

I. *A short History of the several New-Stars that have appear'd within these 150 Years; with an Account of the Return of that in Collo Cygni, and of its Continuance observed this Year 1715.*

Whether it be owing to the greater Diligence of the Moderns, or that in reality no such thing has happen'd for many Ages past, I will not undertake to determine; but this is certain that, within the Space of the last 150 Years, more Discoveries have been made of Changes among the Fixt Starrs, than in all Antiquity before. And tho' it be said that *Hipparchus*, on occasion of a New Star that appeared in his Time, was induced to number the Stars, and make the first Catalogue of them, which was, in the Opinion of *Pliny*, *Res vel Deo improba*; yet neither he or any of the Ancients have left us the Place of that New Star, to compare with those lately seen, one of which might perhaps be the same with it, re-appearing after a long Period of Years. Now though several Authors have severally described those that have been seen nearer to our Times, it may not perhaps be amiss here to give a short Recapitulation of what was principally remarkable in each of them, with the Times of their first Appearance, as far as can be collected.

And first, That in the *Chair of Cassiopeia*, was not seen by *Cornelius Gemma* on the Eighth of *November 1572*, who says, he that Night considered that Part of Heaven in a very serene Sky, and saw it not: but that the next Night, *Novemb. 9<sup>o</sup>*. it appeared with a Splendour surpassing all the fixt Stars and scarce less bright than *Venus*. This was not seen by *Tycho Brahe* before the 11th of the same Month, but from thence He assures us that it gradually decreased and died away, so as in *March 1574*,

1574, after sixteen Months, to be no longer visible; and at this Day no Signs of it remain. The Place thereof in the Sphere of Fixt-Stars, by the accurate Observations of the same *Tycho*, was  $08. 9^{\circ}. 17'. à 1^{ma} * \gamma^{is}$ , with  $53^{\circ}. 45'$ . North Latitude.

Such another Star was seen and observed by the Scholars of *Kepler*, to begin to appear on *Sept. 30<sup>o</sup>. ft. vet. anno 1604*, which was not to be seen the Day before: but it broke out at once with a Lustre surpassing that of *Jupiter*; and like the former it died away gradually, and in much about the same time disappear'd totally, there remaining no Footsteps thereof in *January 1608*. This was near the Ecliptick, following the Right-Leg of *Serpentarius*; and by the Observations of *Kepler* and others, was in  $7^{\circ}. 20^{\circ}. 00'$  à  $1^{ma} * \gamma$ , with North Latitude  $1^{\circ}. 56'$ . These two seem to be of a distinct *Species* from the rest, and nothing like them has appear'd since.

But between them, *viz.* in the Year 1596, we have the first Account of the wonderful Star in *Collo Ceti*, seen by *David Fabricius* on the third of *August*, *ft. vet.* as bright as a Star of the third Magnitude, which has been since found to appear and disappear periodically: its Period being precisely enough 7 Revolutions in Six Years, tho' it return not always with the same Lustre. Nor is it ever totally extinguish'd, but may at all times be seen with a Six-Foot Tube. This was singular in its Kind, till that in *Collo Cygni* was discovered. It precedes the first Star of *Aries*  $1^{\circ}. 40'$ , with  $15^{\circ}. 57'$  South Latitude.

Another New Star was first observed by *Will. Janssonius* in the Year 1600, in *Pectore* or rather in *educatione Colli Cygni*, which exceeded not the third Magnitude. This having continued some Years, became at length so small as to be thought by some to disappear entirely: but in the Years 1657, 58 and 59, it again arose to the third Magnitude, tho' soon after it decay'd by degrees to the

fifth or sixth Magnitude, and at this Day is to be seen as such in  $9^{\text{s}}. 18^{\circ}. 38'$ . à  $1^{\text{ma}} \ast. \gamma$ , with  $55^{\circ}. 29'$  North Lat.

A fifth New Star was first seen and observed by *Hevelius* in the Year 1670, on *July 15. st. vet.* as a Star of the third Magnitude, but by the Beginning of *October* was scarce to be perceived by the naked Eye. In *April* following it was again as bright as before, or rather greater than of the third Magnitude, yet wholly disappeared about the middle of *August*. The next Year, in *March* 1672. it was seen again, but not exceeding the sixth Magnitude: since when it has been no further visible, though we have frequently sought for its Return; its place is  $9^{\text{s}}. 3^{\circ}. 17'$ . à  $1^{\text{ma}} \ast. \gamma$ . and has Lat. North.  $47^{\circ}. 28'$ .

The Sixth and last is that we described from the *Acta Berolinensia*, in No. 343 of these Transactions; discovered by *Mr. G. Kirch* in the Year 1686, and its Period determined to be of  $404 \frac{2}{3}$  Days: and though it rarely exceed the fifth Magnitude, yet is it very regular in its Returns, as we found in the year 1714. Since then we have watched, as the Absence of the Moon and the Clearness of Weather would permit, to catch the first beginning of its Appearance in a Six-Foot Tube, that bearing a very great Aperture discovers most minute Stars. And on *June 15.* last, it was first perceived like one of the very least Telescopical Stars; but in the rest of that Month and *July* it gradually encreased, so as to become in *August* visible to the naked Eye; and so it continued all the Month of *September*. After that it again died away by degrees, and on the *8th* of *December* at Night was scarce discernible by the Tube, and as near as could be guessed, equal to what it was at its first Appearance on *June 15th*: so that this Year it has been seen in all near Six Months, which is but little less than half its Period: And the middle, and consequently the greatest Brightness, falls about the *10th* of *September*. Those that please to seek for it. may expect its first Appearance in *July* next, and find it in  $9^{\text{s}}. 6^{\circ}. 30'$ . circiter à  $1^{\text{ma}} \ast. \gamma$ , with Lat. *Bor.*  $52^{\circ}. 40'$ . II.