Figure 1. from Selection Functions in Astronomical Data Modeling, with the Space Density of White Dwarfs as a Worked Example null 2021 AJ 162 142 doi:10.3847/1538-3881/ac0c13 https://dx.doi.org/10.3847/1538-3881/ac0c13 © 2021. The Author(s). Published by the American Astronomical Society.

Observations/data collection Survey \rightarrow {raw data} $S^{\text{survey}}(\text{detection efficiency}, \Omega, \Delta\lambda, \ldots)$ Data processing Parent catalog $\rightarrow \{i, \mathbf{q}_i\}$ $\mathcal{S}_{\mathcal{C}}^{\text{parent}}(\mathbf{q})$ Sample selection criteria Catalog or sample $\rightarrow \{i, \mathbf{q}_i\}_{\text{subset}}$ $\mathcal{S}^{\text{parent}}_{\mathcal{C}}(\mathbf{q}) imes \mathcal{S}^{ ext{sample}}_{\mathcal{C}}(\mathbf{q})$