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## The mass-dependence of disc lifetimes leads to differences in the planets formed

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The lifetime of protoplanetary discs is a key parameter for forming planets. Observations of disc fractions in star clusters imply median disc lifetimes of only 1 — 3 Myr. Individual lifetimes vary from <1 Myr to well over 20 Myr. Current disc lifetime determination is dominated by data from clusters younger than 4 Myr. However, some clusters older than 8 Myr show disc fractions < 20 %. We show that the discrepancy between the derived median disc lifetimes is likely connected to the fact that many young clusters are located at larger distances. High-mass stars have shorter disc lifetimes than low-mass stars. Thus young distant clusters suffer from the problem of limiting magnitudes and bias towards more luminous stars. We find that median disc lifetimes of 7 — 8 Myr and an initial disc fraction of 80% give the best fit to the observational data. For high-mass stars (B — K 5.5) this reduces to a median of approximately 4 Myr. We demonstrate that the large spread in disc lifetimes might be the key to explaining the diversity of planets and planetary systems. High-mass stars tend to form fewer, but higher-mass planets, while low-mass stars preferentially form lower mass planets but many of them