

Quelle: <http://homepage.univie.ac.at/thomas.posch/doc/hubble.pdf>

Edwin Hubble über

Die schrittweise Horizonterweiterung in der Geschichte der Astronomie

(1936)

Receding Horizons

The history of astronomy is a history of receding horizons. Knowledge has spread in successive waves, each wave representing the exploitation of some new clew to the interpretation of observational data.

The explorations of space presents three such phases. At first the explorations were confined to the realm of the planets, then they spread through the realm of stars, and finally they penetrated into the realm of the nebulae.

The successive phases were separated by long intervals of time. Although the distance of the moon was well known to the Greeks, the order of the distance of the sun and the scale of planetary distances was not established until the latter part of the seventeenth century. Distances of stars were first determined almost exactly a century ago [1838/39], and distances of nebulae, in our own generation. The distances were the essential data. Until they were found, no progress was possible.

The early explorations halted at the edge of the solar system, facing a great void that stretched away to the nearer stars. The stars were unknown quantities. They might be little bodies, relatively near, or they might be gigantic bodies, vastly remote. Only when the gap was bridged, only when the distances of a small, sample collection of stars had been actually measured, was the nature determined of the inhabitants of the realm beyond the solar system. Then the explorations, operating from an established base among the now familiar stars, swept rapidly through the whole of the stellar system.

Again there was a halt, in the face of an even greater void, but again, when instruments and techniques had sufficiently developed, the gap was bridged by the determination of the distance of a few of the nearer nebulae. Once more, with the nature of the inhabitants known, the explorations swept even more rapidly through the realm of the nebulae and halted only at the limits of the greatest telescope.

Aus: Edwin Hubble: The Realm of the Nebulae. New Haven and London 1936 (2. Aufl. 1982), S. 21f.