We present radio-interferometric observations of HCN $J = 1 \rightarrow 0$ line emission from the carbon star R Scl, obtained with the interim 3-mm receivers of the Australia Telescope Compact Array. The emission is resolved into a central source with a Gaussian FWHM of $\sim 1$, which we identify as the present mass loss envelope. Using a simple photodissociation model and constraints from single-dish HCN spectra, we argue that the present mass-loss rate is low, $\sim 2 \times 10^{-7} \, M_\odot \, yr^{-1}$, supporting the idea that R Scl had to experience a brief episode of intense mass loss in order to produce the detached CO shell at $\sim 10$ radius inferred from single-dish observations. Detailed radiative transfer modelling yields an abundance of HCN relative to H$_2$, $f_{\text{HCN}}$, of $\sim 10^{-5}$ in the present-day wind. There appears to be a discrepancy between model results obtained with higher transition single-dish data included and those from the $J = 1 \rightarrow 0$ interferometer data alone, in that the interferometer data suggest a smaller envelope size and larger HCN abundance than the single-dish data. The lack of HCN in the detached shell, $f_{\text{HCN}} \approx 2 \times 10^{-7}$, is consistent with the rapid photodissociation of HCN into CN as it expands away from the star.
Observations and data reduction

Figure 1: Coverage of the visibility plane obtained after combining observations in all four ATCA configurations (EW214, EW352, H168, and 750A).