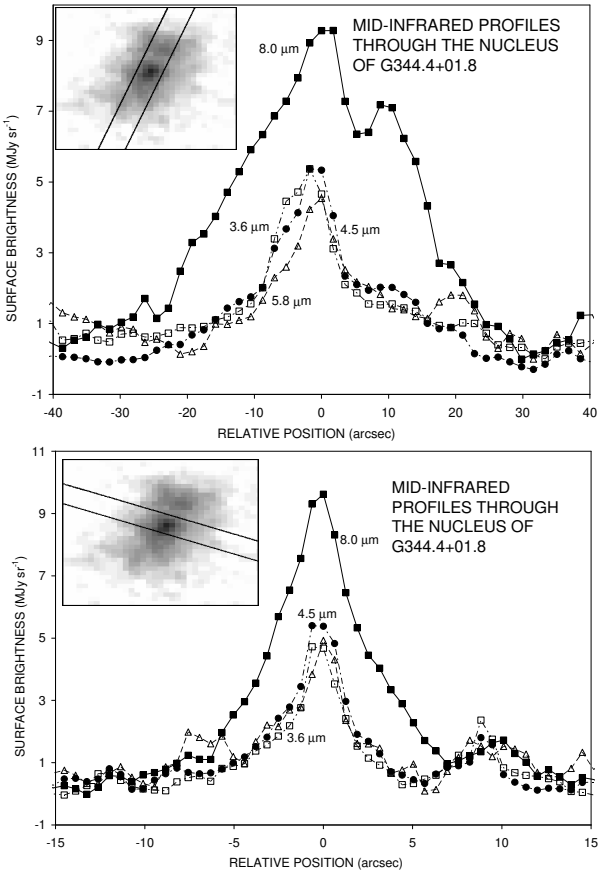

Fig. 26. Major and minor axis profiles though PN G344.4+01.8 (MPA1654-4041). Note the presence of a bright and unresolved core source, and the steep and monotonic fall-off in emission along the minor axis (lower panel). This latter variation is untypical of elliptical PNe.

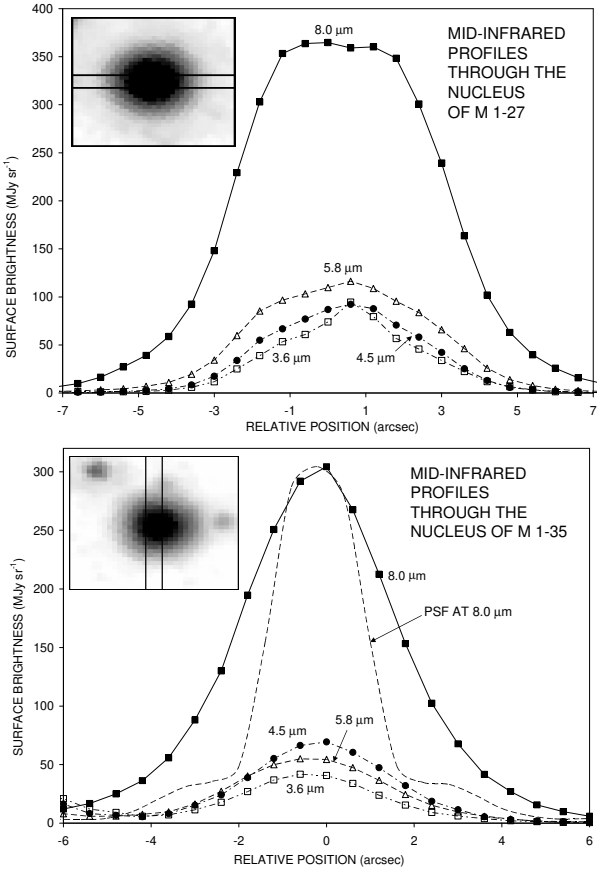

Fig. 27. Profiles through the nuclei of two compact PNe. These sources have an elliptical/circular appearance, and are typical of a large fraction of the PNe detected in the GLIMPSE 3D survey.

columns give the magnitude in each of the IRAC bands, determined using the zero magnitude calibration of Reach et al. (2006) and the techniques described in § 2. Typical errors range from 0.03 mag for the fainter sources through to 0.01 or less for the brightest.

It is of interest to compare the present results with photometry of other PNe, and this is undertaken in the [3.6]−[4.5]/[5.8]−[8.0] colour plane in Figure 29. In this latter case, MASH I sources are indicated by squares, the Acker et al. (1992) PNe are identified through disks, and the single MASH II PN is represented by a triangle. The solid lines indicate the limits for PNe detected through previous photometry, and are taken from the compilation of results by Phillips & Ramos-Larios (2010).

It is finally worth noting that previous photometry of PNe has sometimes used slightly differing correction factors for the diffuse background scattering (see § 2). These correction factors have proven extremely difficult to pin down, and officially quoted estimates have varied over time. It follows that care must be taken when comparing differing sets of data.

For the most part, it is clear that the 3.6 and 4.5 μm correction factors are similar, however, and the same applies for the 5.8 and 8.0 μm factors as well. Changes in the values of these factors therefore lead to only minor variations in colour, and a comparison between differing sets of data is expected to be reliable.

It is clear that our present results fall neatly within the range for other PNe, although they occupy a region which is somewhat more restricted. In particular, it would seem that there is a paucity of indices $[5.8]-[8.0] < 1$. This may, in part, testify to lower levels of stellar contamination, whether this occurs due to unrelated field stars or the PN central stars themselves. It can also however occur where