

OBSERVATIONS OF COMET B 1883 (PONS-BROOKS.)

The instrument used in the following Observations was a 46 inch achromatic telescope of 3½ inches aperture, with a magnifying power of 48. The following are extracts from my note-book :—

September 27th.—Comet first seen near the Star η Draconis, and appears as a very diffuse nebulosity, with little central condensation and no visible nucleus, slightly elongated in a direction away from the Sun. (The Comet was observed on October 1st, 3rd, 4th, 6th and 9th; on each of these occasions it was very faint, and certainly fainter than when first seen on September 27th.)

October 4th. observed the Comet passing nearly centrally over two 8th magnitude Stars, which shine undimmed through it; the only effect (and that is very slight) being that the Stars do not appear quite so neatly defined as when seen on the dark sky. The Comet itself is so faint that the light from these small Stars renders it nearly invisible.

October 20th.—The Comet is certainly brighter, the centre looks granulated or mottled, but there is no visible nucleus.

October 27th.—The Comet is large, diffuse, and faint, very different to its appearance on October 20th.

November 3rd.—Comet much smaller, the centre more strongly condensed and rather brighter, but no stellar nucleus.

November 6th.—The central condensation has increased, and a minute stellar nucleus of about 10th magnitude is seen.

November 20th.—The Comet shows a mottled centre, but the stellar point has disappeared, and it is again increasing in diameter.

November 23rd.—The brightness increases but slowly; there is a faint but certain elongation towards a tail.

November 28th.—Comet considerably brighter, the centre looks mottled, tail is increasing, and can be traced about 15' in length.

December 5th.—Comet so bright as to be distinctly visible with a binocular glass, the tail is getting plainer with the telescope, but with powers 48, 70 and 120, I can see no stellar nucleus.

December 16th.—Comet first seen with the naked eye; it is now a fine telescopic object, but differs from former descriptions only in increased length of tail.

December 24th.—The Comet to the naked eye is about equal to a 4½ magnitude Star; with the binocular glass the tail can be traced for fully a degree, the telescopic appearance, except from increased brightness, is unchanged.

1884, *January 7th.*—After a long spell of cloudy weather, the Comet again seen; to the naked eye it nearly equals ζ Pegasi of the 3rd magnitude. At 6 p.m., it is so close to the 4th magnitude Star, 31 Pegasi, that they cannot be separated by the unassisted sight, and appear very close in the binocular glass. The tail is straight, narrow and very distinct, nearly parallel to a line joining the Stars ξ and ζ Pegasi. With the telescope, the head looks large and brilliant, with a very condensed centre, but no real stellar nucleus can be seen, though carefully looked for with powers 48, 70 and 120.

January 9th.—Comet a little brighter than ζ Pegasi.