

Abstract : Previous zircon fission-track ages for the Omachi Tephra (A₁Pm, A₂Pm, A₃Pm: Kato and Danhara, 1987) were re-examined. Age determinations based on zeta age calibration were carried out by both the re-etch method (REM) and the external detector method (EDM), independently by two different systems (observers). It was revealed that zeta value for the REM is 0.7-0.8 times that of EDM because of the difference in track counting efficiencies between zircon and mica detectors for induced-track counts. Compared with the common counting procedure using square grids in an eyepiece, technical defects of 'the total area counting procedure' adopted for the previous dating were also revealed. New ages from each method and each system are statistically consistent but are 30-50% younger than the previous REM ages which were analyzed without age standards. We recommend the determinations of zeta values for each mineral, each method and each system (observer) and the use of fission-track ages calibrated using them.