P-wave travel time residuals were computed for all PDE events in the 20 degree to 100 degree distance range and the statistics of these results are shown in Table 4. Predicted P arrival times were computed using the same travel time tables as were used for locating events. No station corrections were applied and there were no corrections for earth ellipticity. Figure 20 shows the time residuals for station KIV as a function of station to event azimuth and a histogram of the travel time residuals. As can be seen in this figure, the distribution is not symmetric which is due, at least in part, to a bias function of travel time residual as a function of azimuth which tends to increase the standard deviation

Table 4. CNET travel time residuals for PDE events between 20˚ and 100˚

Station	Mean	Stand Deviation	Number
GUM	3.06	1.30	147
KIV	3.06	1.43	192
KUB	3.05	2.12	63
MIC	3.19	1.18	33
NAG	2.83	1.20	108

Figure 21 shows P travel time residuals for all stations as a function of time. We can see that there are no apparent time dependencies in the travel time residuals. The azimuthal travel time dependency along with the bimodal probability distribution shown in Figure 20 indicate possible geographical dependencies of the travel time residuals. Figure 22 shows the PDE events recorded at KIV which are color coded by the residual. We can clearly see strong geographical variations in the residual with the Northwestern Pacific Rim exhibiting slow travel paths while the East Indies residuals are closer to zero.

6.2 Magnitude Threshold Characteristics

Preliminary Mb magnitude threshold estimates for CNET can be made using this catalog. The simplest way of showing the CNET magnitude threshold is in a magnitude-distance plot which is shown in Figure 23. In this figure squares are events that were not in the PDE catalog and triangles are events that were in the PDE catalog. Another more quantitative way to show magnitude threshold characteristics is in number of event histogram plots which are shown in Figure 24 as separate distance and magnitude functions. From these figures we can see that the Mb magnitude threshold at 2 degrees distance is probably about 3.0 and the Mb 4.5 threshold is at about 5 degrees distance.