

Figure 1: Meqtrees SKA simulation and Meqtrees-generated dirty image of two 1 Jy point sources with 75' separation located at R.A.: $0^h0^m0.1^s$, Dec.: $28^d0^m1^s$ and R.A.: $0^h0^m0.1^s$, Dec.: $26^d45^m10^s$, without Cortes beam applied. Simulation: $N_a = 50$, same as in previous progress reports; image displayed, zoomed in, and brightness-contrast colormap adjustments with casaviewer; colormap used: 'isophotes'.

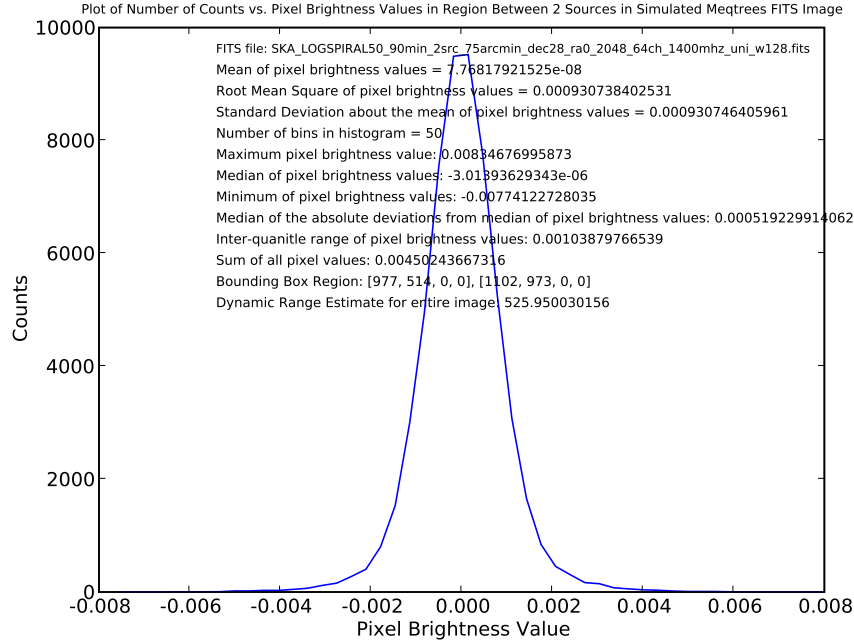


Figure 2: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the the two point sources in Fig. 1. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) positive pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

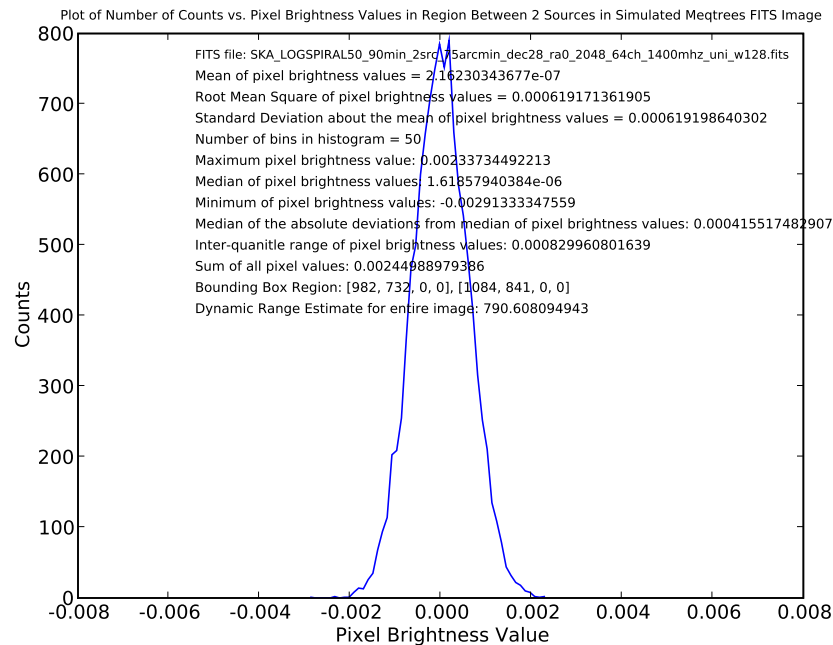


Figure 3: Same Fig. 2 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 1 in obtaining statistical measures.

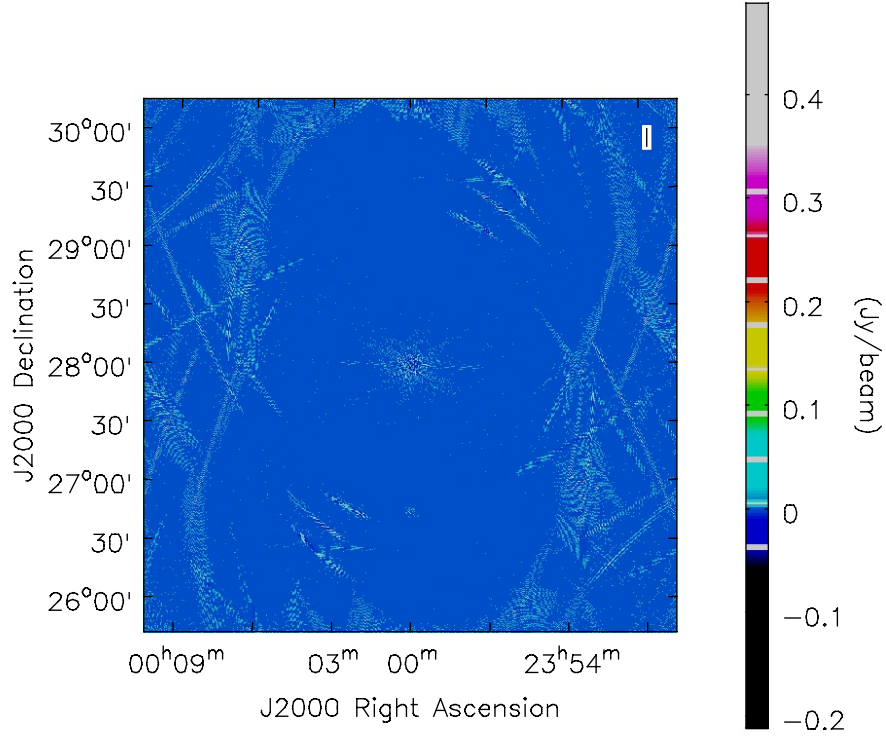


Figure 4: Meqtrees SKA simulation and Meqtrees-generated dirty image of two 1 Jy point sources with 75' separation located at R.A.: $0^h0^m0.1^s$, Dec.: $28^d0^m1^s$ and R.A.: $0^h0^m0.1^s$, Dec.: $26^d45^m10^s$, with Cortes beam but no pointing errors applied. Simulation: $N_a = 50$, same as in previous progress reports; image displayed, zoomed in, and brightness-contrast colormap adjustments with casaviewer; colormap used: 'isophotes'.

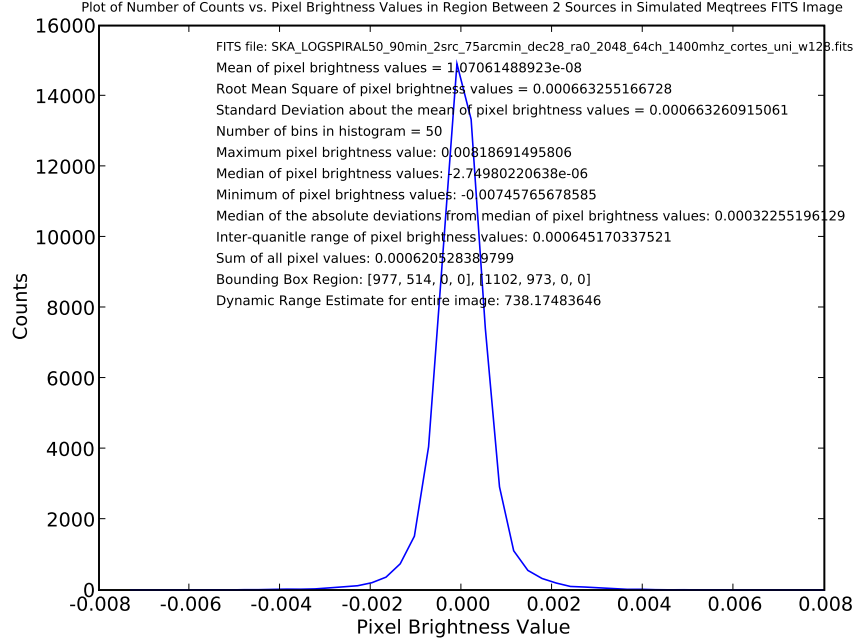


Figure 5: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the the two point sources in Fig. 4. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) positive pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

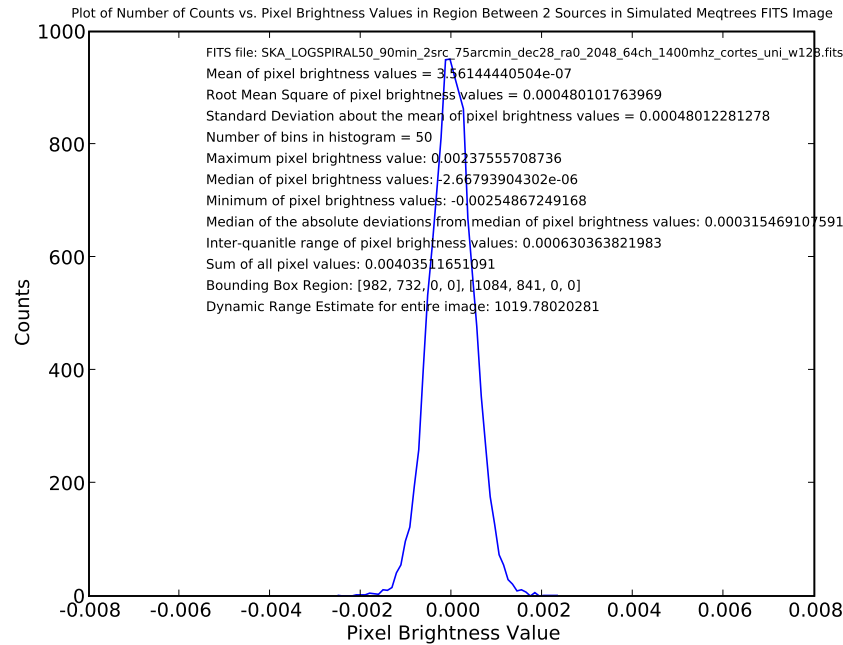


Figure 6: Same as Fig. 5 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 4 in obtaining statistical measures.

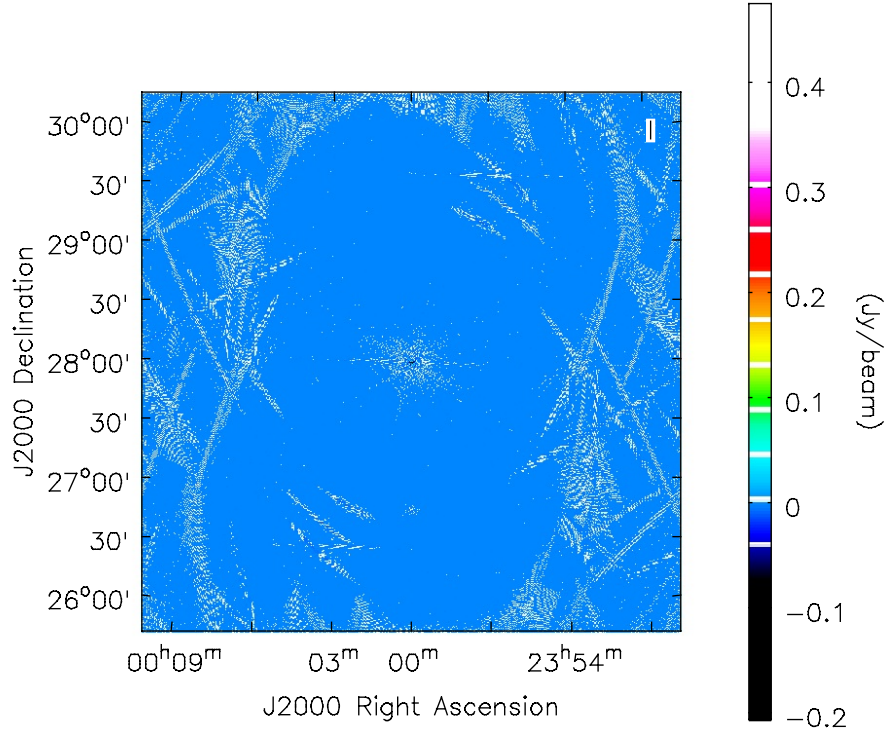


Figure 7: Meqtrees SKA simulation and Meqtrees-generated dirty image of two 1 Jy point sources with 75' separation located at R.A.: $0^h0^m0.1^s$, Dec.: $28^d0^m1^s$ and R.A.: $0^h0^m0.1^s$, Dec.: $26^d45^m10^s$, with Cortes beam and pointing errors ($l_{offset} = 0.00172 \text{ rad} = 5.919'$, $m_{offset} = 0.0004 \text{ rad} = 1.416'$) applied. Simulation: $N_a = 50$, same as in previous progress reports; image displayed, zoomed in, and brightness-contrast colormap adjustments with casaviewer; colormap used: 'isophotes'.

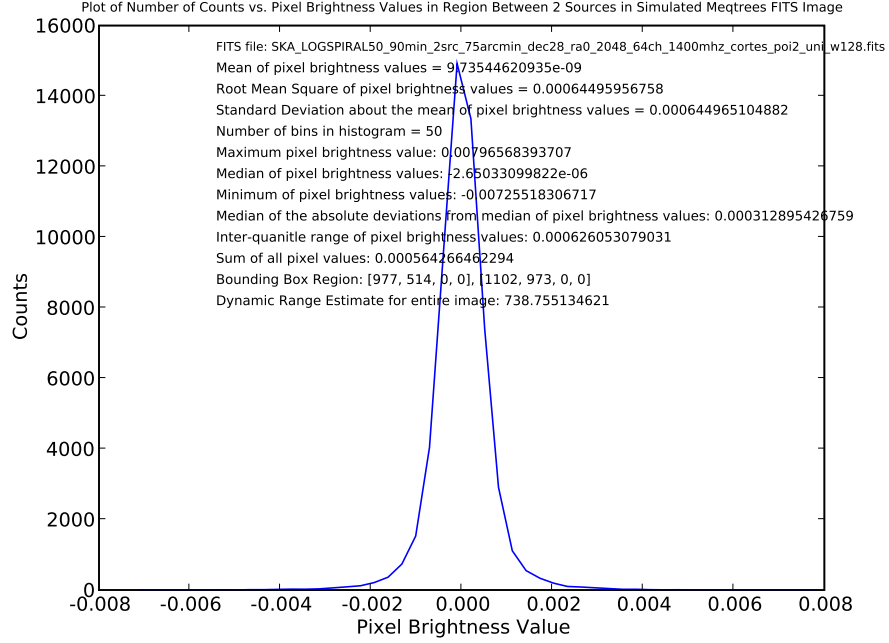


Figure 8: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the the two point sources in Fig. 7. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) positive pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

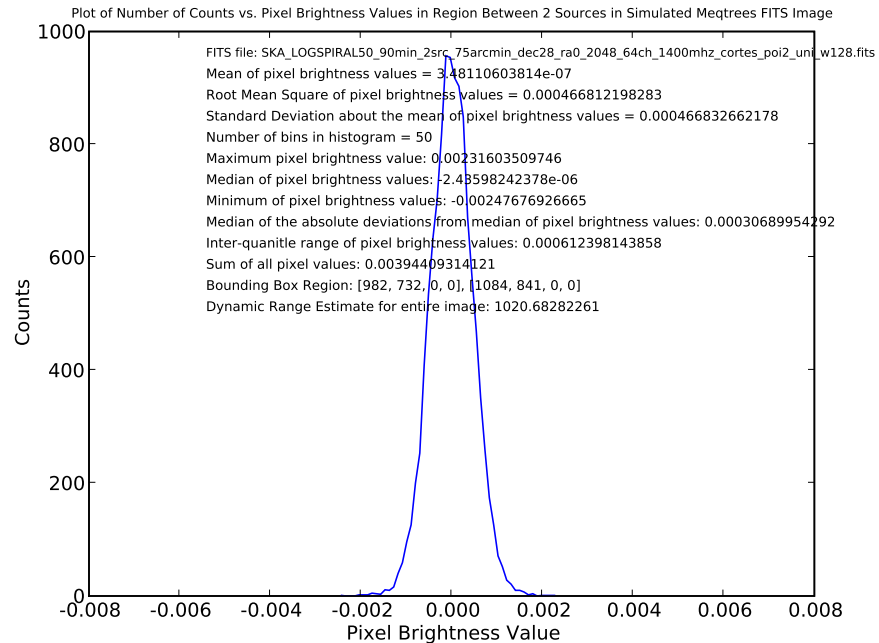


Figure 9: Same as Fig. 8 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 7 in obtaining statistical measures.

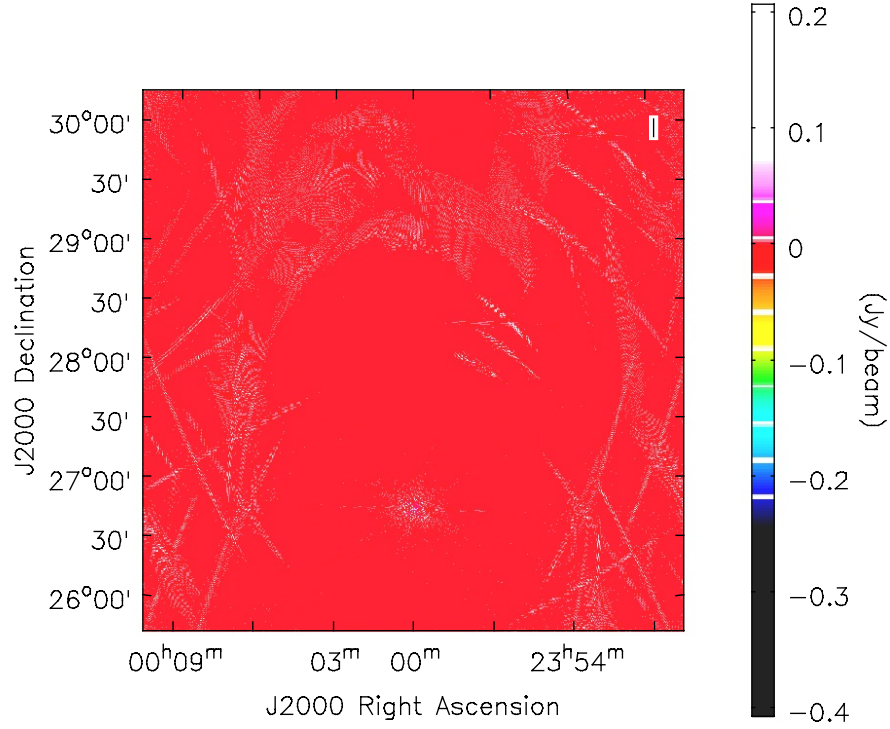


Figure 10: Meqtrees residual image resulting from a differencing simulation between simulations with (Fig. 4) and without (Fig. 1) the Cortes beam model applied (without pointing errors). See <http://www-astro.physics.ox.ac.uk/~ianh/SSSC/30/purlog/index.html> as a reference and for a relevant example. The resulting image here represents net image plane effect of E-Jones matrix for this SKA simulation.

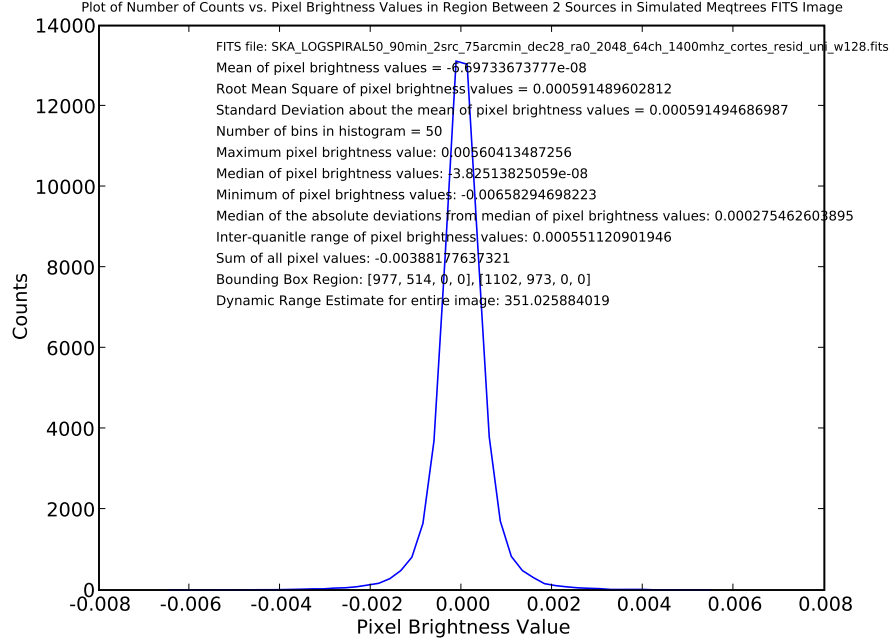


Figure 11: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = $[977, 514, 0, 0]$, top right corner = $[1102, 973, 0, 0]$) between but not including the two point sources in Fig. 10. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

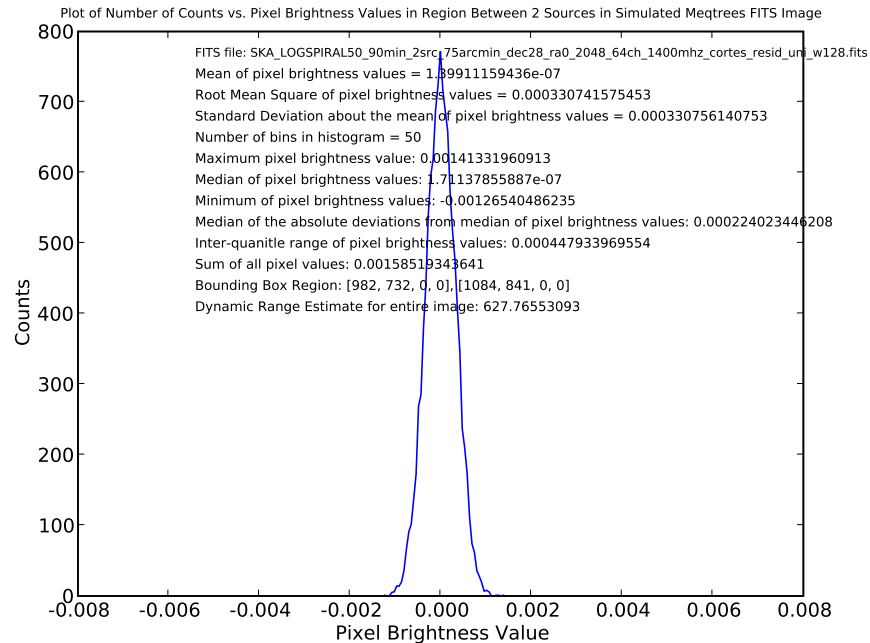


Figure 12: Same as Fig. 11 except smaller bounding box region (bottom left corner = $[982, 732, 0, 0]$, top right corner = $[1084, 841, 0, 0]$) used between the two point sources in Fig. 10 in obtaining statistical measures.

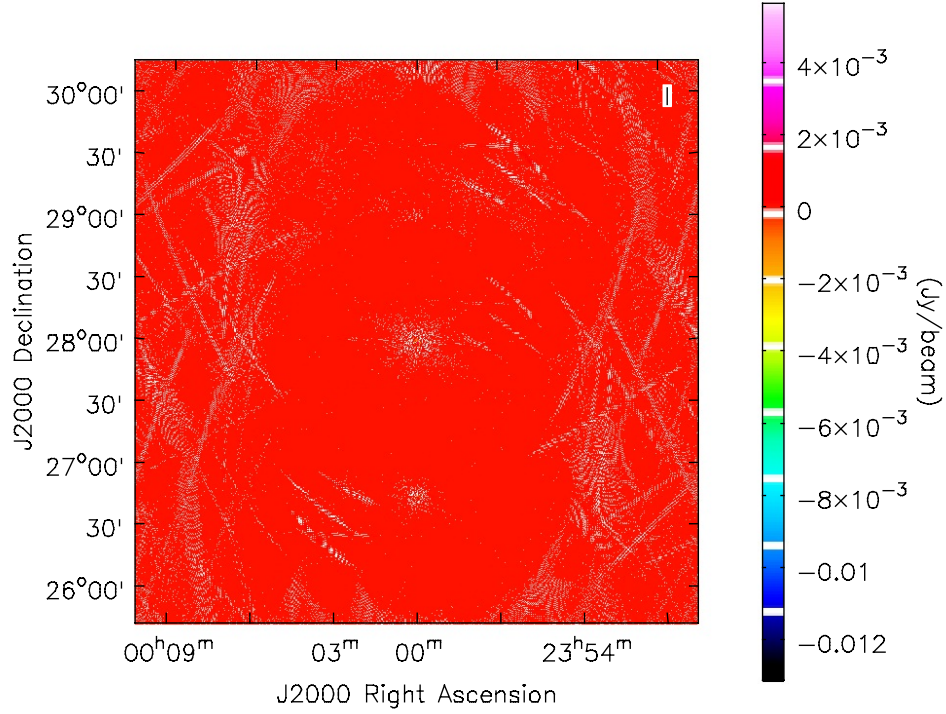


Figure 13: Meqtrees residual image resulting from a differencing simulation between simulations with Cortes beam model applied with pointing errors (Fig. 7) and with Cortes beam applied without pointing errors (Fig. 4). See <http://www-astro.physics.ox.ac.uk/~ianh/SSSC/30/purrlog/index.html> as a reference and for a relevant example. Casaviewer colormap display: 'isophotes'.

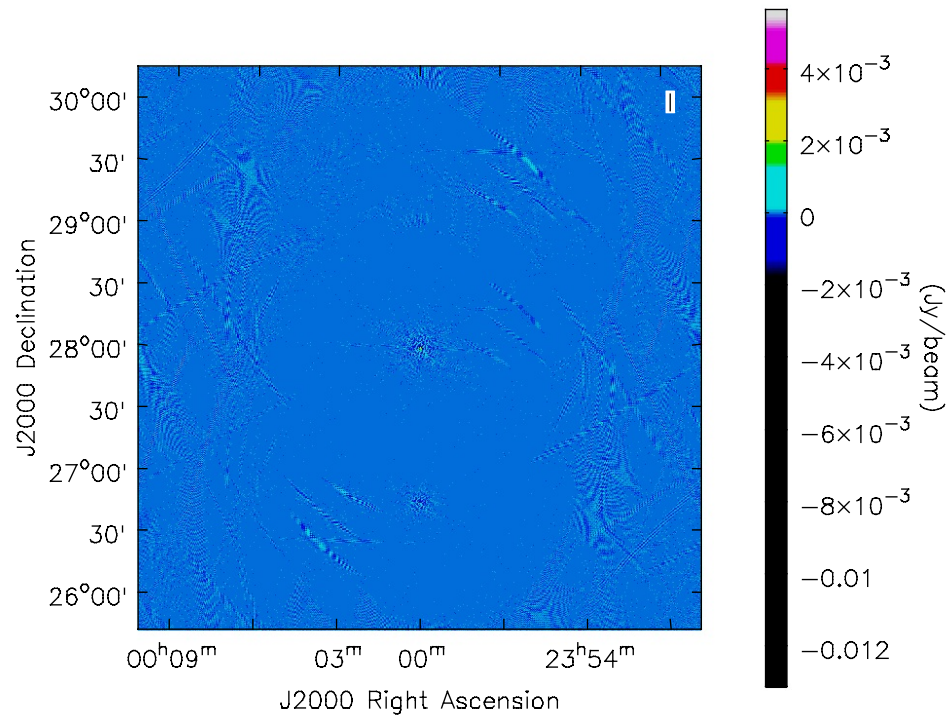


Figure 14: Same as Fig. 13 except that 'rainbow2' casaviewer colormap display was used to try to bring out more details.

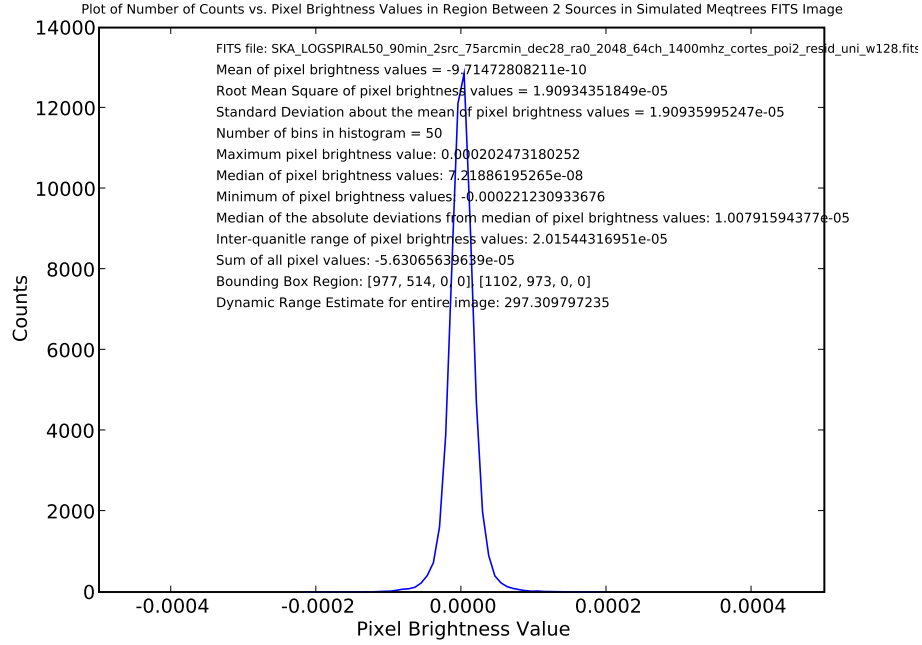


Figure 15: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the two point sources in Fig. 13. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

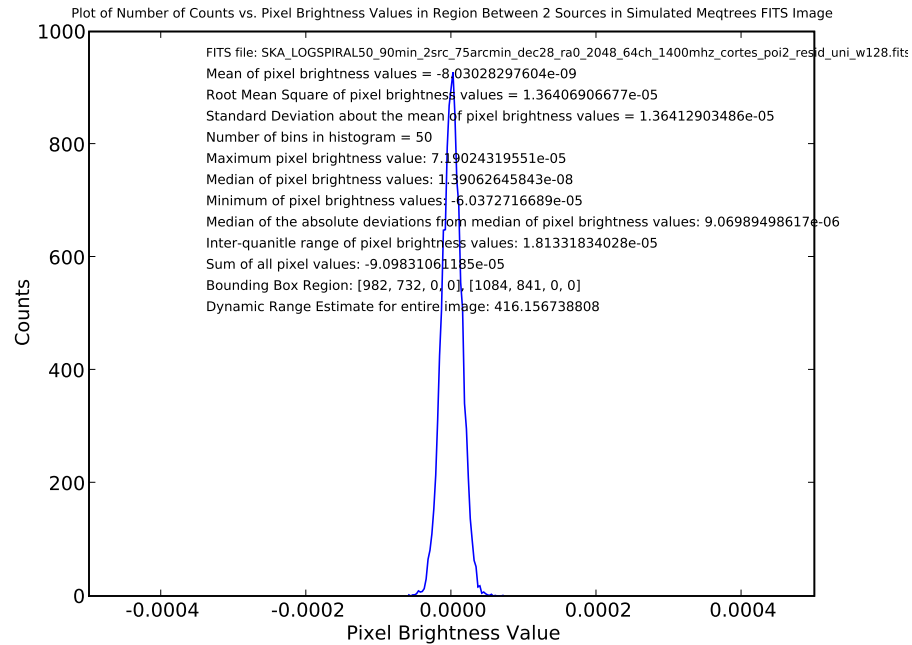


Figure 16: Same as Fig. 15 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 13 in obtaining statistical measures.

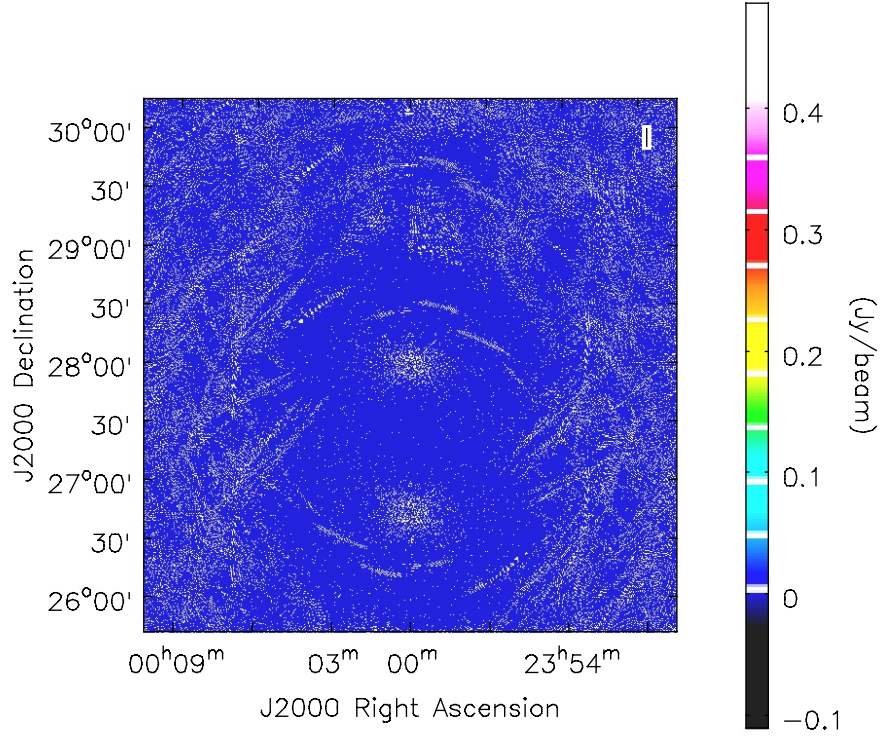


Figure 17: Meqtrees SKA simulation and Meqtrees-generated dirty image of two 1 Jy point sources with 75' separation located at R.A.: $0^h0^m0.1^s$, Dec.: $28^d0^m1^s$ and R.A.: $0^h0^m0.1^s$, Dec.: $26^d45^m10^s$, without Cortes beam applied. Simulation: $N_a = 100$, same as in previous progress reports; image displayed, zoomed in, and brightness-contrast colormap adjustments with casaviewer; colormap used: 'isophotes'.

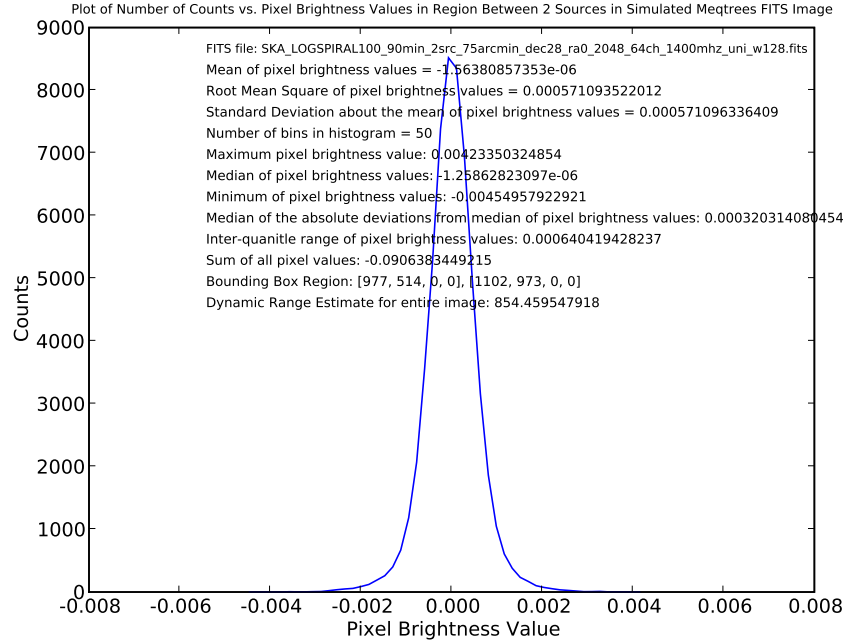


Figure 18: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the two point sources in Fig. 17. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) positive pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

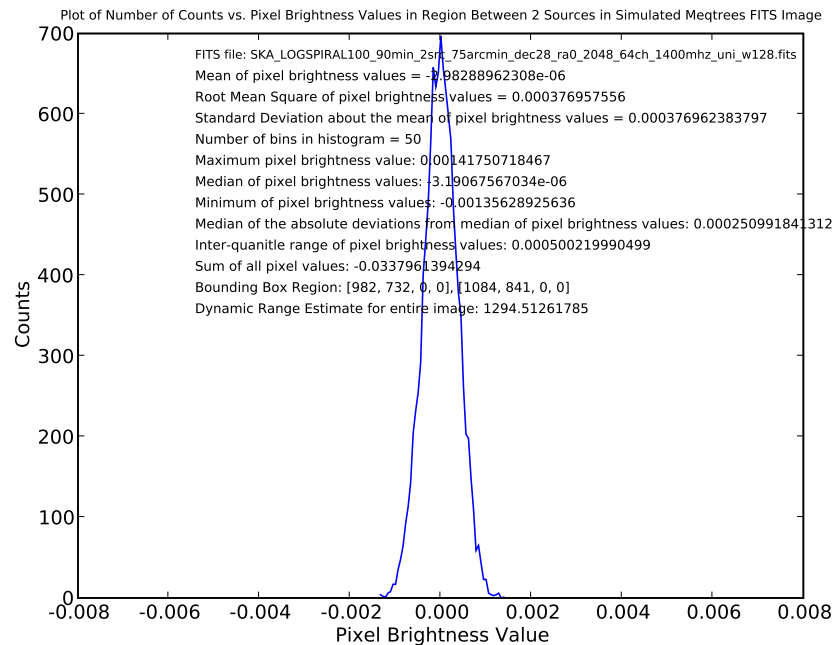


Figure 19: Same Fig. 18 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 17 in obtaining statistical measures.

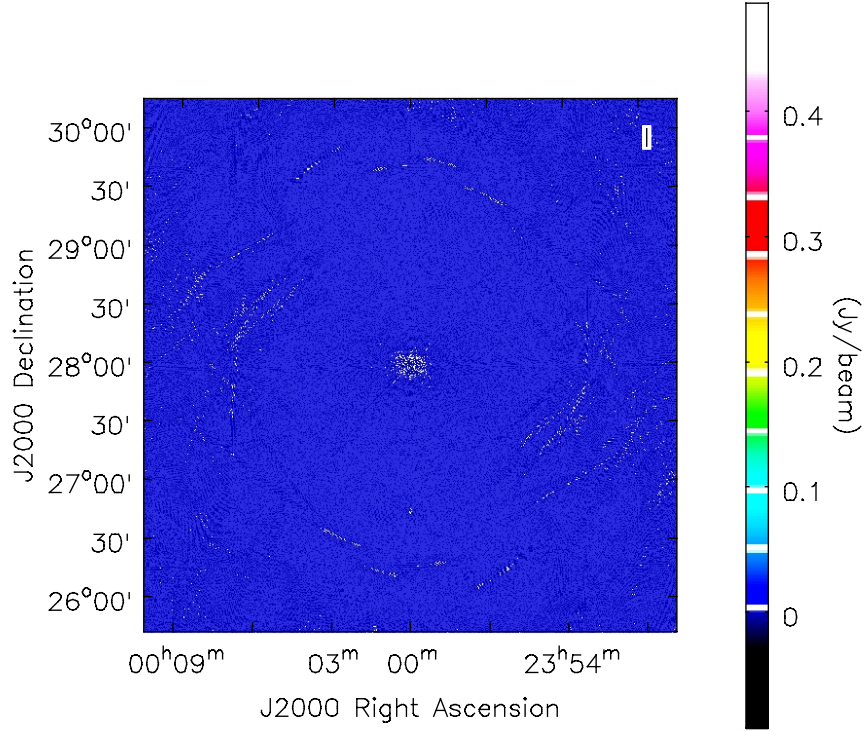


Figure 20: Meqtrees SKA simulation and Meqtrees-generated dirty image of two 1 Jy point sources with 75' separation located at R.A.: $0^h0^m0.1^s$, Dec.: $28^d0^m1^s$ and R.A.: $0^h0^m0.1^s$, Dec.: $26^d45^m10^s$, with Cortes beam but no pointing errors applied. Simulation: $N_a = 100$, same as in previous progress reports; image displayed, zoomed in, and brightness-contrast colormap adjustments with casaviewer; colormap used: 'isophotes'.

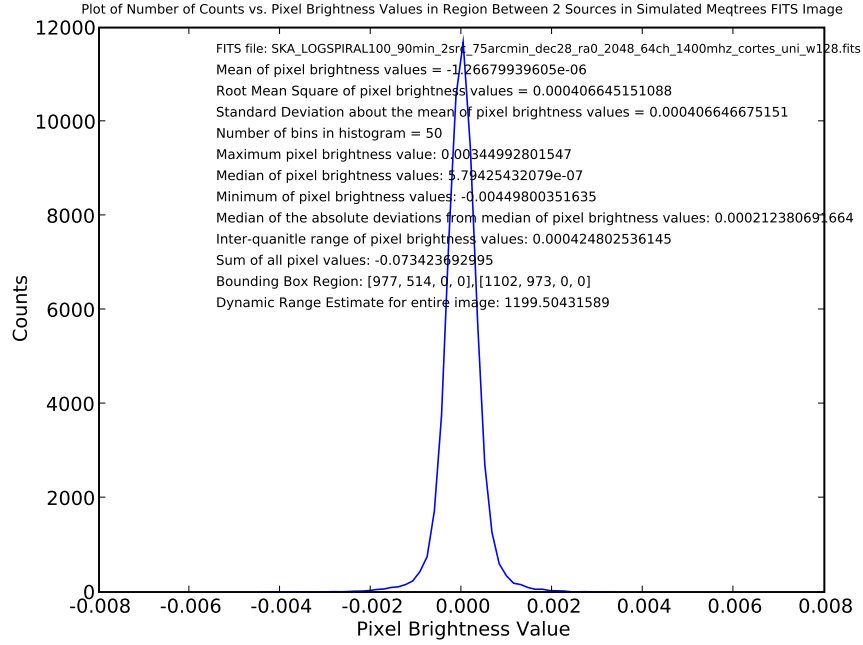


Figure 21: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the the two point sources in Fig. 20. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) positive pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

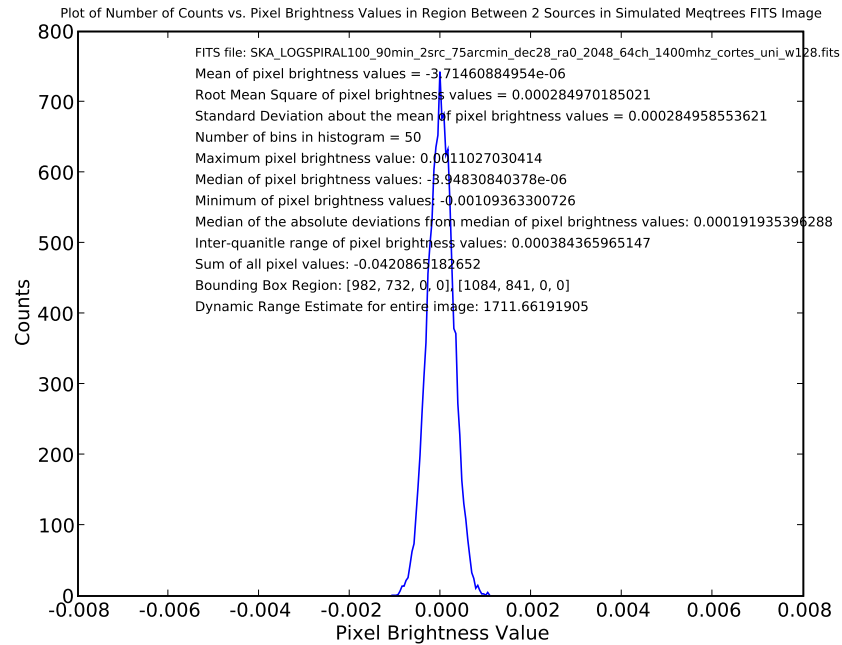


Figure 22: Same as Fig. 21 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 20 in obtaining statistical measures.

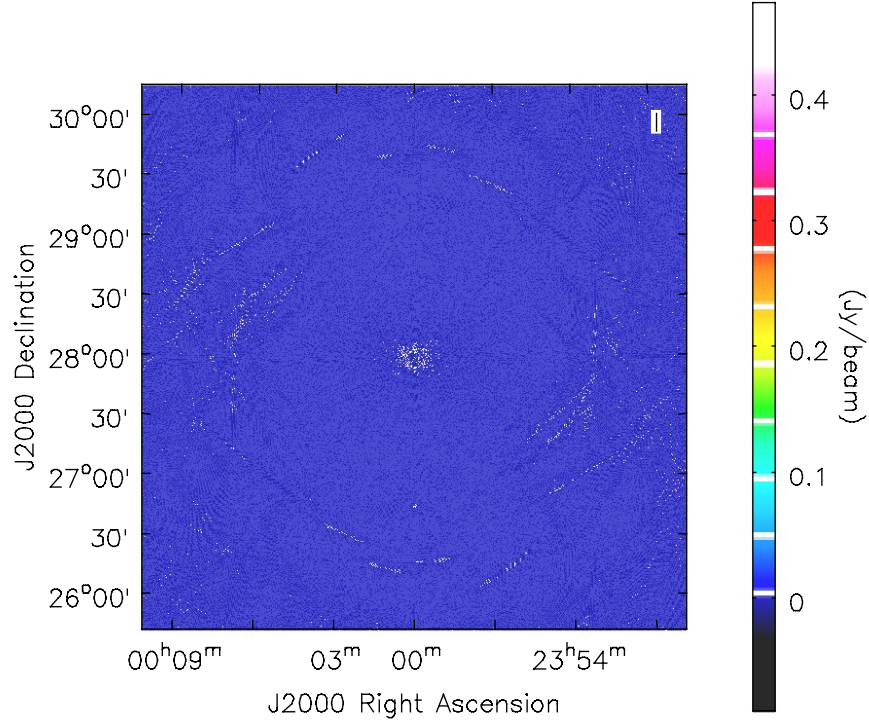


Figure 23: Meqtrees SKA simulation and Meqtrees-generated dirty image of two 1 Jy point sources with 75' separation located at R.A.: $0^h0^m0.1^s$, Dec.: $28^d0^m1^s$ and R.A.: $0^h0^m0.1^s$, Dec.: $26^d45^m10^s$, with Cortes beam and pointing errors ($l_{offset} = 0.00172 \text{ rad} = 5.919'$, $m_{offset} = 0.0004 \text{ rad} = 1.416'$) applied. Simulation: $N_a = 100$, same as in previous progress reports; image displayed, zoomed in, and brightness-contrast colormap adjustments with casaviewer; colormap used: 'isophotes'.

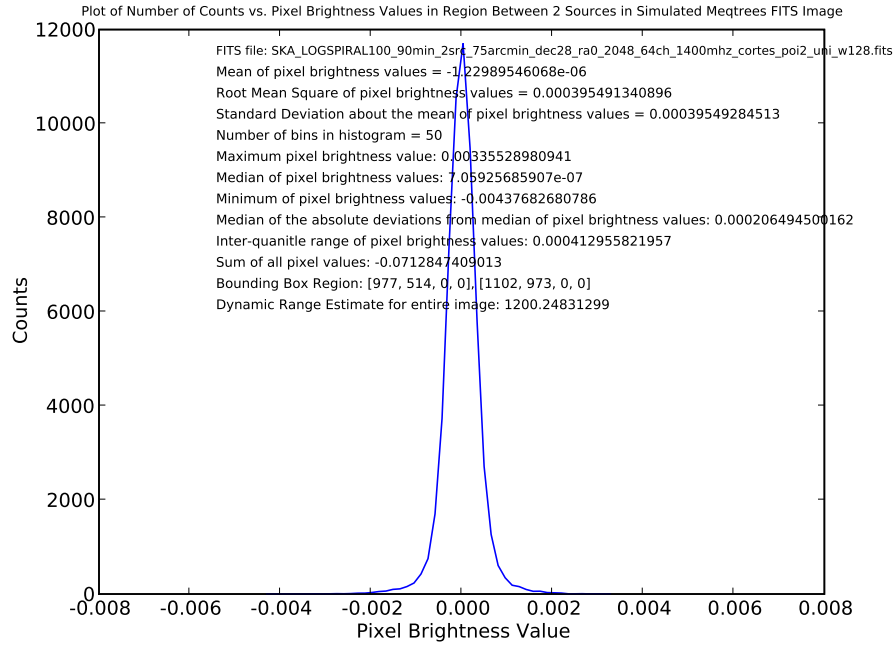


Figure 24: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = $[977, 514, 0, 0]$, top right corner = $[1102, 973, 0, 0]$) between but not including the two point sources in Fig. 23. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) positive pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

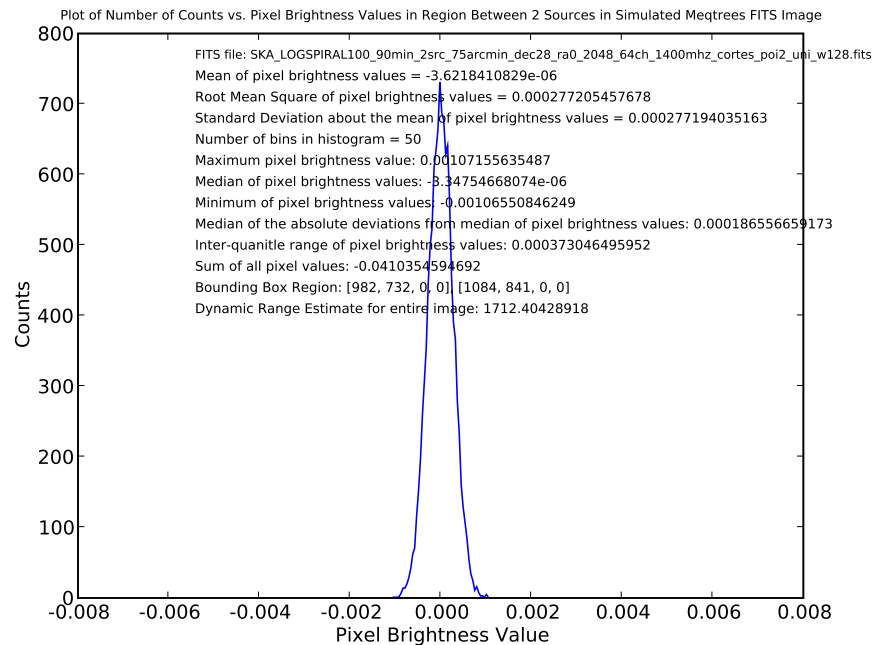


Figure 25: Same as Fig. 24 except smaller bounding box region (bottom left corner = $[982, 732, 0, 0]$, top right corner = $[1084, 841, 0, 0]$) used between the two point sources in Fig. 23 in obtaining statistical measures.

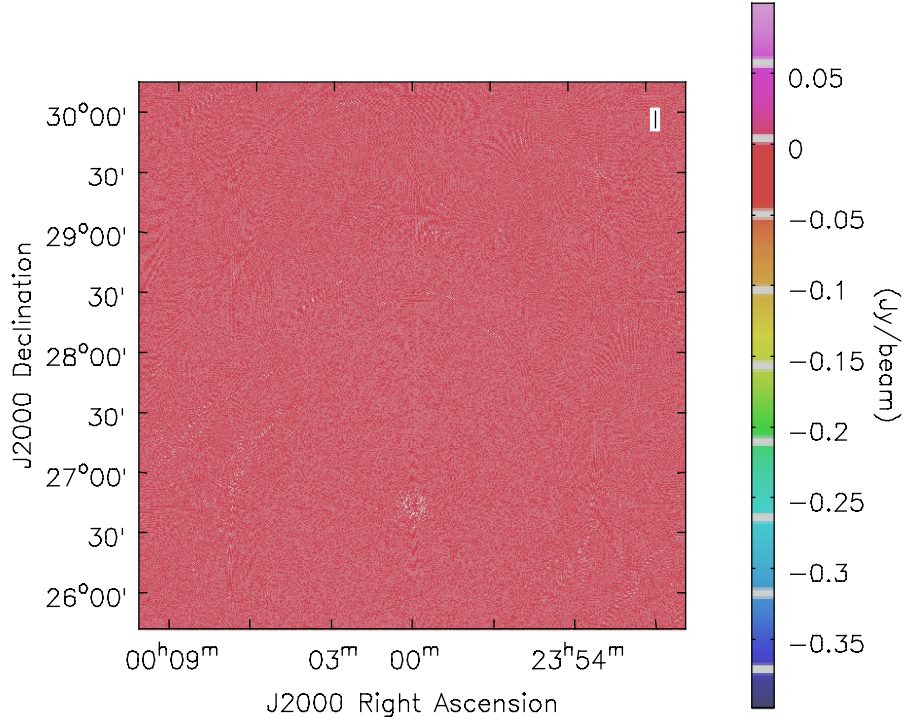


Figure 26: Meqtrees residual image resulting from a differencing simulation between simulations with (Fig. 20) and without (Fig. 17) the Cortes beam model applied (without pointing errors). See <http://www-astro.physics.ox.ac.uk/~ianh/SSSC/30/purlog/index.html> as a reference and for a relevant example. The resulting image here represents net image plane effect of E-Jones matrix for this SKA model array.

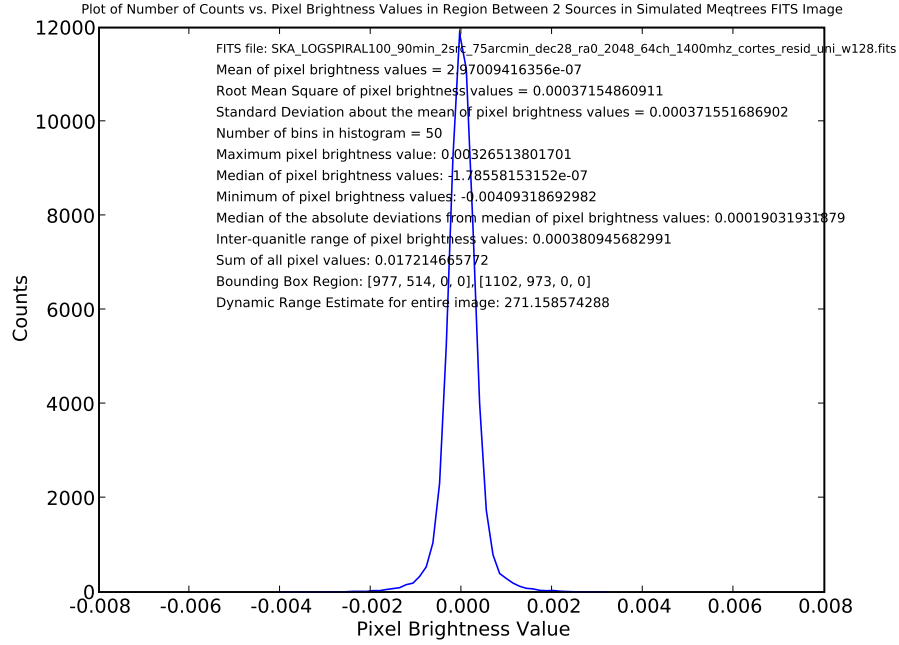


Figure 27: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the two point sources in Fig. 26. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

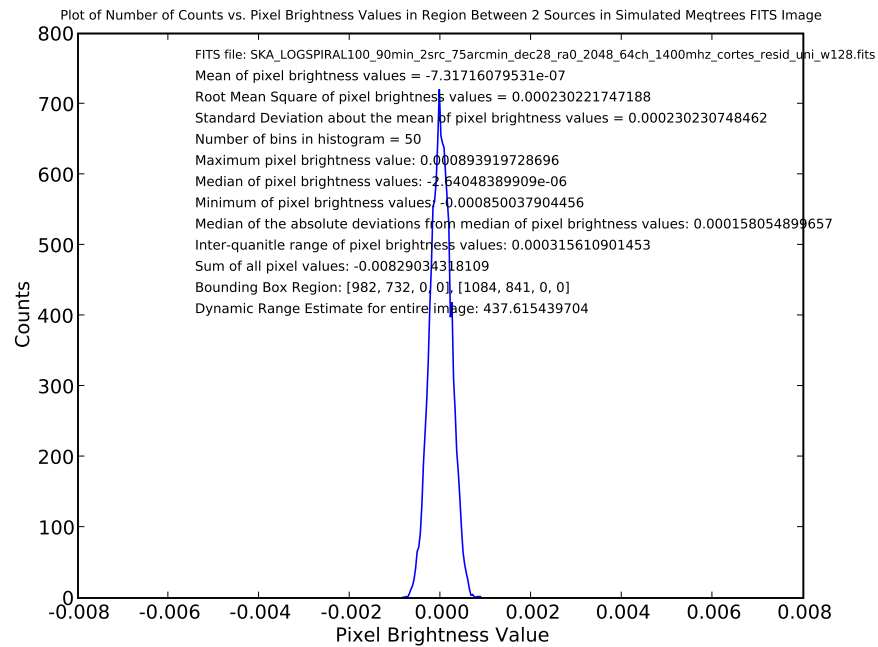


Figure 28: Same as Fig. 27 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 26 in obtaining statistical measures.

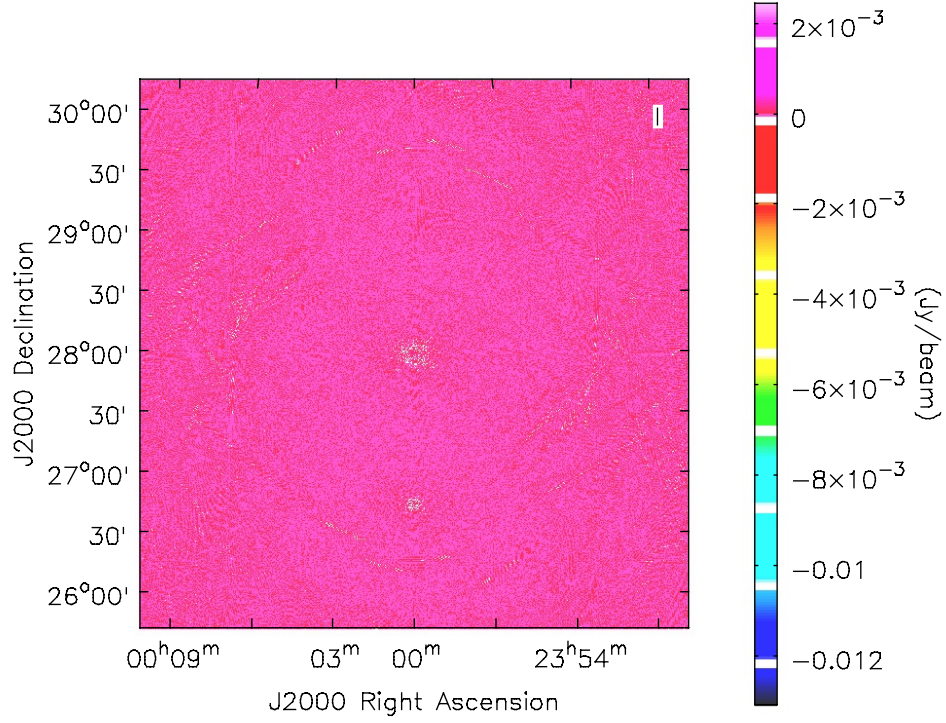


Figure 29: Meqtrees residual image resulting from a differencing simulation between simulations with Cortes beam model applied with pointing errors (Fig. 23) and with Cortes beam applied without pointing errors (Fig. 20). See <http://www-astro.physics.ox.ac.uk/~ianh/SSSC/30/purrlog/index.html> as a reference and for a relevant example.

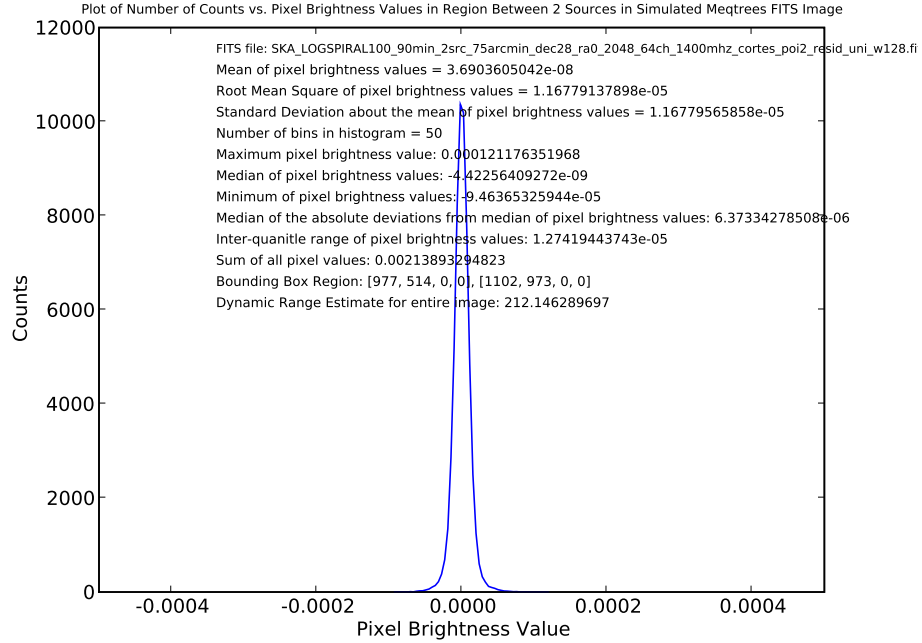


Figure 30: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the two point sources in Fig. 29. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

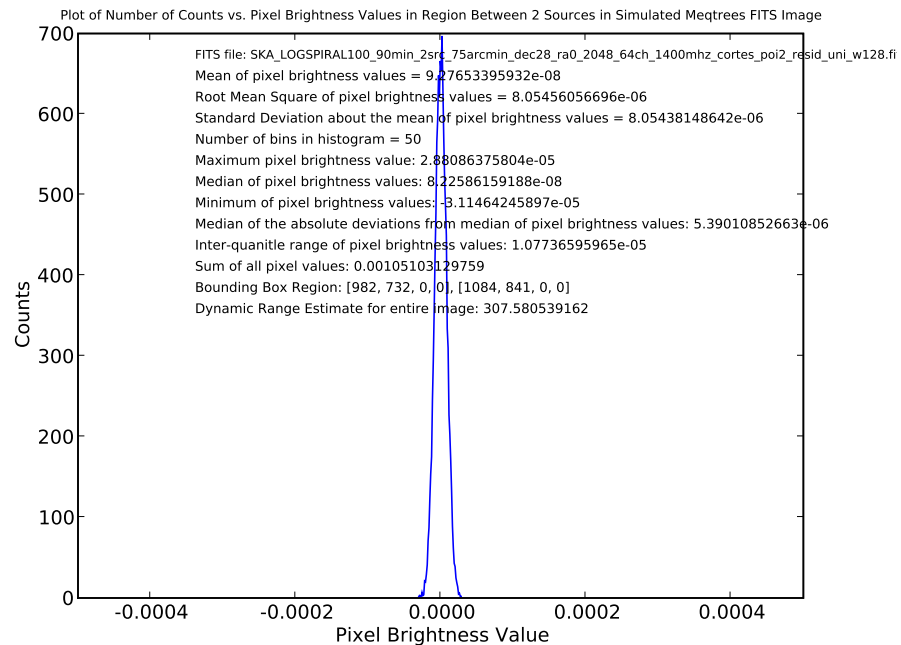


Figure 31: Same as Fig. 30 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 29 in obtaining statistical measures.

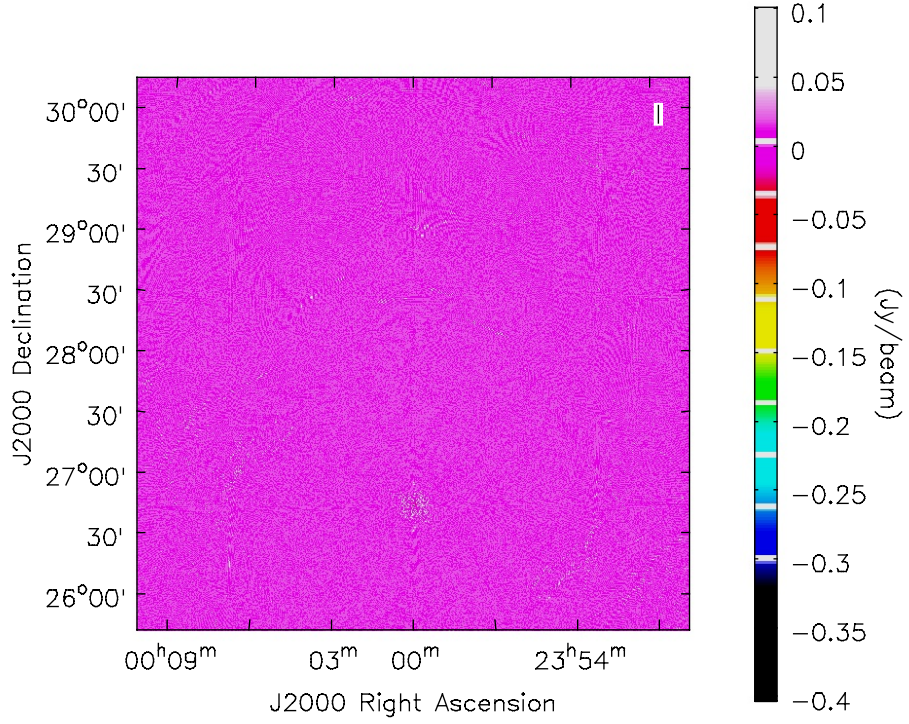


Figure 32: Meqtrees residual image resulting from a differencing simulation between simulations with Cortes beam model applied with pointing errors (Fig. 23) and without Cortes beam model applied (Fig. 17). See <http://www-astro.physics.ox.ac.uk/~ianh/SSSC/30/purrlog/index.html> as a reference and for a relevant example.

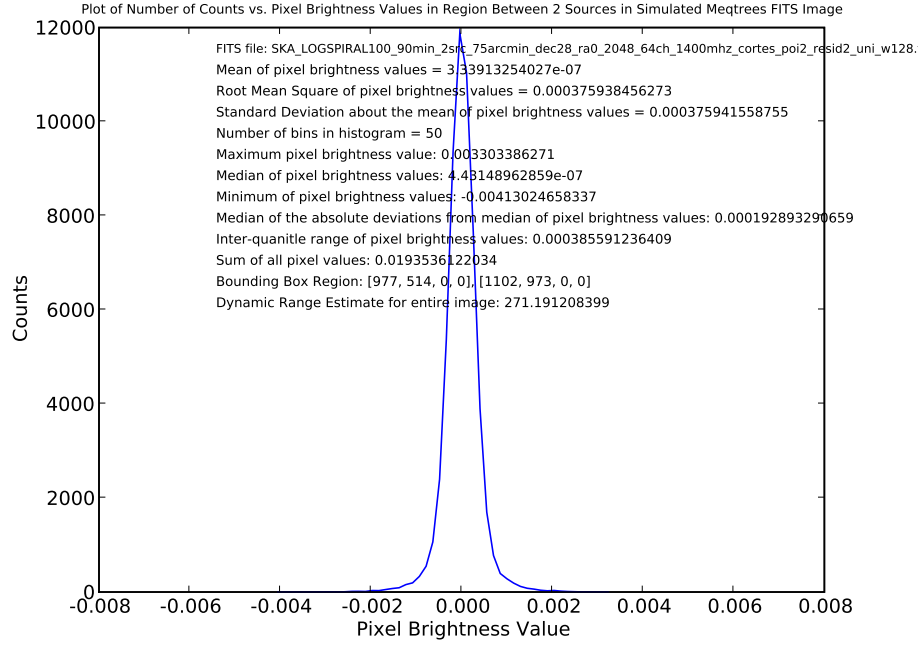


Figure 33: Line plot of counts vs. pixel brightness value for a specified bounding box region (bottom left corner = [977,514,0,0], top right corner = [1102,973,0,0]) between but not including the two point sources in Fig. 32. Statistical measures calculated within the bounding box region are included in the plot. The dynamic range estimate is for the entire image and is taken as the ratio of the brightest (largest) pixel brightness value in the image to the rms of pixel brightness values in the bounding box region.

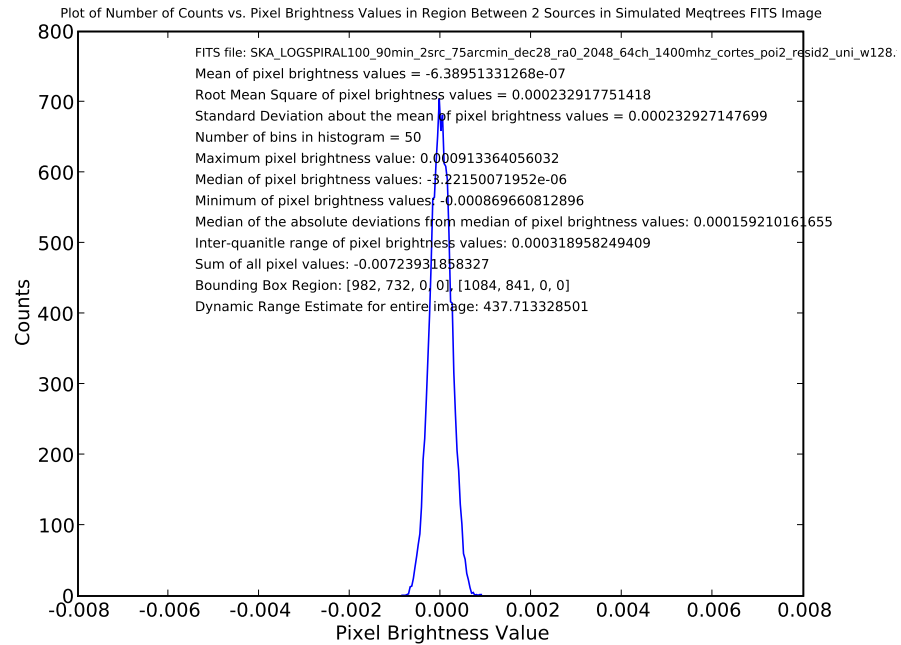


Figure 34: Same as Fig. 33 except smaller bounding box region (bottom left corner = [982,732,0,0], top right corner = [1084,841,0,0]) used between the two point sources in Fig. 32 in obtaining statistical measures.