

T1.2-O6. The effect of structure on the mislocation vectors of Naqu array and the SASC for Naqu array

Naqu array in western China were built by CEA, it run in 2002 and then began to supply waveform data. The earthquakes occurred from 2007-2008 were used in this paper, the mislocation vectors show symmetry axes in their slowness and azimuth components. For the slowness the line of separation is at about 180deg against north. The azimuth pattern shows a symmetry axis perpendicular to the axis in the slowness pattern. Waves arriving from East have a larger slowness, whereas waves from West have a reduced slowness. Waves arriving from North have an anticlockwise mislocation vectors, whereas waves from South have a clockwise mislocation vectors. This phenomenon could be interpreted as the effect of low-velocity sediments below the array according to Kruger and M.Weber (1992). Previous papers also agree to this result. To approve the mislocation vectors of Naqu array, the paper applied SASC (slowness-azimuth correction) to enhance the location accuracy of this array. After correction, the single array location ability was clearly improved and the standard deviations of back-azimuth and slowness residuals drop from 27.1 to 10.1° and from 8.97 to 0.08 s/° respectively for Naqu. The improvement is 82.2% in back-azimuth and 93.5% in slowness location after SASC.

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