

CATALOGUE OF THE ASTRONOMISCHE
GESELLSCHAFT.

Catalog der Astronomischen Gesellschaft. Erste Abtheilung. Catalog der Sterne bis zur neunten Grösse zwischen 80° nördlicher und 2° südlicher Declination für das Aequinoctium 1875. Drittes Stück, Zone + 65° bis + 70° , beobachtet auf der STERNWARTE CHRISTIANA. Viertes Stück, Zone + 55° bis + 65° , beobachtet auf den STERNWARTEN HELSINGFORS und GOTHA. Vierzehntes Stück, Zone + 1° bis + 5° , beobachtet auf der STERNWARTE ALBANY. Leipzig, 1890. 3 vols., 4to.

ASTRONOMERS frequently need the positions of so-called fixed stars. They are wanted when a clock is to be regulated to true sidereal or true mean time ; when, again, the astronomer is on his travels and desires to fix his latitude and longitude, and the direction on the earth of his meridian ; or when he is observing some planet's or comet's course, and wishes to settle the various right ascensions and declinations it occupies from day to day and hour to hour, in order from them to calculate its orbit, predict its future course, and test the law of gravitation.

Thus accurate star places are the basis in one sense of all astronomy of position ; but they have an interest of their own which is more prominent now than it ever has been, and is yearly increasing.

For no star is absolutely fixed ; and the small motions of the stars which have been long detected are slowly accumulating their effects, and giving evidence that will in time throw much light on the structure of the universe.

The star which has by some been called the "runaway" (Groombridge 1830) moves over half a degree, as seen from the earth, in about two centuries and a half ; so that a sharp-sighted observer in a dry mountain region (where the air is transparent enough) could readily detect its motion with the naked eye in about a life-time. Other stars move so slowly, in appearance, that a hundred years of the closest telescopic observation are necessary to detect any slight deviation from their former position. The constellations exhibit to the eye substantially the same appearance from century to century ; it is only in very small details that they seem to alter during fifty years.

The study of these trifling motions (as they seem to us) is extremely fascinating to those who have undertaken it ; and a vast amount of human effort has been spent in the acquisition of this form of knowledge.

The Alexandrine Greeks did something in mapping and listing the stars, by such simple devices as they possessed ;