

Figure 1 is a scatter plot showing the relationship between the RA offset (arcsec) on the x-axis and the number of stars in the field ( $N_{\text{stars}}$ ) on the y-axis. The x-axis ranges from -200 to 600 arcsec, and the y-axis ranges from 0 to 100. Data points are colored based on the number of stars in the field: red (0-10), orange (11-20), yellow (21-30), green (31-40), blue (41-50), and grey (51-60). Many points are labeled with their RA offset and  $N_{\text{stars}}$  value. Green arrows indicate the direction of the field's motion, and purple arrows indicate the direction of the field's rotation. The plot shows a clear trend where the number of stars in the field increases with RA offset, particularly for positive offsets.

Dec offset, arcsec