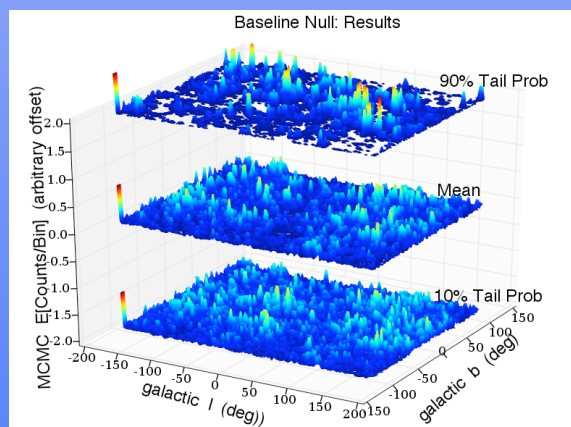


Quantifying the Unexpected with Enhanced Imaging Multiscale Methods for Diffuse Emission *and/or* Model Fitting

A. Connors, D. van Dyk, J. Chiang, A. Roy, R. Izem, CHASC;
(D. Esch, M. Karovska)

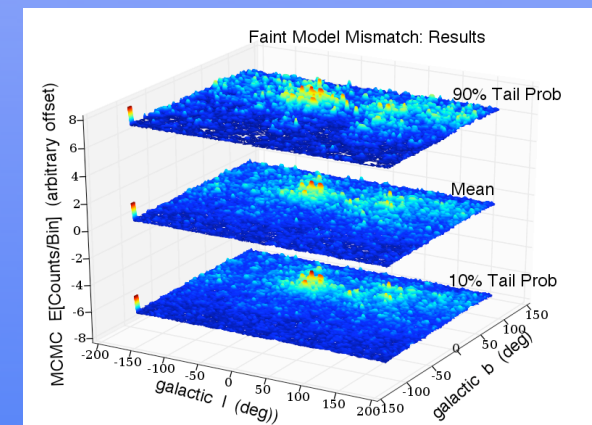
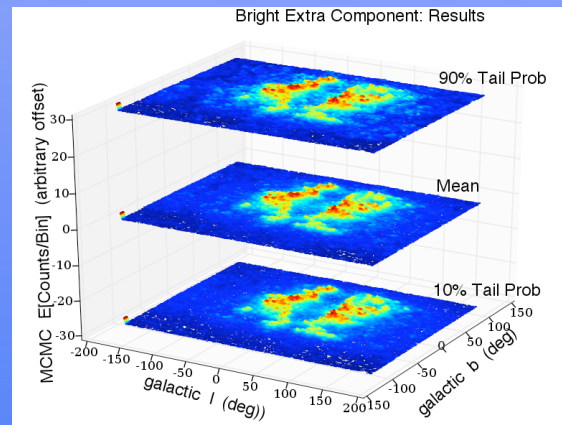
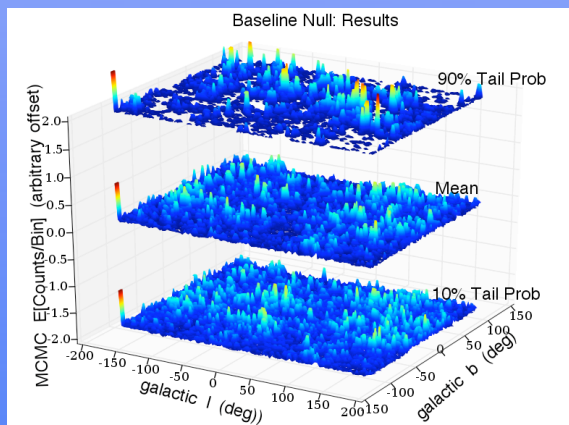


What Does That Really Mean?

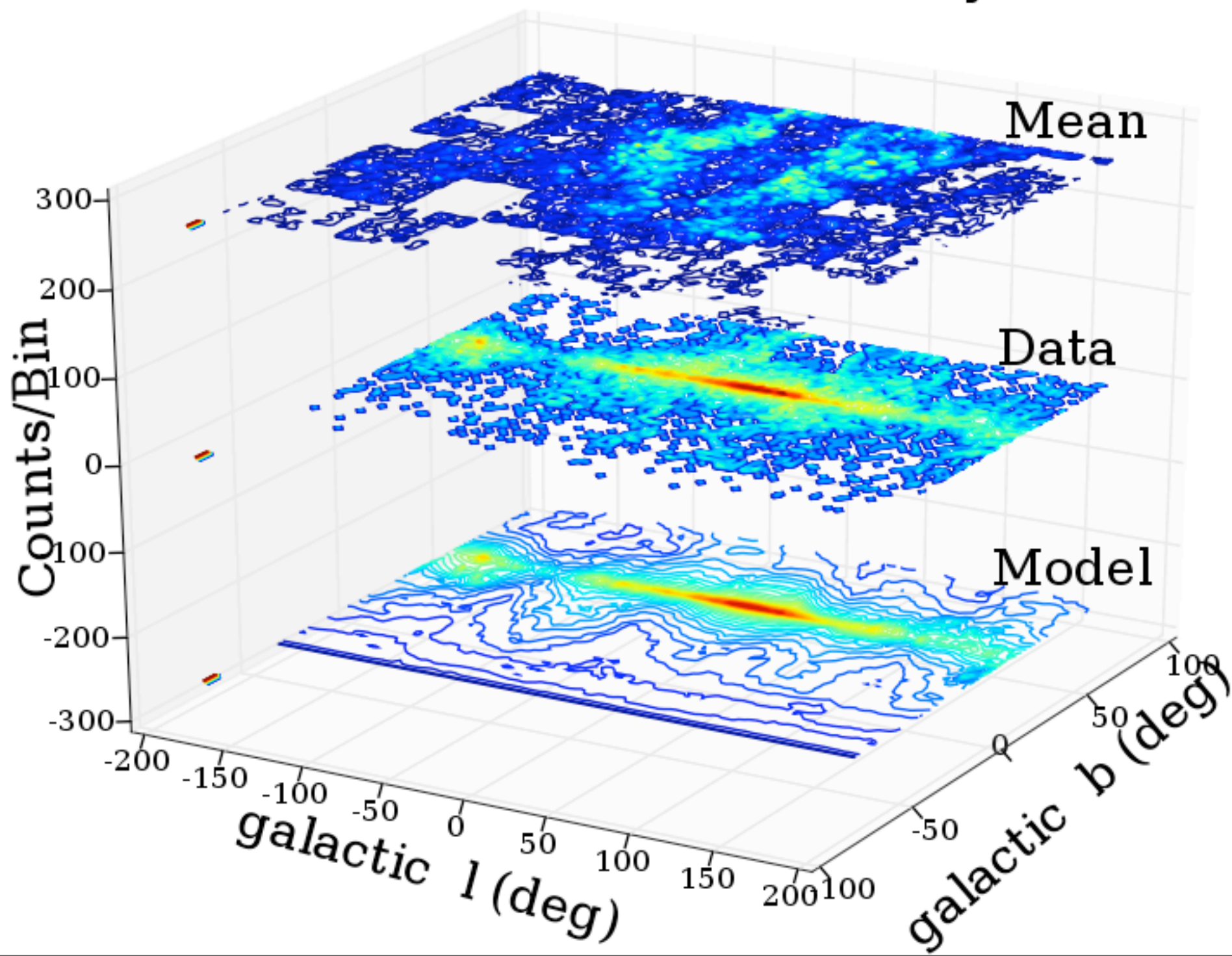
- * **Wake Up** Your Vision:
- * See With New Eyes: Source/Feature Detection
(Multiplicative+Multiscale-like)
- * See With New Eyes: Quantify Goodness-of-Fit:
(Simulate Null, Data; Summary)
- * See With New Eyes: Confidence Limits on Shape
(Think 4D+)

TRICKS: (Enhanced EMC2)

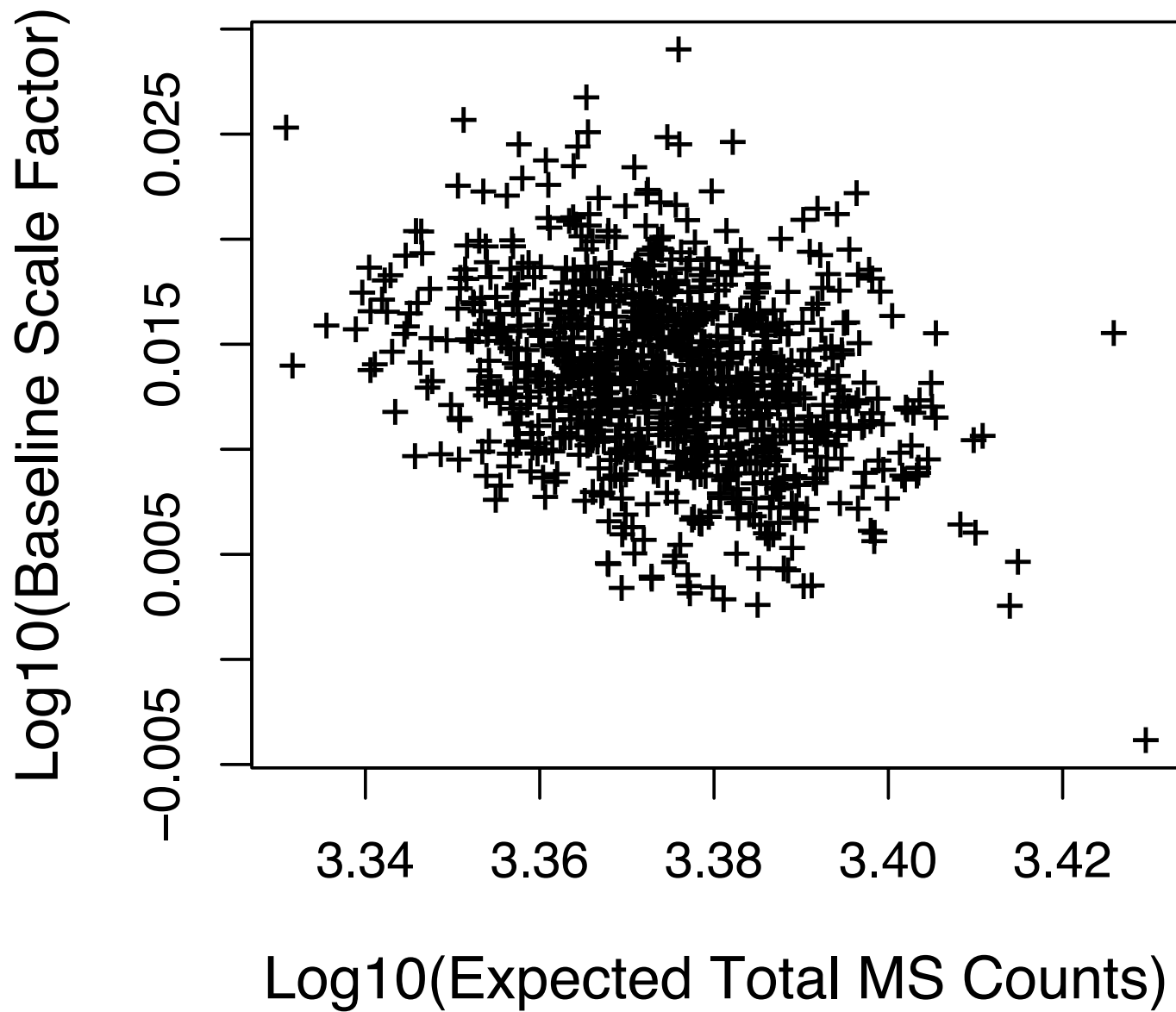
- * Match Models to Physics: Multiply, Add; SO Quantify Difference: Multiscale + Scale-Factor*(Null)
- * Get Uncertainties by Embedding in MCMC; SO Many Samples of Images
- * Compare to Null Simulations: Low-Dim (2+) Summary



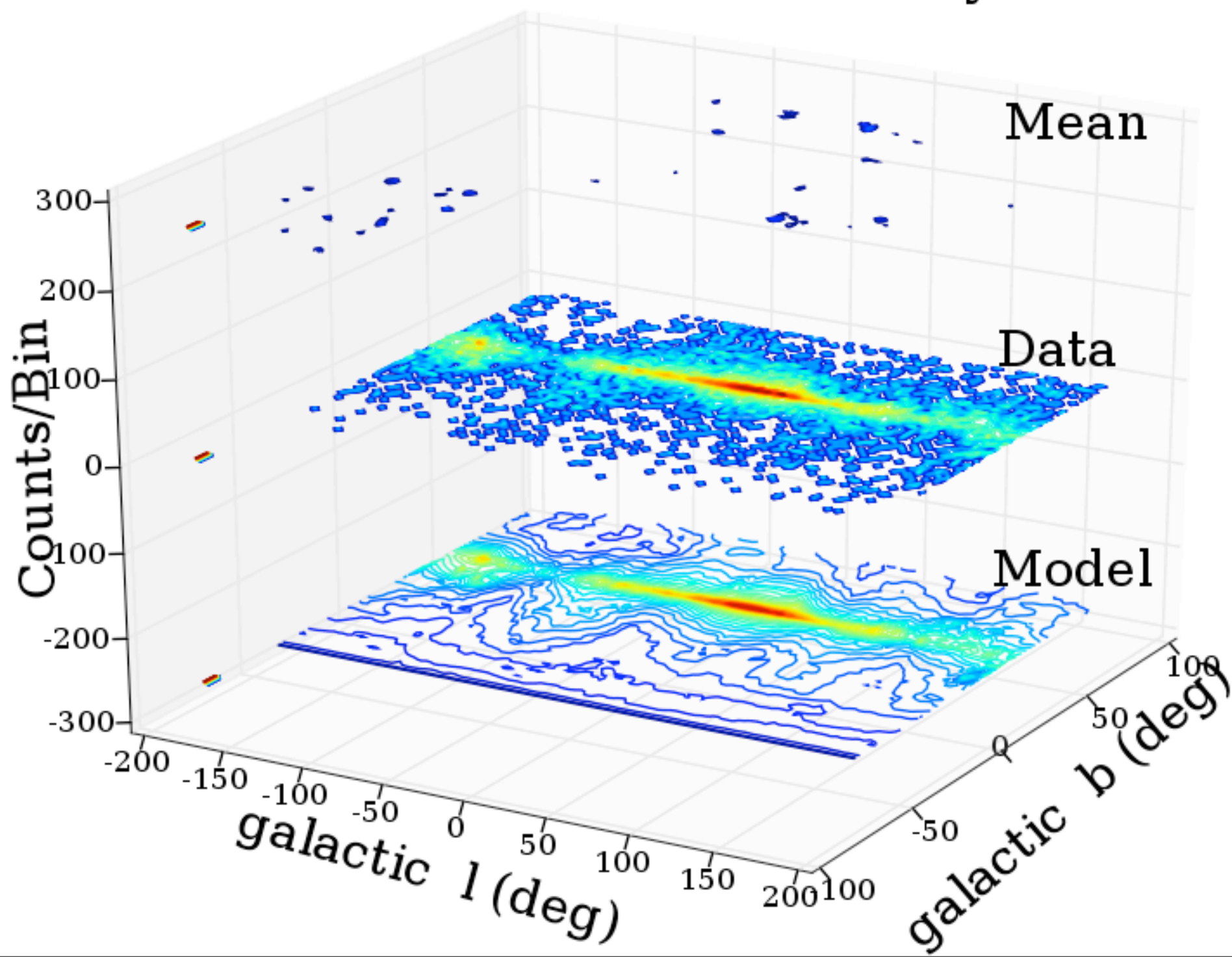
Simulated All-Sky Data+Models



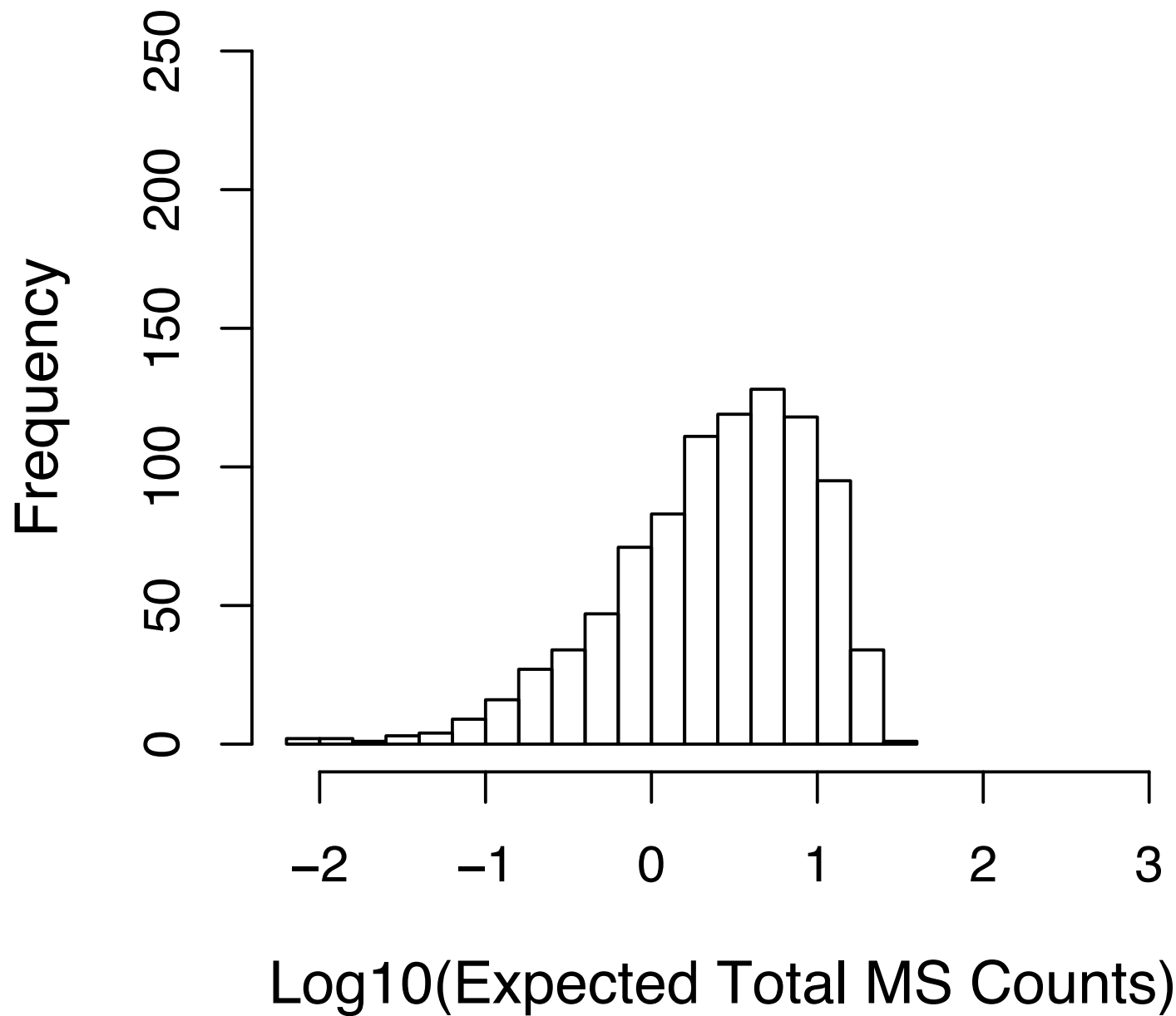
Bright Discontinuous Unknown



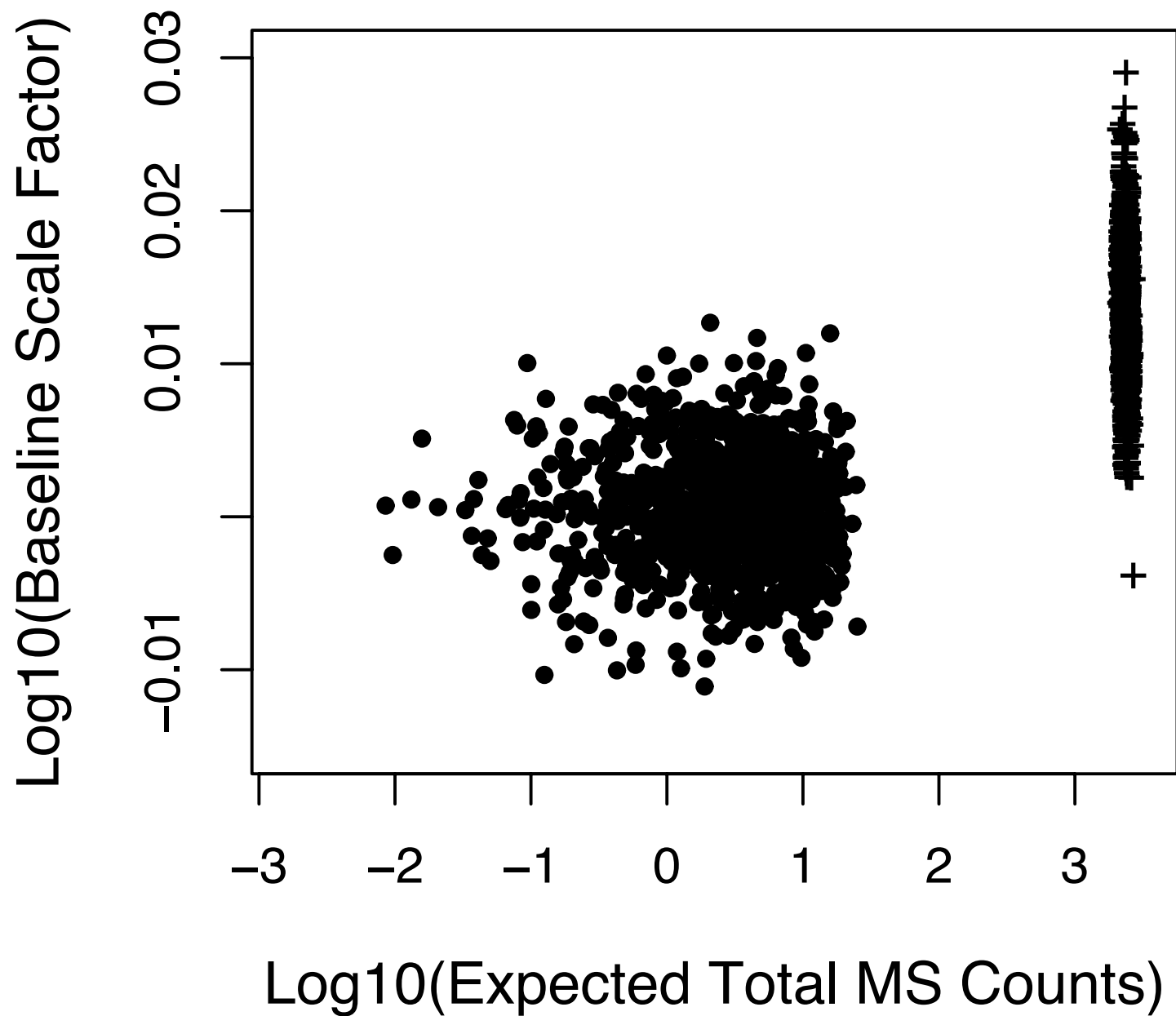
Simulated All-Sky Data+Models



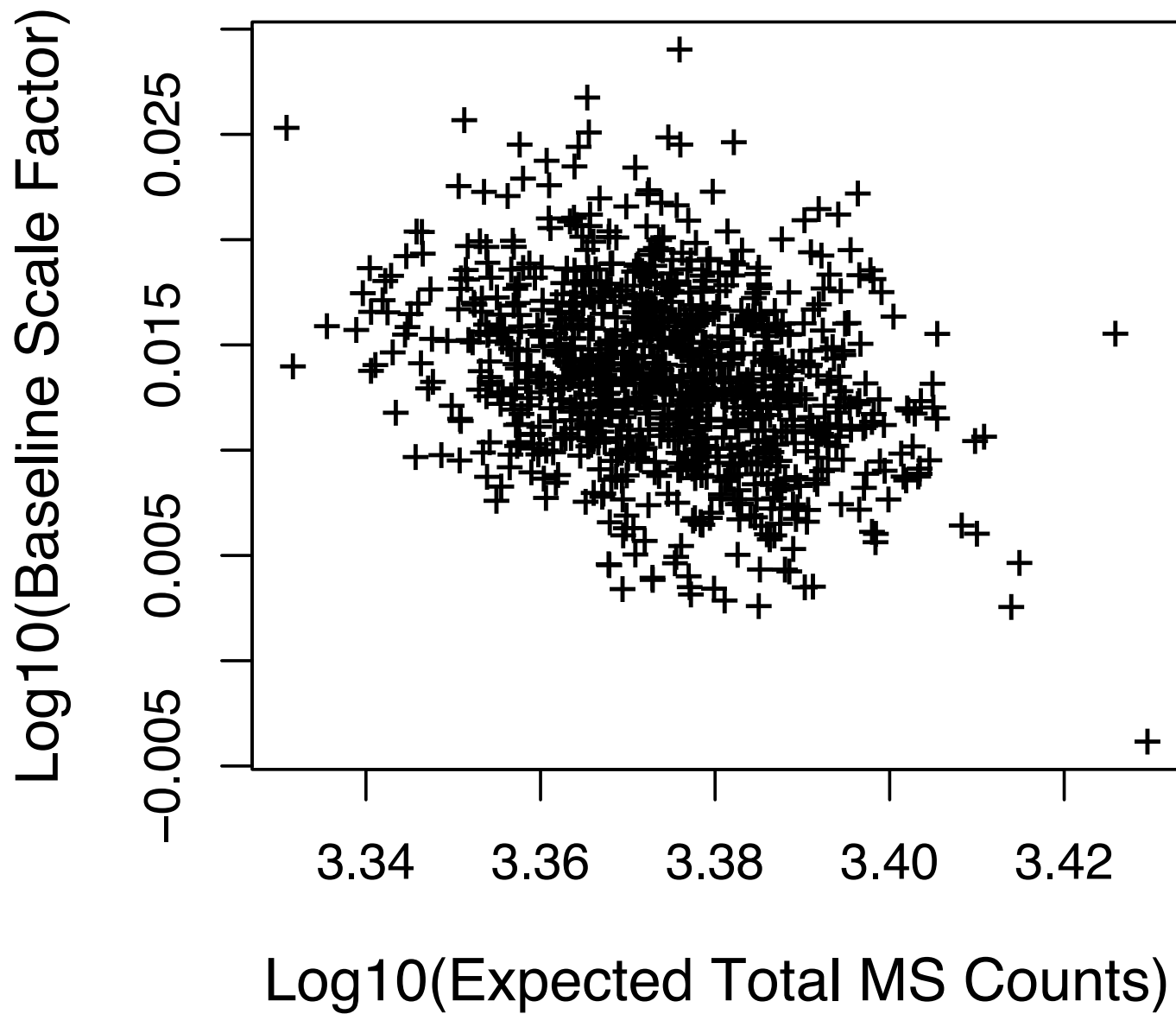
Nothing (Null Hypothesis)



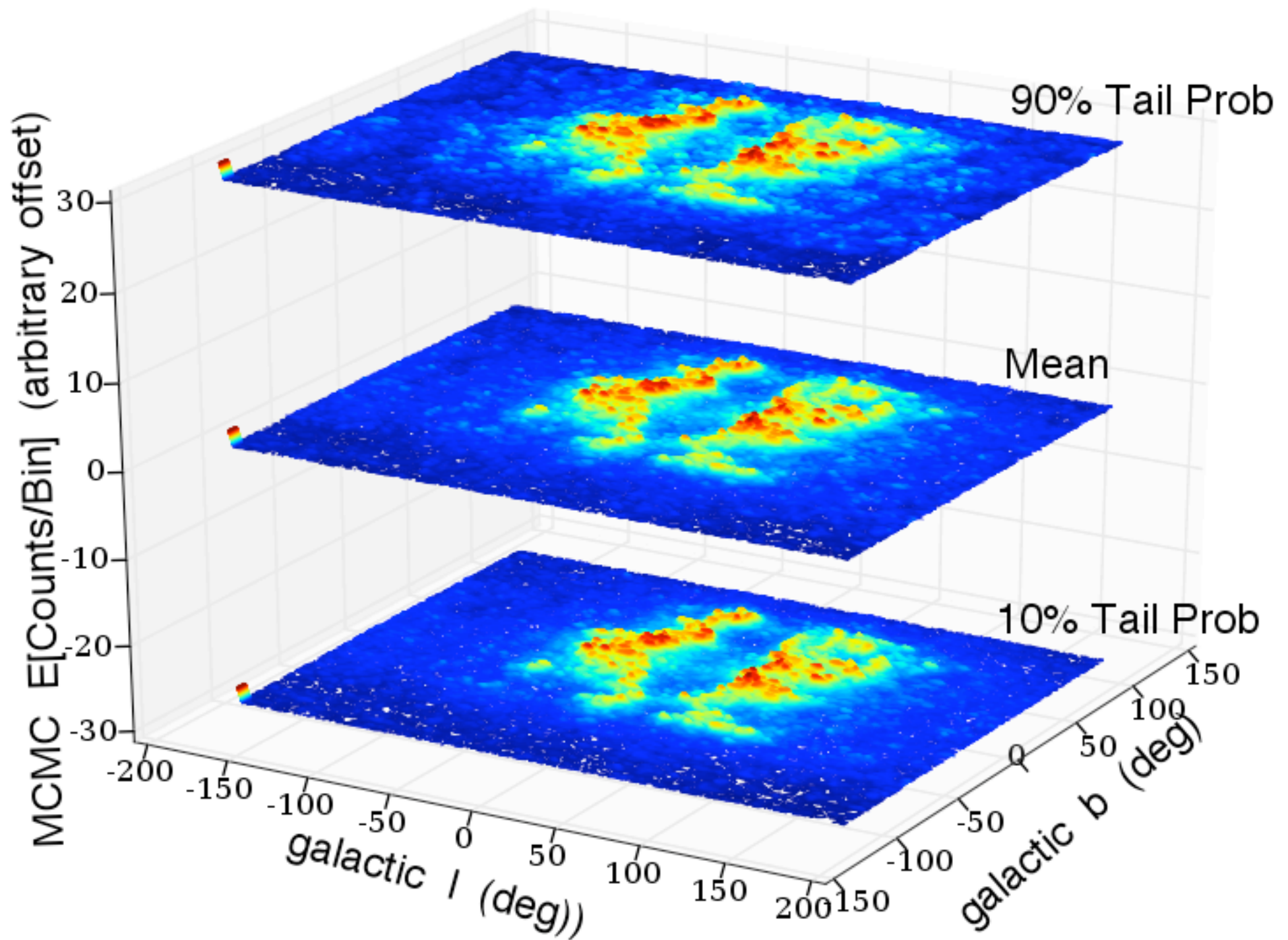
Null (.) vs Bright Unknown (+)



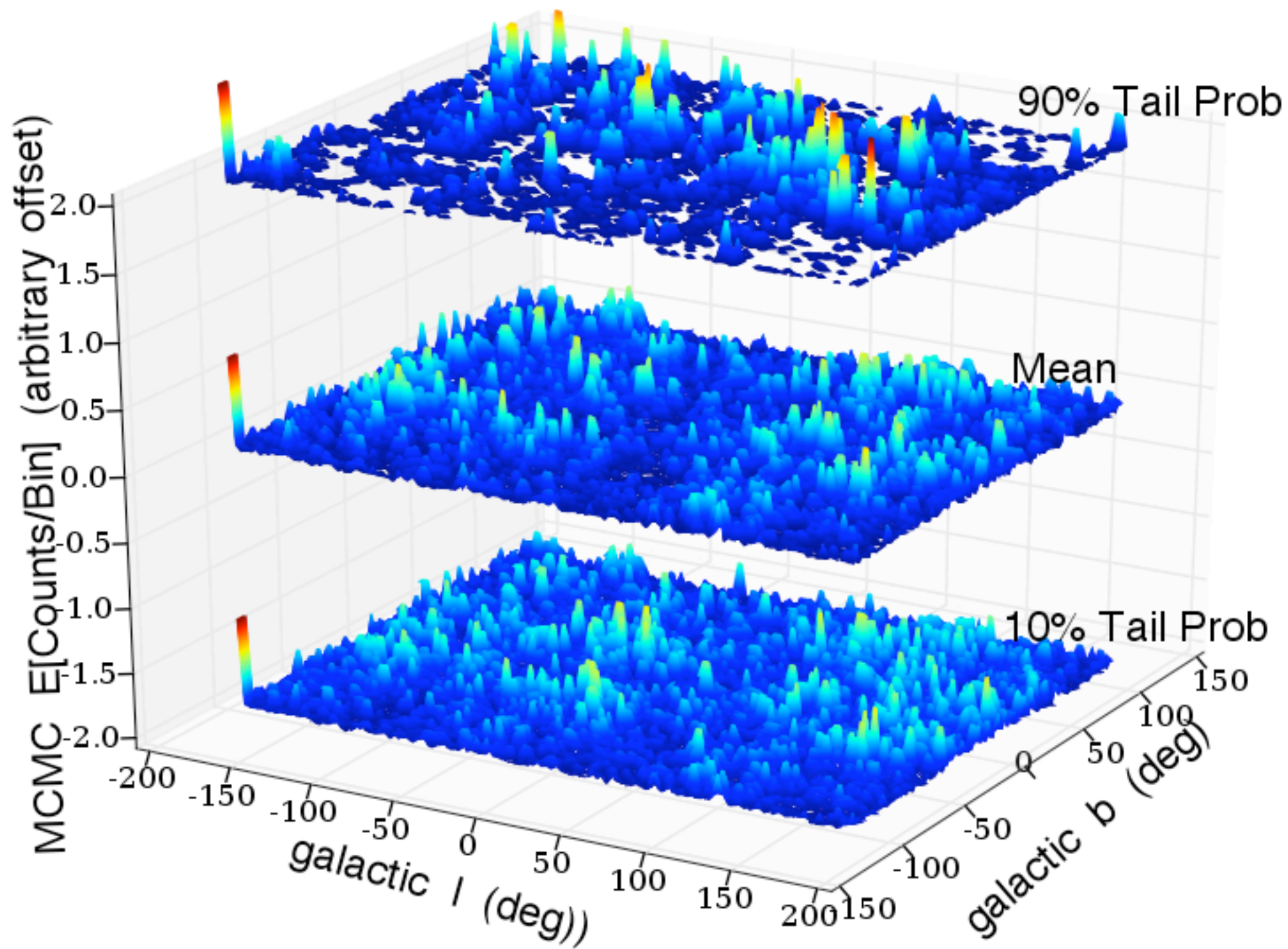
Bright Discontinuous Unknown



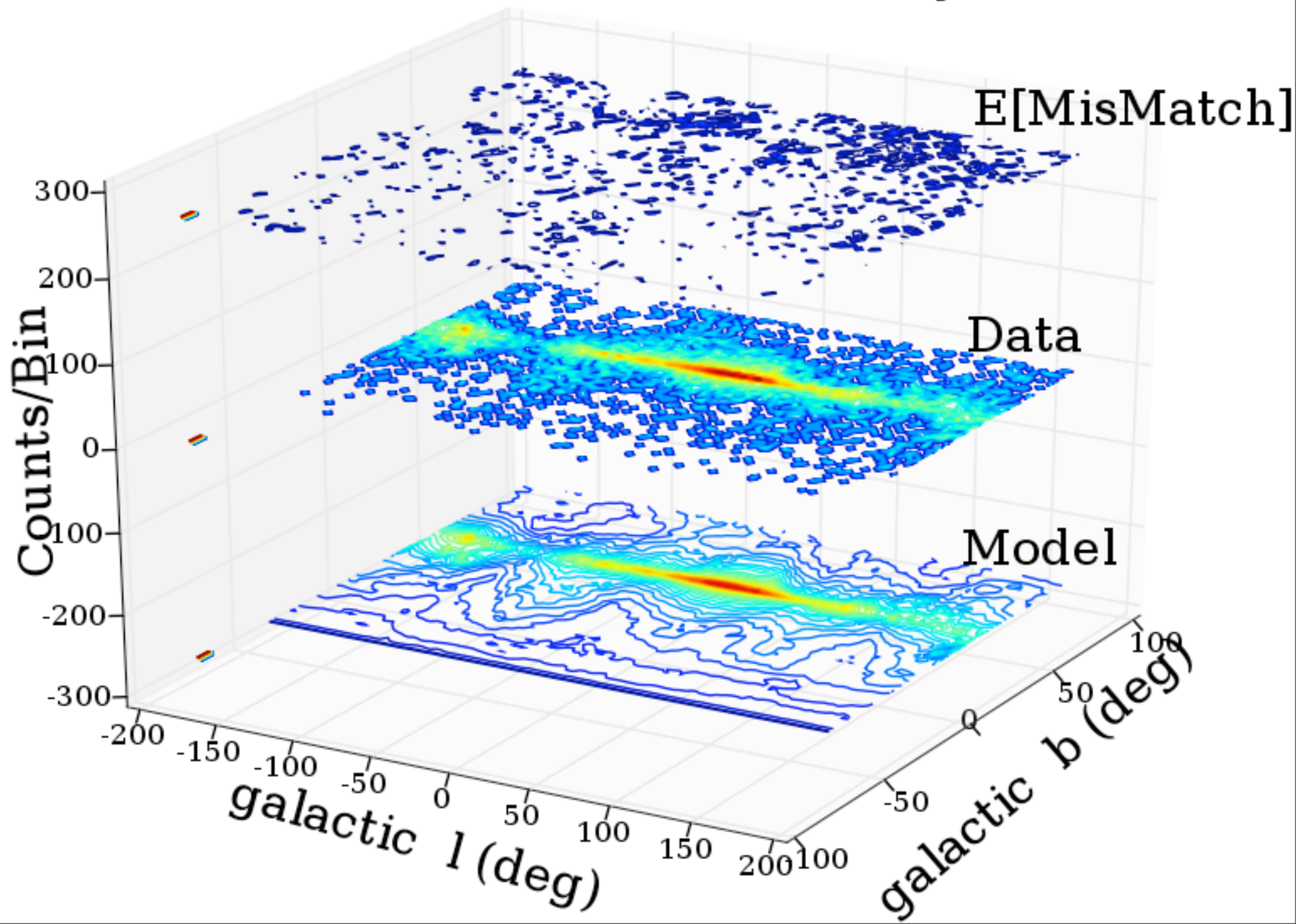
Bright Extra Component: Results



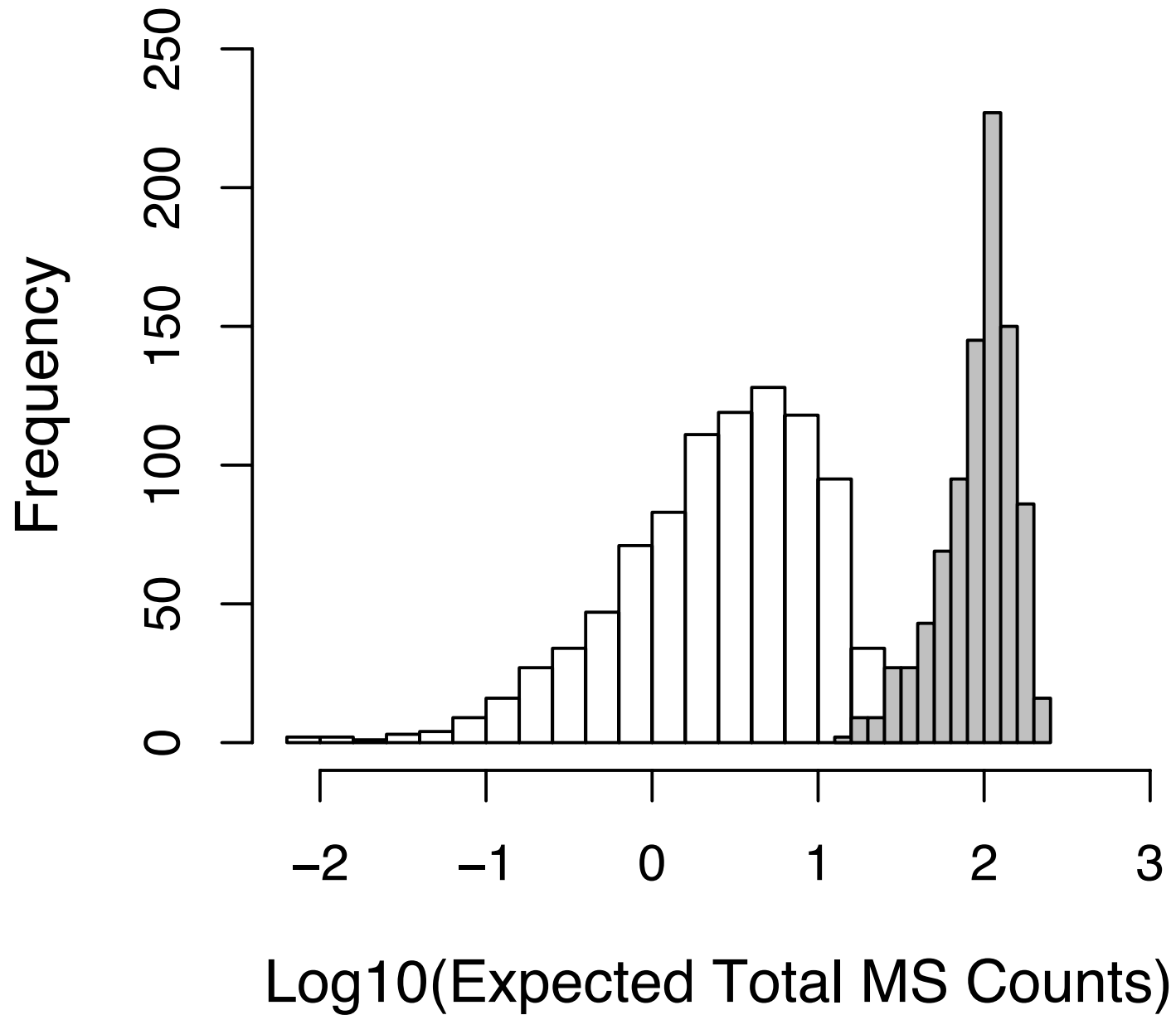
Baseline Null: Results



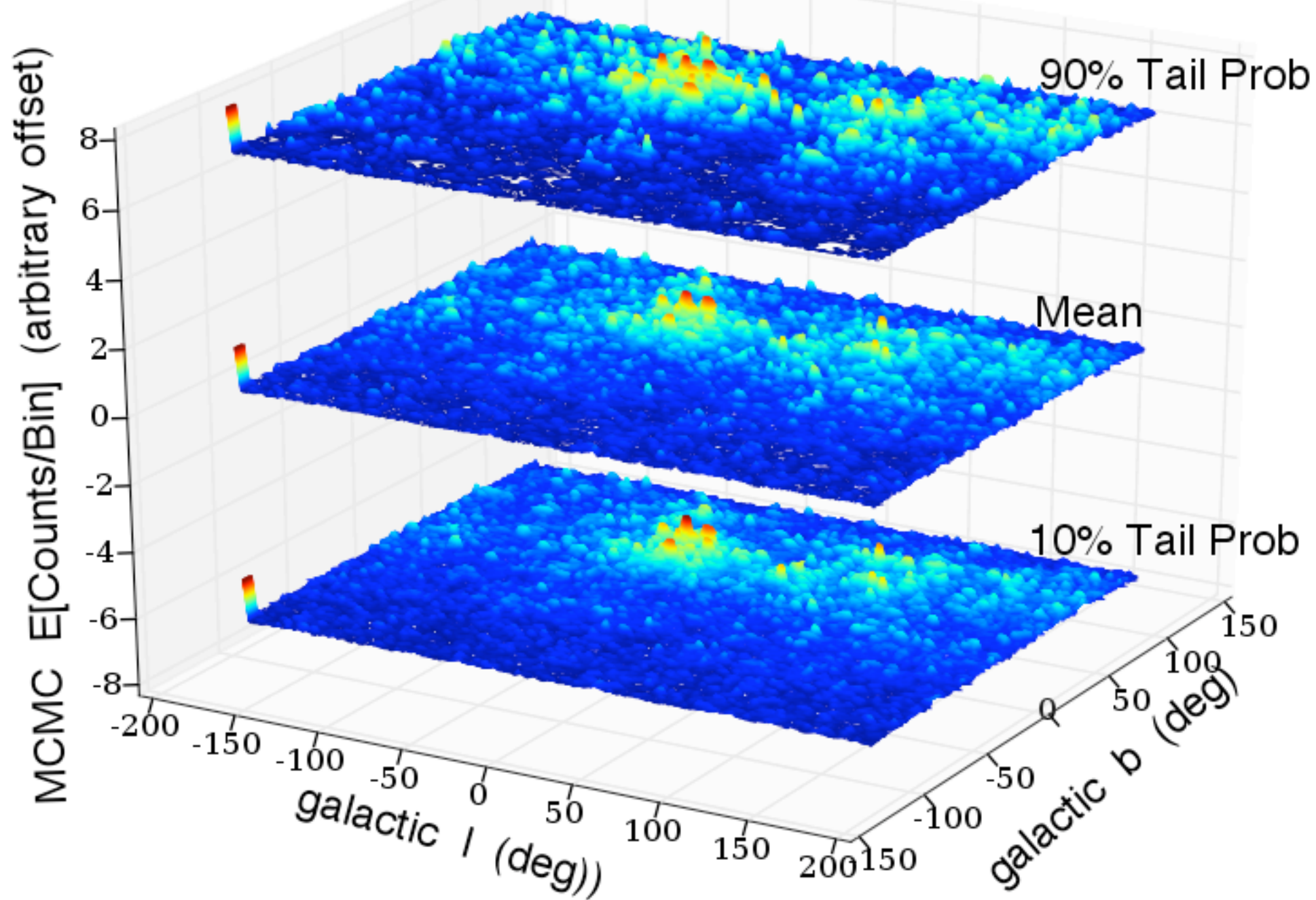
Simulated All-Sky Data+Models



Null vs Faint Model Mis-Match



Faint Model Mismatch: Results



Pixel-Level Quantiles

