of five minutes. Thus we have 32 giving 9:50, but none giving 9:49, and only six giving 9:51. There are 13 giving 10 o'clock and there would have been many more of them if the catalogue had included those which stated the time as being "about" 10 o'clock or "near" 10 o'clock. There are 86, or more than one fourth the whole number, which give 9:55. Every one of the 9:50 reports is rejected. It is certain that they all involve errors greater than one minute too early, and the large number of them would introduce a large systematic error into the mean; and as there is no apparent reason for rejecting or keeping one observation rather than another, all of them are thrown out. All of the 10 o'clock observations are thrown out. For, upon further examination, all giving 9:58 and seconds, 9:59, 10:01 and 10:02 will be rejected on their merits. This would leave the 10 o'clock reports as an isolated group in an otherwise comparatively orderly series, and its effect would be to introduce an error of unknown magnitude and of anomalous character. In dealing with those giving 9:55 there is more difficulty. The following course has been adopted. Wherever a report states clearly, or raises a strong presumption, that this was really the nearest minute observed, to the exclusion of any other, it is accepted if otherwise unobjectionable. Where this evidence is wanting the report is rejected. It is quite probable that some thus rejected are very good observations; but it is clearly better to reject many possibly good observations (provided a sufficient number remain) than to admit a few bad ones with the certainty of introducing an unknown error. The number of 9:55 reports thus rejected is 43, which happens to be just one half.

Still other observations are rejected on their merits. A majority of these are thrown out for what are presumed to be large unexplained errors. There are 29 of them, of which 15 are rejected for being two minutes or more too early and 14 for being as much, or more than as much, too late, when compared with a larger number of much better observations in the same locality or in the immediately surrounding region. The rejection of these 29 observations does not greatly affect the deduced speed, but it does diminish notably the computed probable error. The total number rejected for all causes is 130 and the number accepted is 186. These have been separated into four groups, each containing data which are considered to be as nearly homogeneous as possible; that is to say, in each group the observations are presumed to have the same sources of error, whether accidental or systematic.

The first group is required to fulfill the following conditions: (1) The report must specify the beginning, or the time when the tremors first became sensible. (2) It must give not