



Extended Data Figure 5 | Gravitational lensing model of the dust continuum emission in SPT0311–58. For each continuum wavelength for which we have suitable data, we reconstruct the source-plane emission as described in Methods section ‘Gravitational lens modelling’. For each wavelength, from left to right, we show the ‘dirty’ (not de-convolved) image of the data, the dirty image of the model, the model residuals and the source-plane reconstruction. Because the images of the data are not de-convolved, the structure far from the object is due to side lobes in the

synthesized beam, and should be reproduced by the models. The image-plane region modelled is evident in the residuals, and results in the ‘noise’ in the source-plane reconstructions. Contours in the residual panels are drawn in steps of $\pm 2\sigma$. The lensing caustics are shown in each source-plane panel (ellipse and diamond). The lens parameters are determined independently at 90 μm and 160 μm ; at 110 μm we adopt the parameters of the 160- μm model.