

The figure displays a scatter plot of simulated light curves for 100 sources. The x-axis represents time in Modified Julian Days (MJD), ranging from 56200 to 57400. The y-axis represents the magnitude, ranging from 10 to 20. The data is categorized by filter band: g (purple), r (blue), i (green), and z (orange). The plot shows four distinct groups of sources, each corresponding to a different filter band. The sources exhibit various light curve shapes, including steady, dipping, and flaring patterns. The z-band sources generally show higher variability and larger magnitude changes compared to the other bands.

