Observational Bias as an Explanation for Distributions of Galaxy Inclination Angles JORDAN ROZUM, Utah State University, MATT GARLOCK, Weber State University, SHANE L. LARSON, Utah State University, BRADLEY W. CARROLL, Weber State University — The distribution of spiral and bar galaxy inclination angles is expected to be uniform. However, analysis of several major galaxy catalogs shows this is not the case; the frequency of inclination angles for galaxies classified as spirals or bars peaks between 80 and 90 degrees from edge-on. In an attempt to explain this discrepancy, we examine the dependence of observed brightness upon inclination angle by using luminous mass density as an analog for light intensity. If this dependence strongly corresponds to the observed distribution of inclination angles, we can attribute much of the discrepancy to a geometrical selection effect.

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