



Extended Data Figure 1 | ALMA continuum images of SPT0311–58. **a–d**, Continuum images in ALMA bands 3 (**a**), 6 (**b**), 7 (**c**) and 8 (**d**), corresponding to rest-frame wavelengths of $380\,\mu\text{m}$, $160\,\mu\text{m}$, $110\,\mu\text{m}$ and $90\,\mu\text{m}$, respectively. Note that the resolution in **a** is a factor of roughly ten

worse than in **b–d**, and the displayed field of view is also larger by a factor of four. Contours at 10%, 30% and 90% of the image peak in band 6 are shown in **a** for scale. The ALMA synthesized beam (full-width at half-maximum) is represented as a hatched ellipse in the corner of each image.