

Figure 3: Example of the good (left) and poor (right) fit of the synthetics to the data. Both synthetics and data were filtered with the same bandpass filter between 0.05 and The event 3105604 (SCEC catalogue) had magnitude 3.7 and located at  $34.29^{\circ}$ N and  $117.48^{\circ}$  . Event 7042960 had magnitude 3.8 and is located at  $33.91^{\circ}$ N  $117.14^{\circ}$ W. In judging the fit, shifts within the source waveform were not considered significant (at this time), because of uncertainties in the source time function of the synthetics.



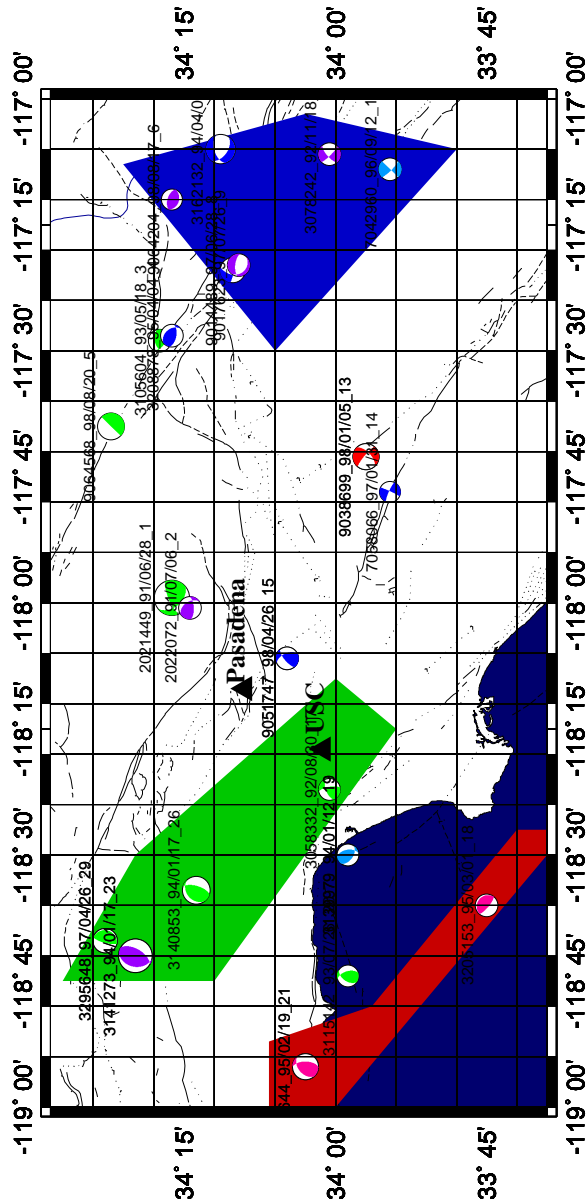


Figure 5: Fit of the maximum amplitude on the synthetic seismograms to the data. The green color denotes correct amplitude (within the 503208878) denotes earthquakes with underestimated amplitude at both USC and Pasadena. The red mechanism of 9038699 denotes overestimated amplitude at both Pasadena and USC stations. Pink mechanisms (e.g. 3205153) denote overestimated amplitude only at USC. The violet beach balls show underestimated amplitude y at Pasadena only, while the light-blue color denotes underestimated amplitude at USC only. The colored areas show our interpretation of the results: the green area highlights fair part of the velocity model where as the red area shows a part of the model from which amplitudes are overestimated and the blue color represents part of the model which causes to underestimate the amplitudes.

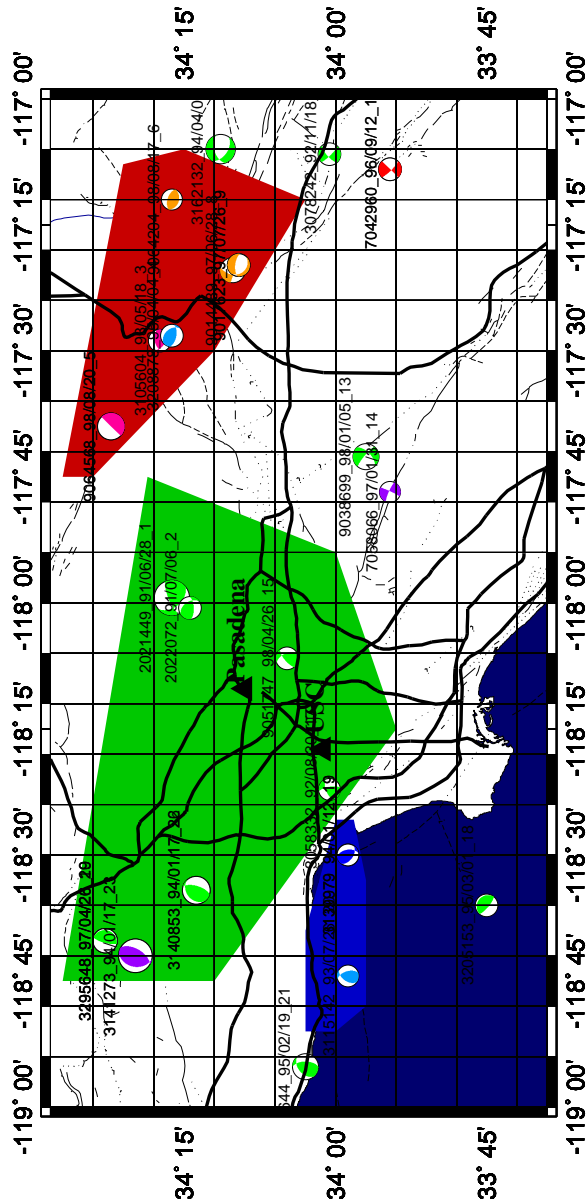


Figure 6: Fit of the coda on the synthetic seismograms to the data. The green color denotes approximately same character of coda. The blue color (e.g. 3208878) denotes earthquakes with underestimated coda at both USC and Pasadena. The red mechanism of 7042960 denotes overestimated coda at both Pasadena and USC stations. Pink mechanisms (9064568) denotes overestimated coda only at USC, violet beach balls show underestimated coda at Pasadena only, and the light-brown color denotes overestimated coda at the PAS station only. The colored areas show our interpretation of the results: the green area highlights fair part of the velocity model whereas the red area shows a part of the model with too complex velocity structure and the blue color represents part with underestimated complexity of the model.