

Abstract Submitted
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Well, It Was Big When We Built It! VIRGINIA TRIMBLE, University of California Irvine & Las Cumbres Observatory — Many of the fundamental discoveries of astronomy were made with telescopes that we now regard as derisively small, but which were often the largest and most expensive that then existed. Everything Galileo did obviously comes under this heading, but also the discovery of parallax with 8-10" heliometers and such by Bessel, Struve, and Henderson; the existence of external galaxies (1923, Hubble with the Mt. Wilson 60"), and the later expansion of the universe (1929, Hubble again, with the 100"); the spiral structure of galaxies (Lord Rosse 1855 with a 72" speculum mirror); and the discovery of Neptune (Galle, another of those heliometers). There are also counterexamples of frontier work done with marginal facilities (the dominance of hydrogen in stars, from routine Harvard spectra examined by Payne; the first optical counterparts of a pulsar and a gamma ray burst with 36" telescopes - maybe even the same one - in Arizona). The talk will dash madly through the growth of telescope apertures, pausing briefly at a few interesting cases.

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