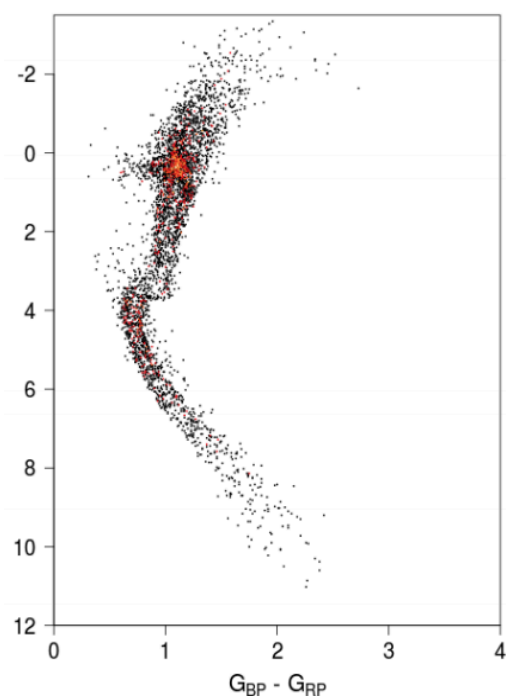


## High Velocity Stars

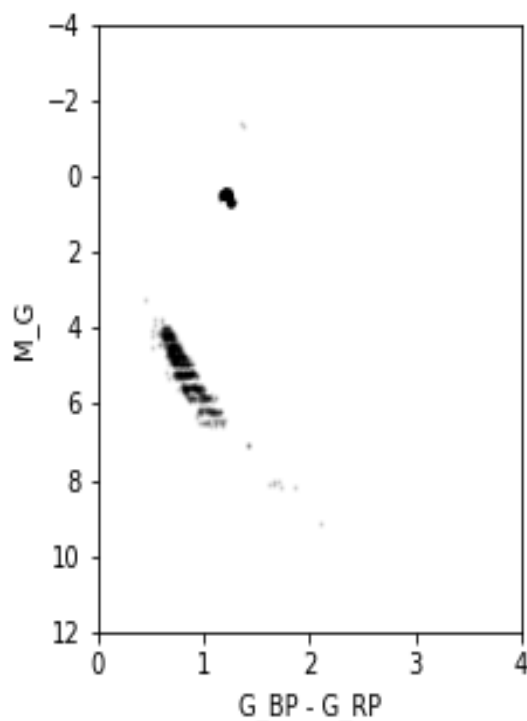
Total Velocity > 200 km/s

Figure 20, Panel



Stars Expected: 4461

Replication Attempt



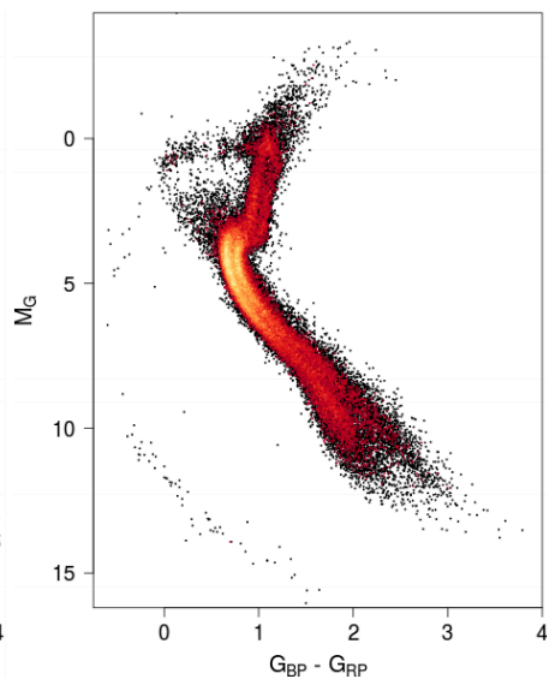
Stars Received: 1187

Interpretation of filters for Figure 20, panel C

AND sqrt( power(radial\_velocity,2) + power( ( 4.74/parallax \* sqrt(power(pmra,2)  
+ power(pmdec,2)) ),2 ) ) > 200  
AND e\_bp\_min\_rp\_val < 0.015

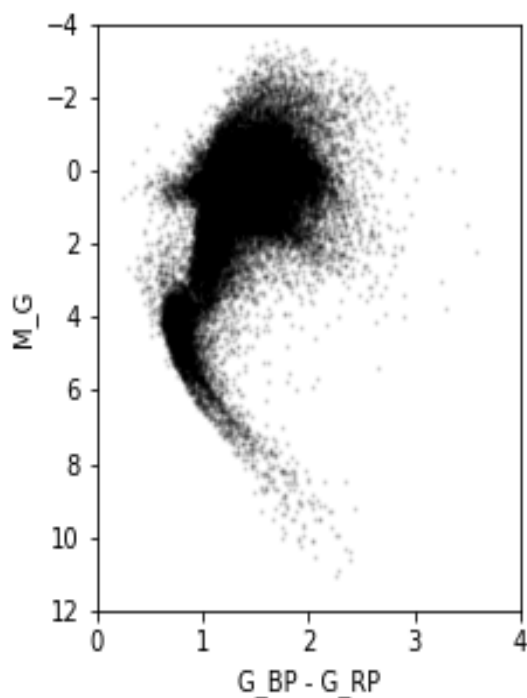
Tangential Velocity > 200 km/s

Figure 21, Panel C



Stars Expected: 64,727

Replication Attempt



Stars Received: 42,182

Interpretation of filters for Figure 21, panel C

AND  $4.74/\text{parallax} * \sqrt{\text{power}(\text{pmra},2) + \text{power}(\text{pmdec},2)} > 200$   
AND  $e_{bp\_min\_rp\_val} < 0.015$