Appendix B Results using Uniform Hypocenter Distribution

B.1 REVERSE RUPTURE RESULTS

B.1.1 Changes in the Mean of the Log Normal 5% Damped Pseudo-Spectral Acceleration

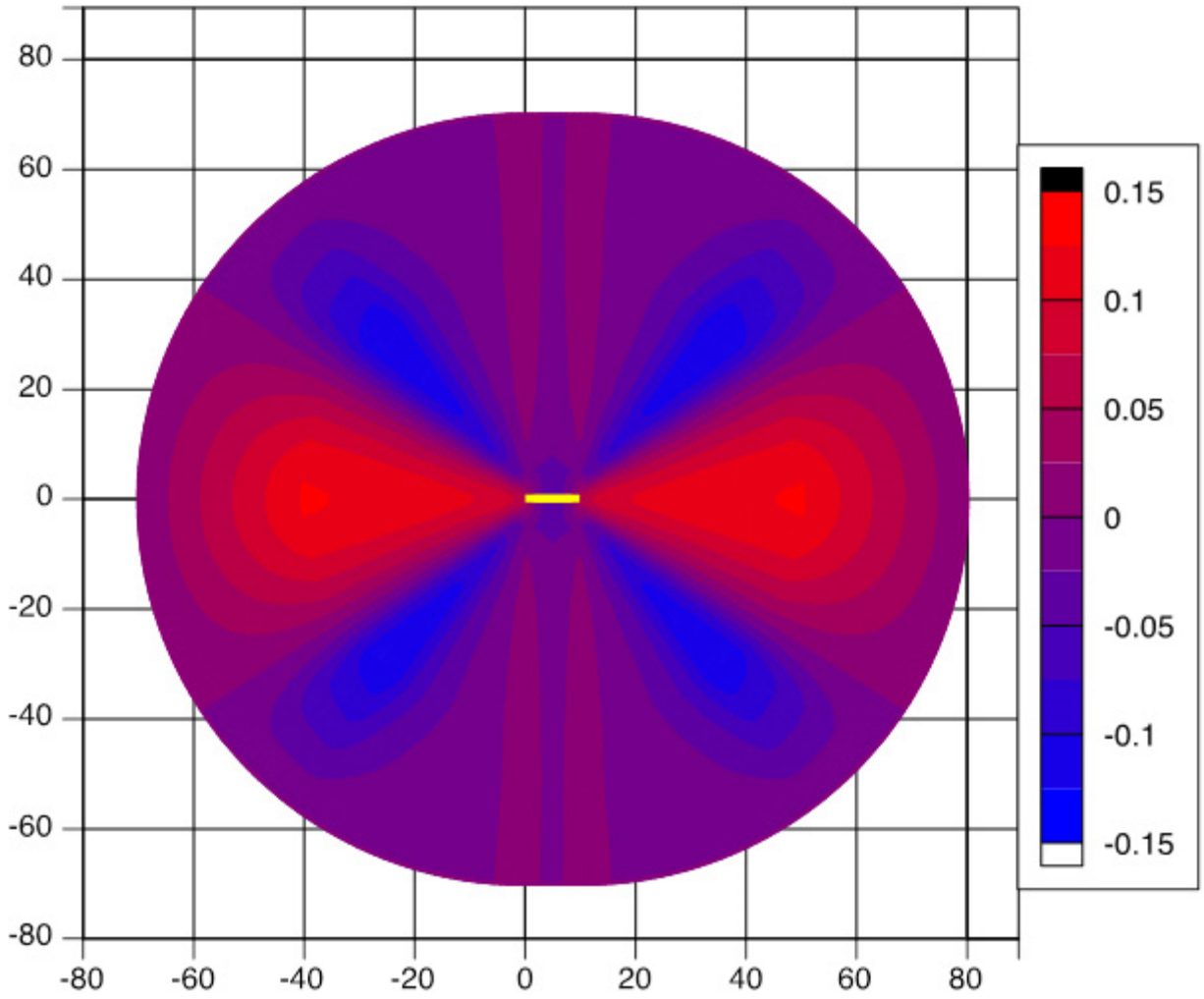

Figure B.1 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture.**

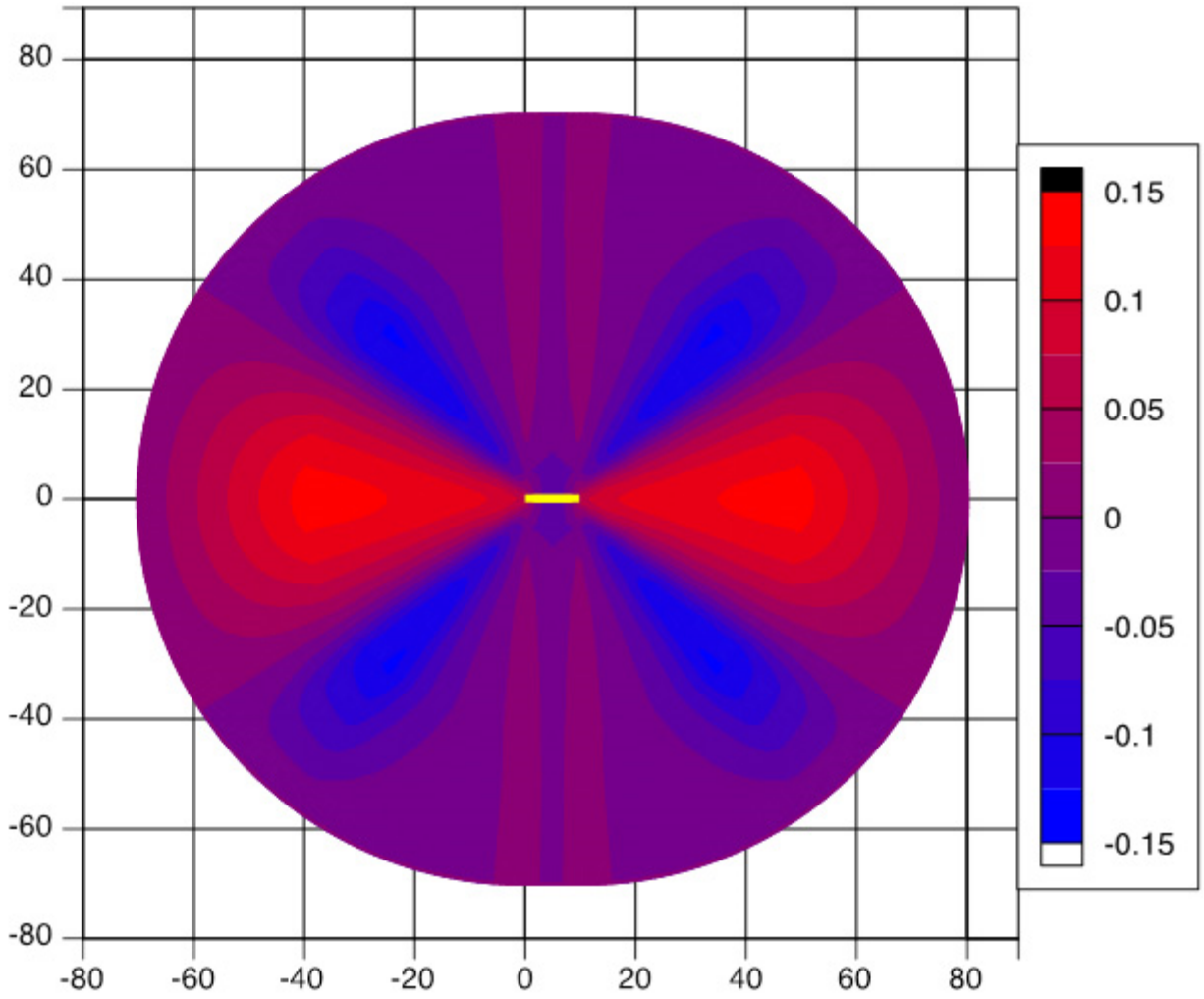

Figure B.2 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture.**

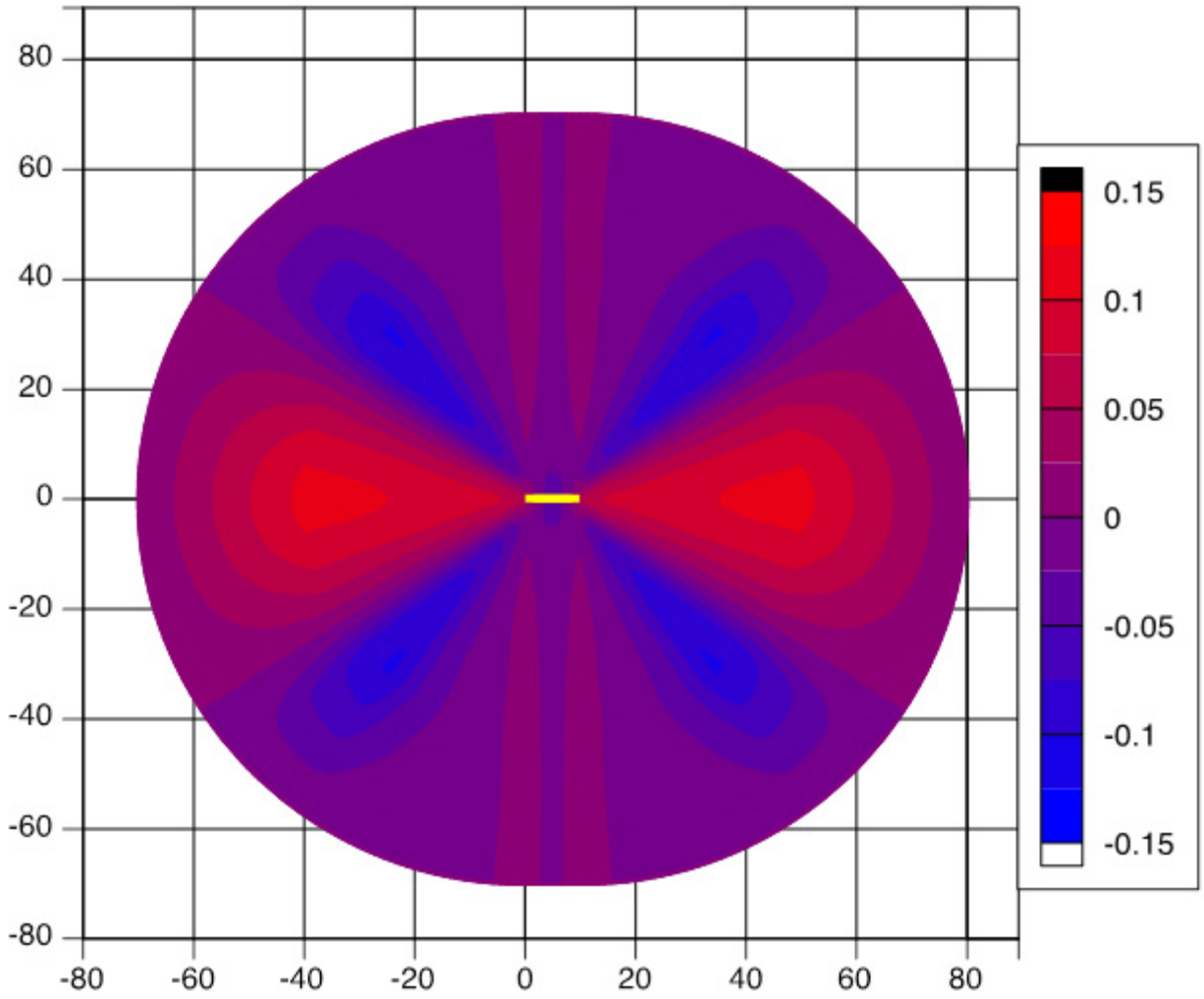

Figure B.3 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, strike–slip rupture.**

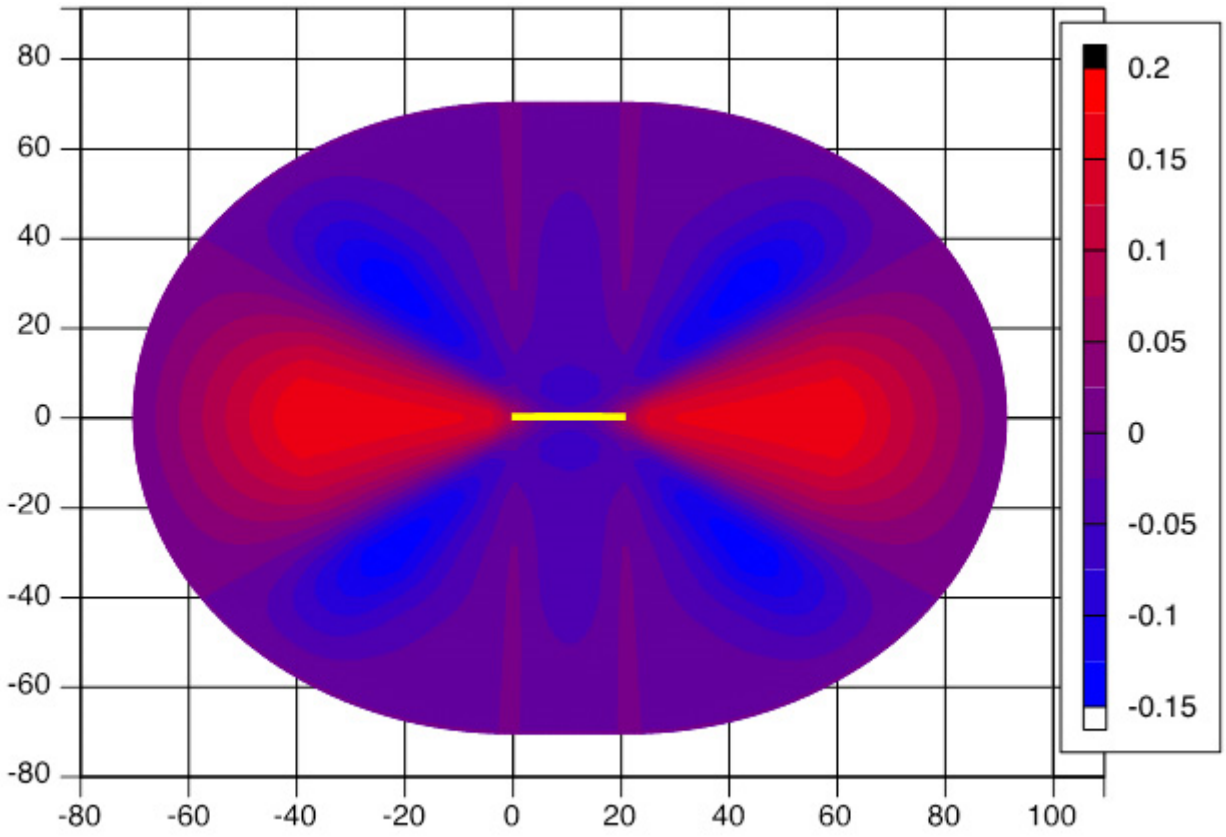

Figure B.4 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture.**

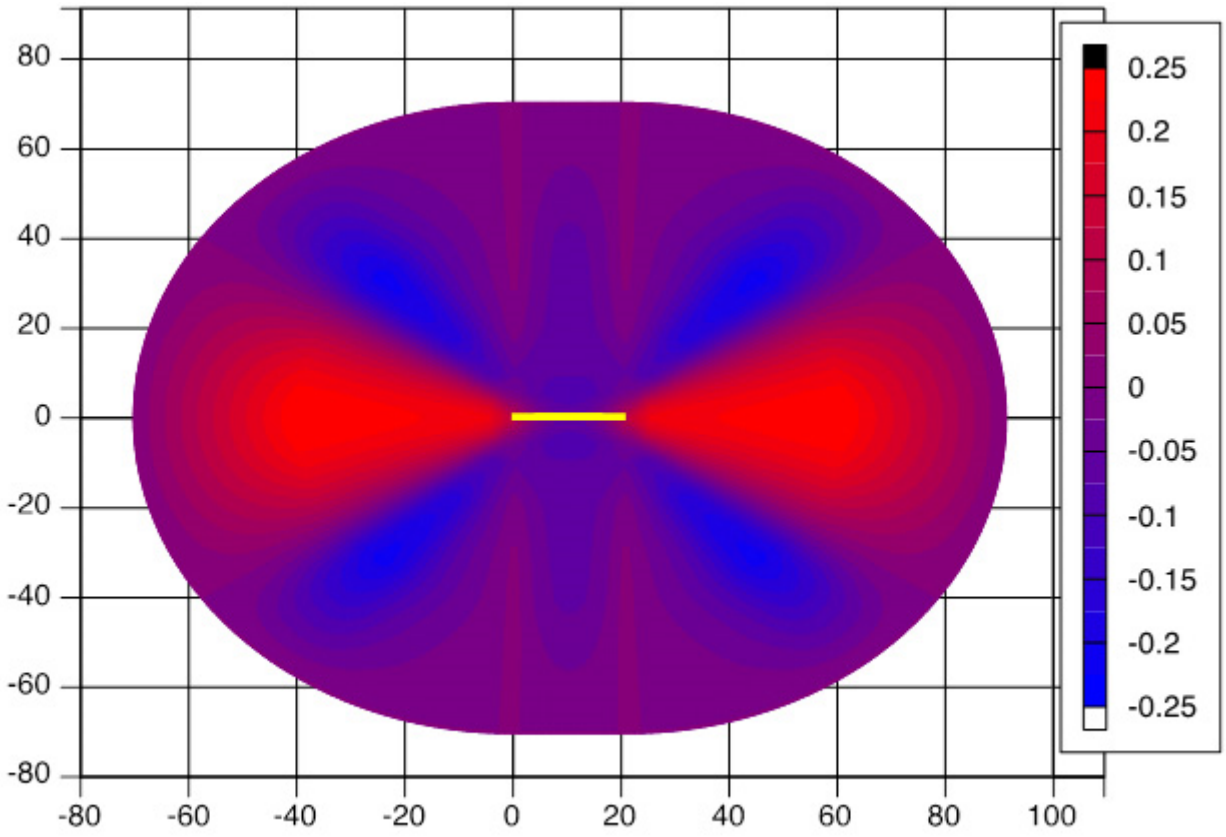

Figure B.5 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture.**

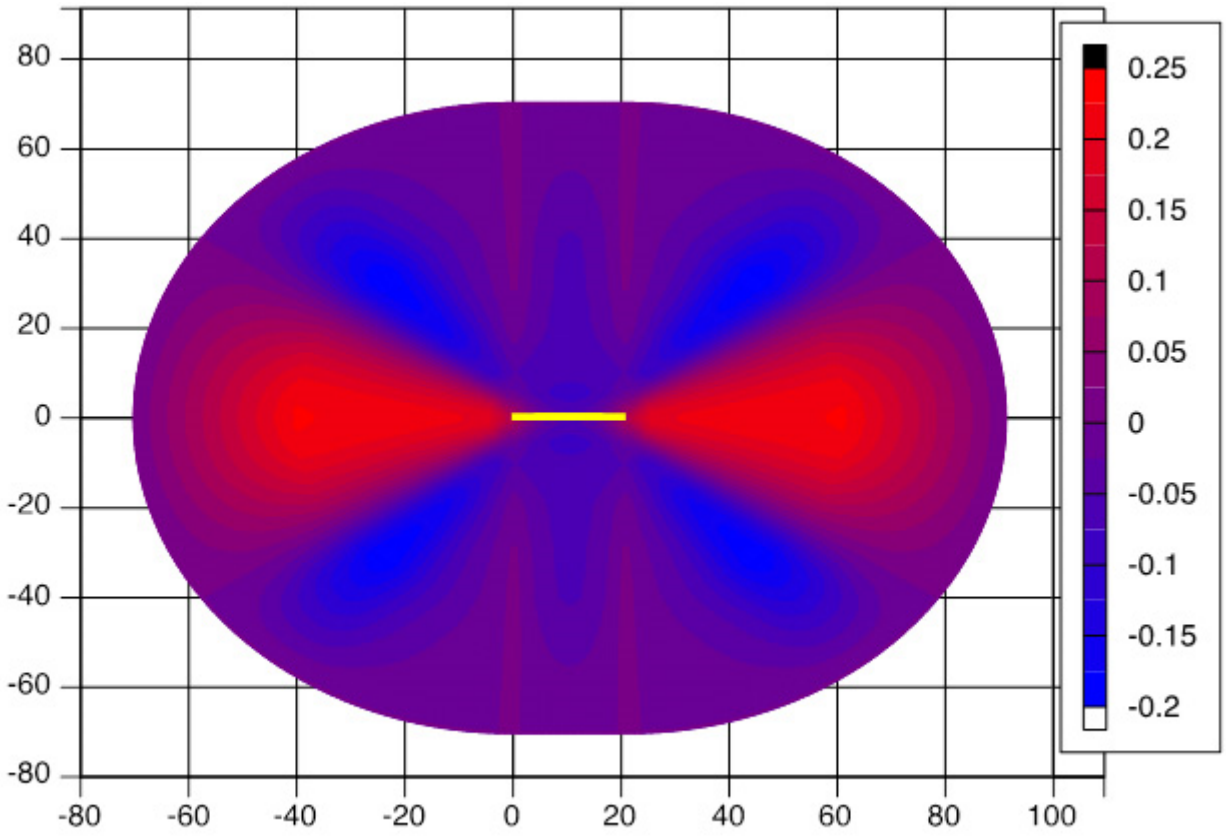

Figure B.6 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture.**

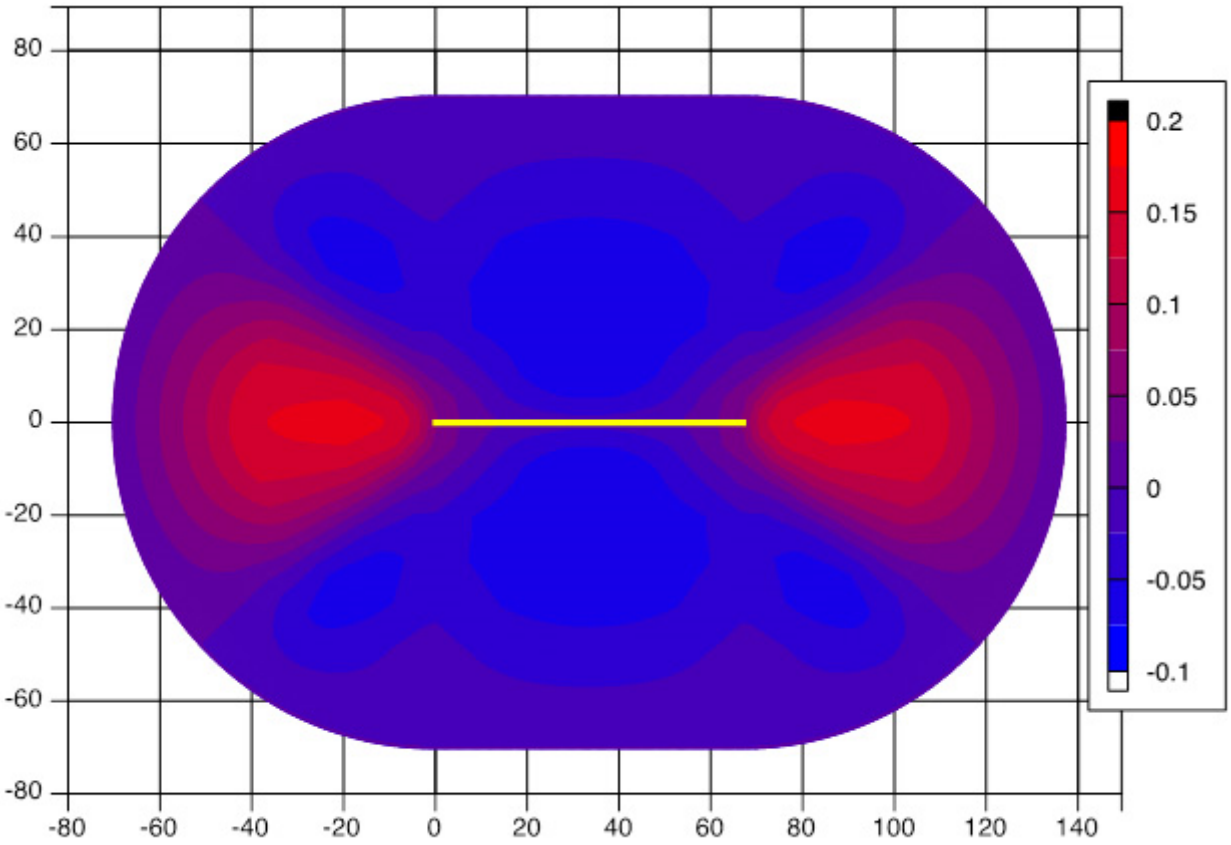

Figure B.7 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture.**

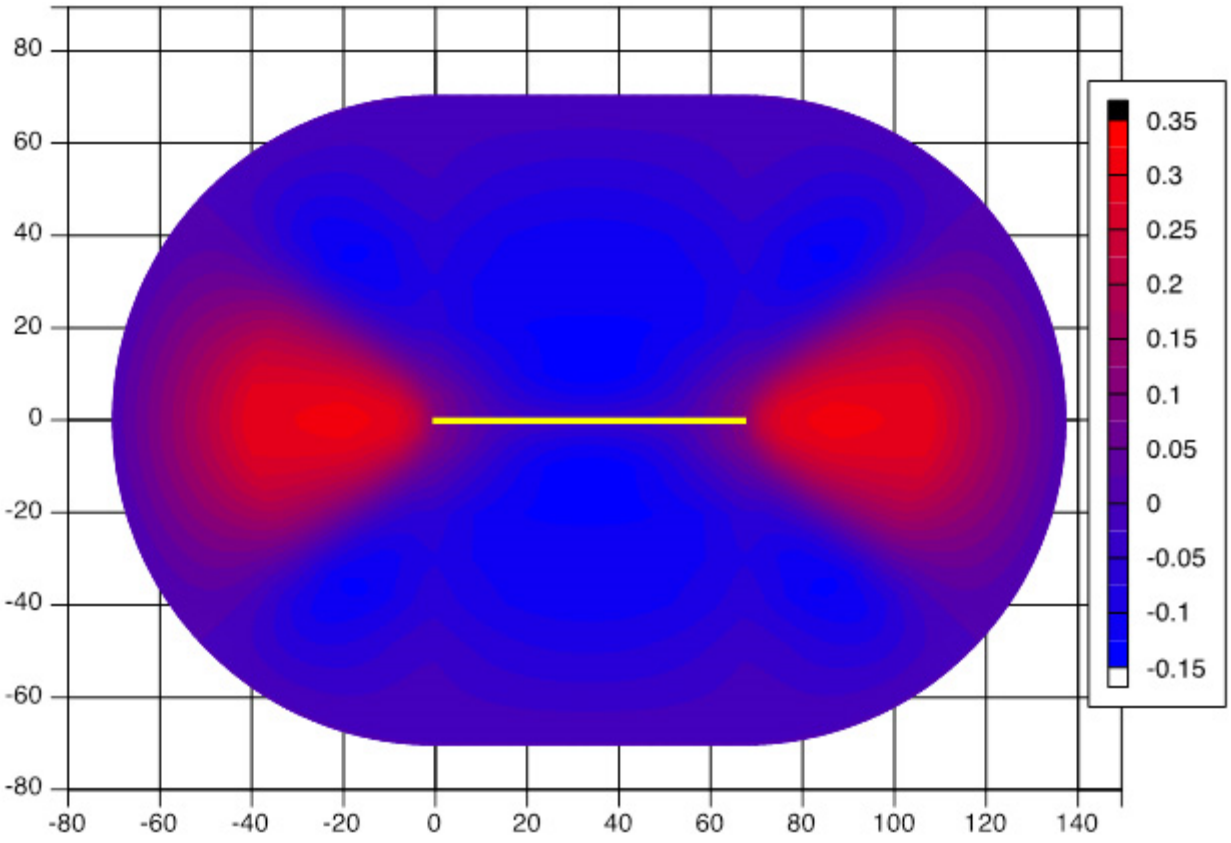

Figure B.8 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture.**

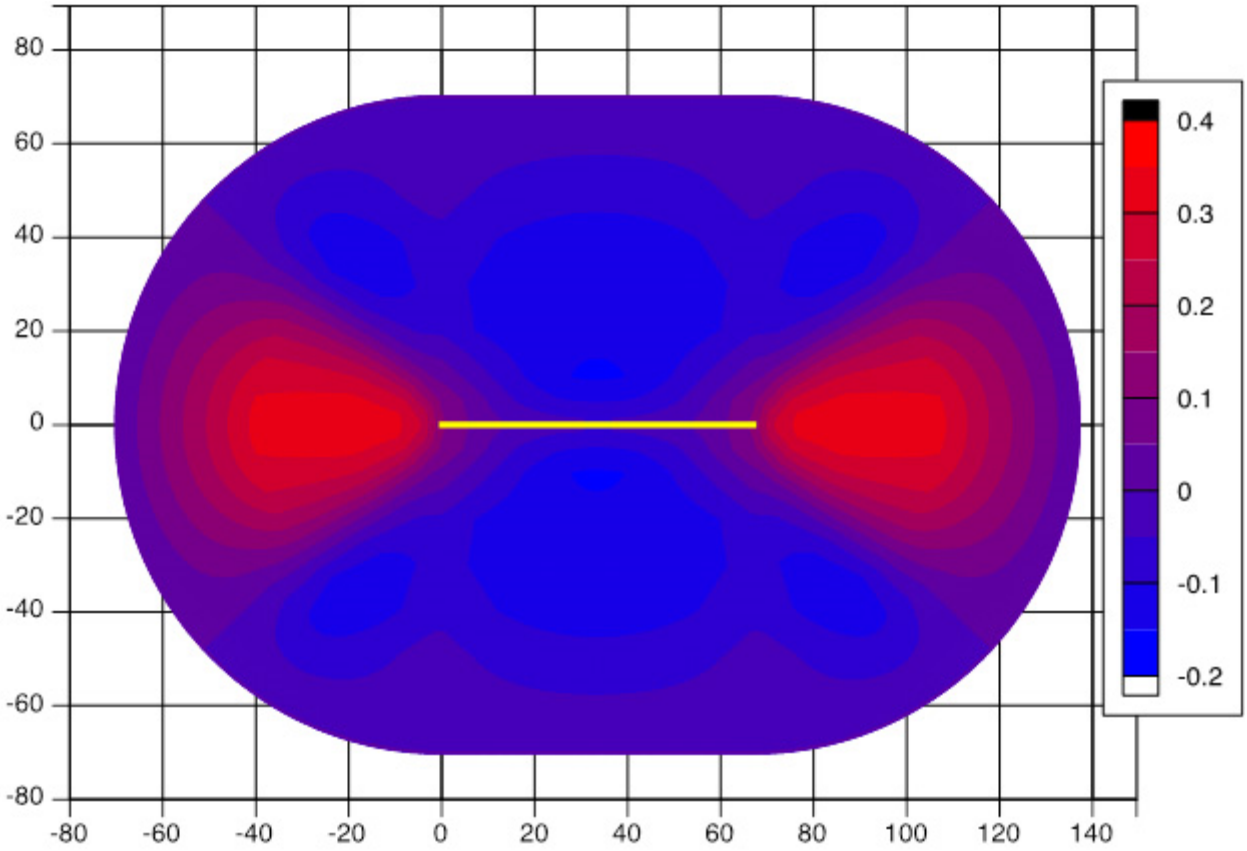

Figure B.9 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture.**

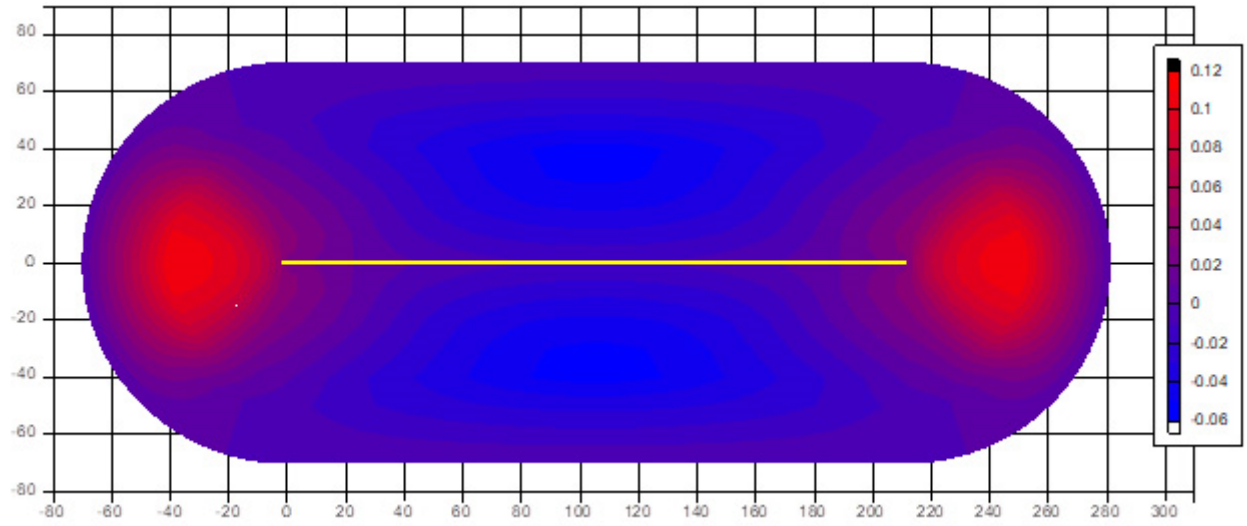

Figure B.10 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture.**

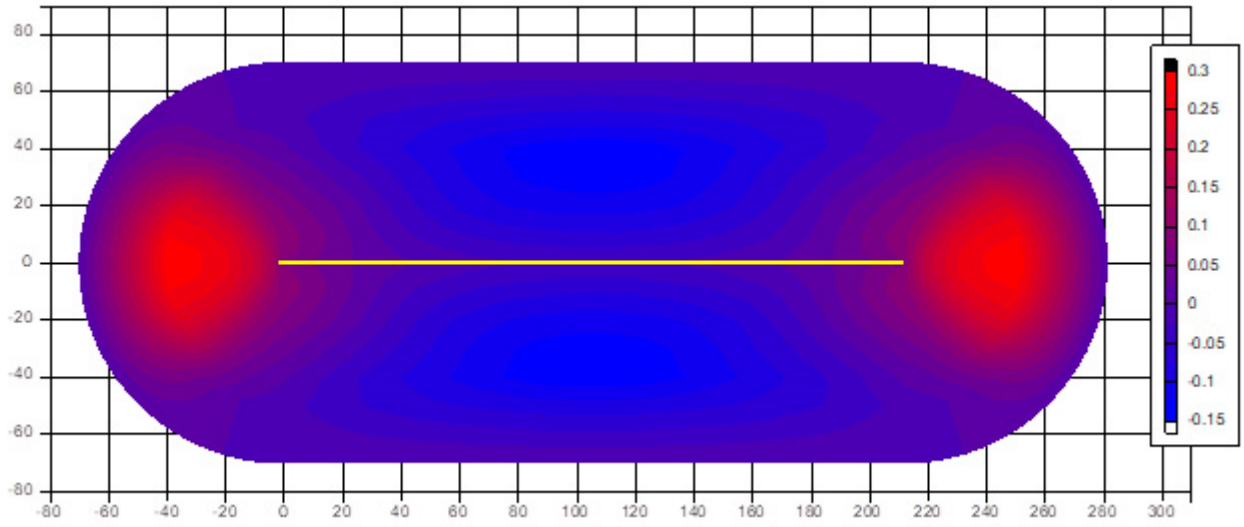

Figure B.11 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture.**

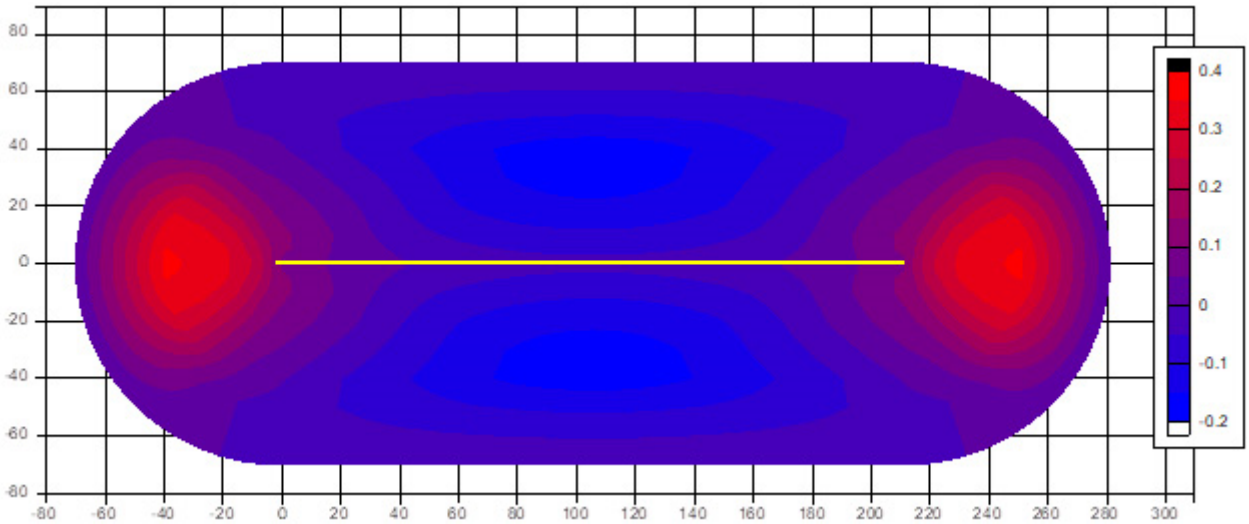

Figure B.12 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture.**

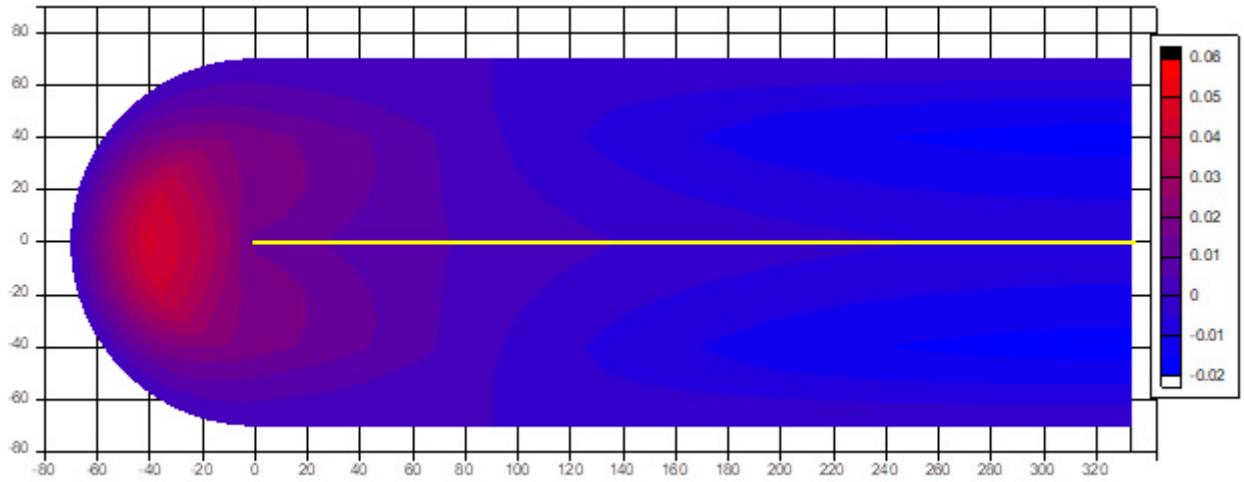

Figure B.13 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture.**

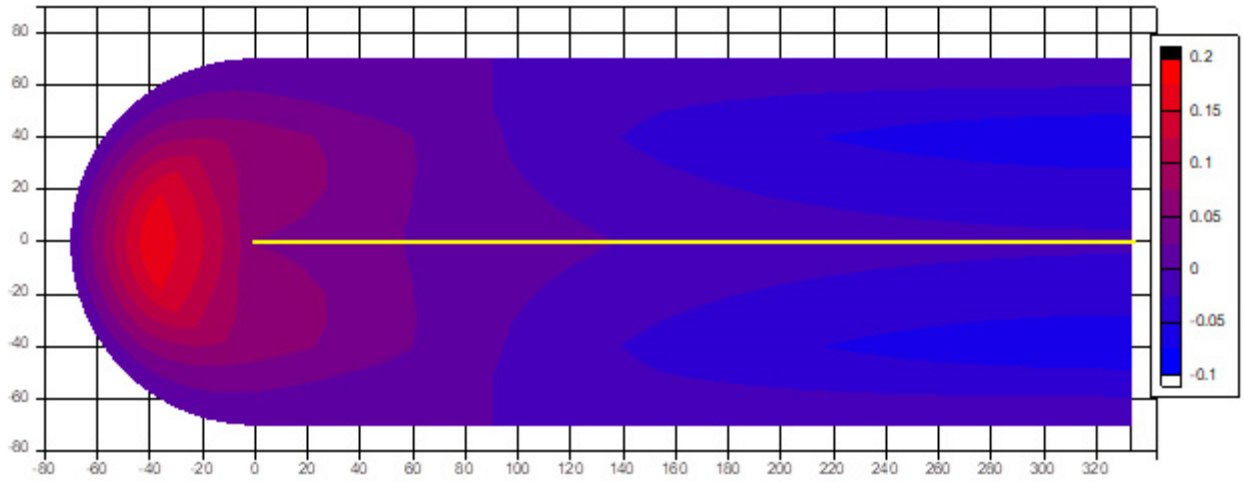

Figure B.14 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture.**

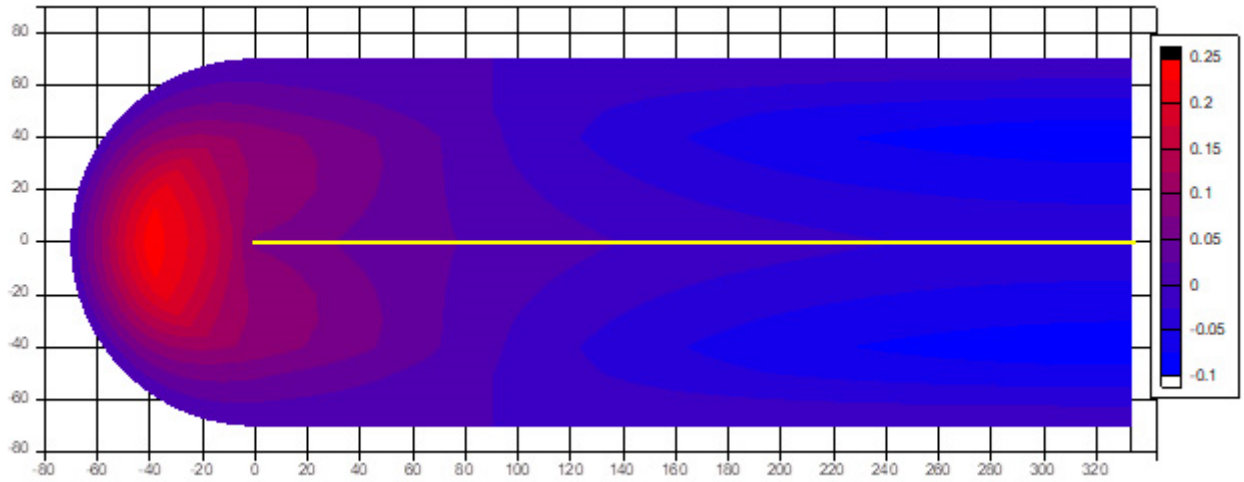

Figure B.15 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture.**

B.1.2 Changes in the Standard Deviation of the Log Normal 5% Damped Pseudo-Spectral Acceleration

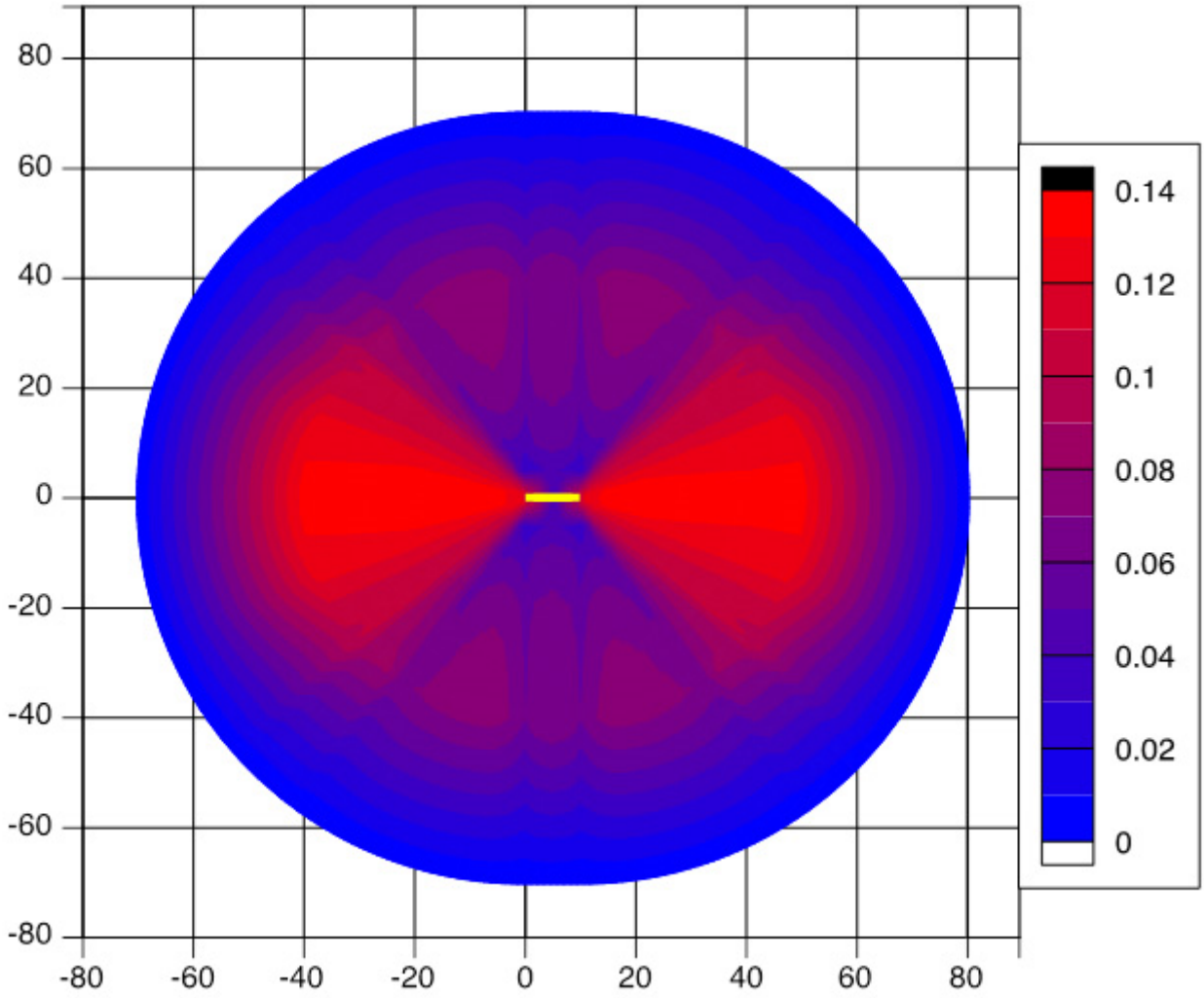

Figure B.16 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, strike–slip rupture.**

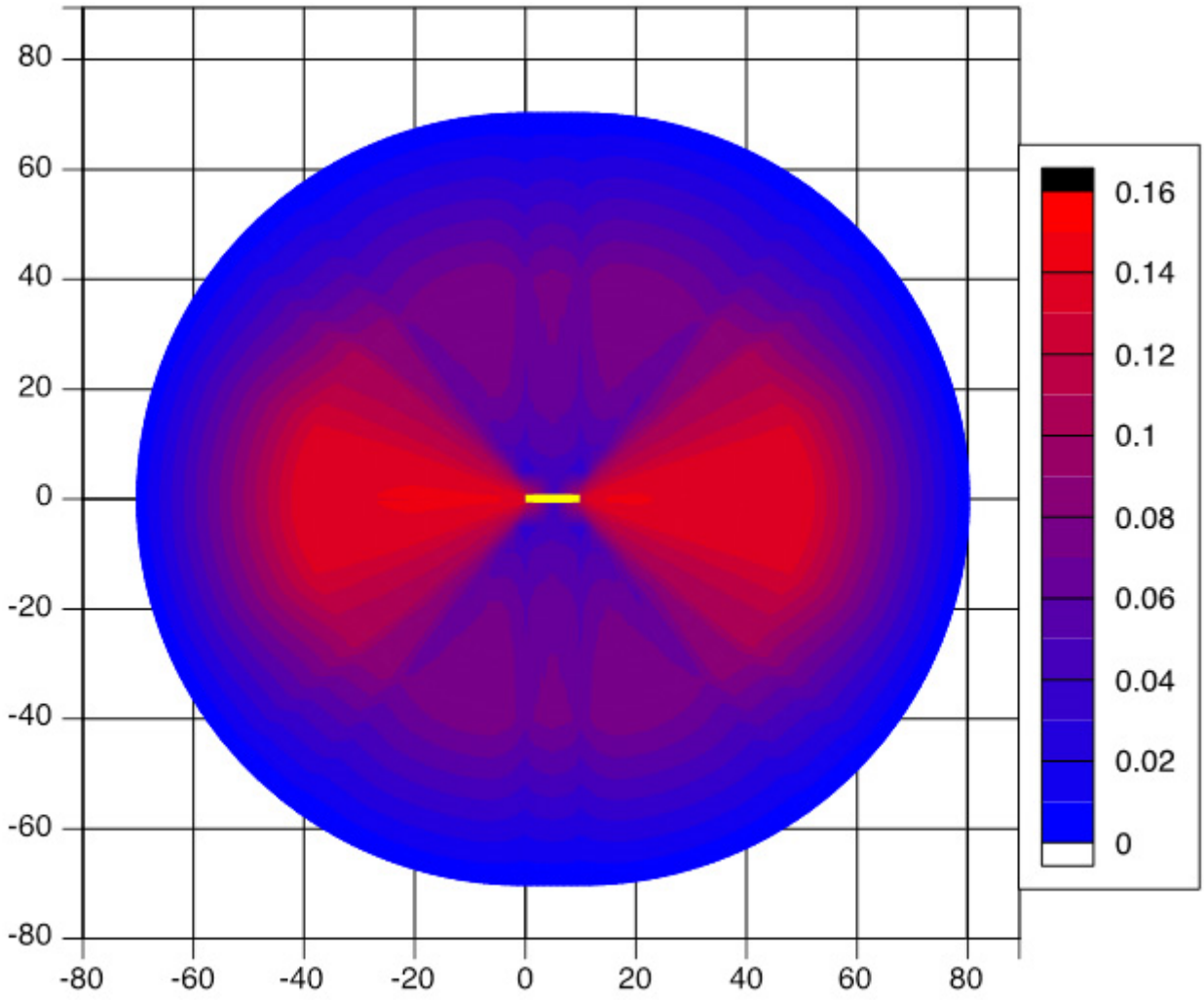

Figure B.17 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, strike–slip rupture.**

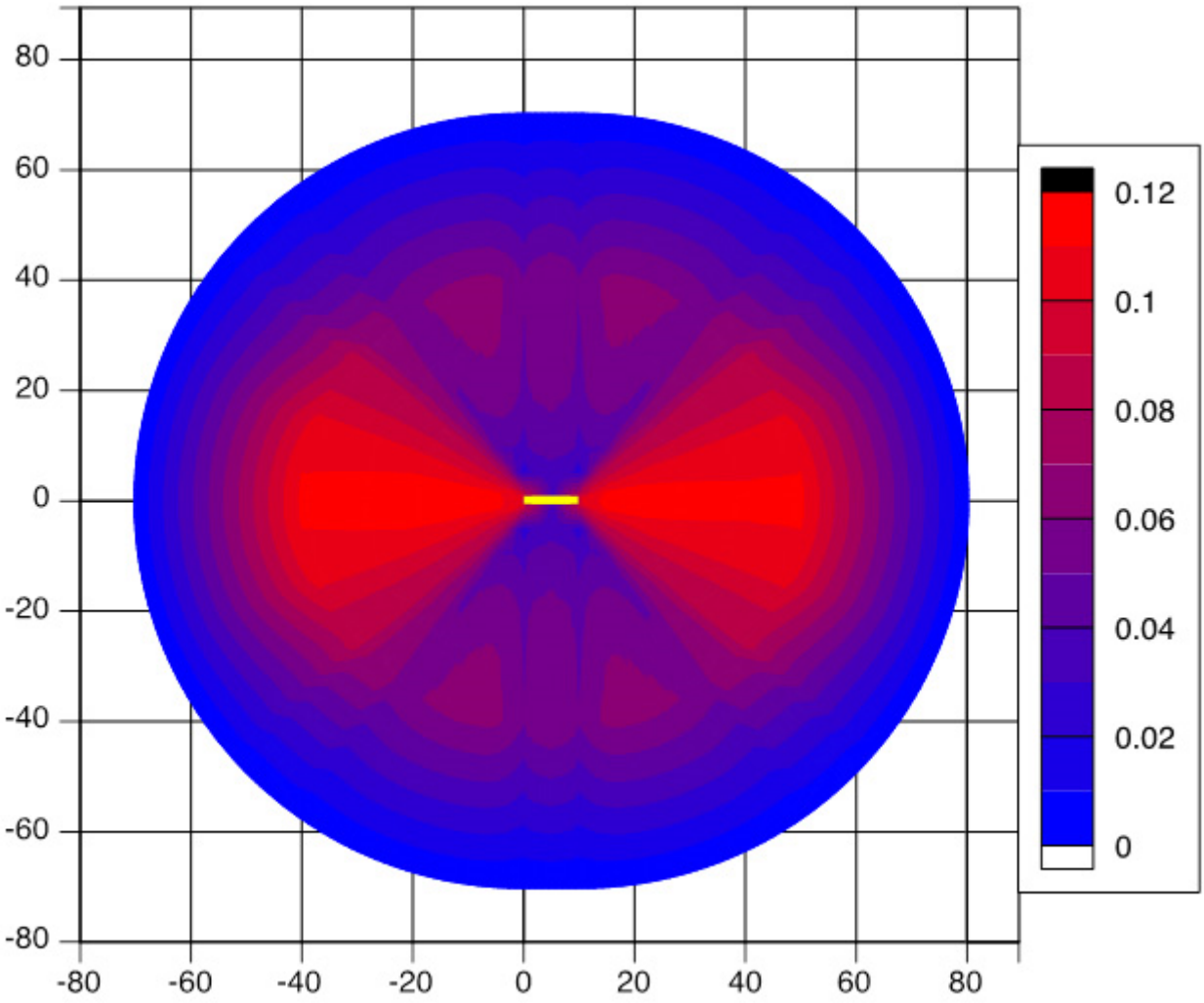

Figure B.18 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, strike–slip rupture.**

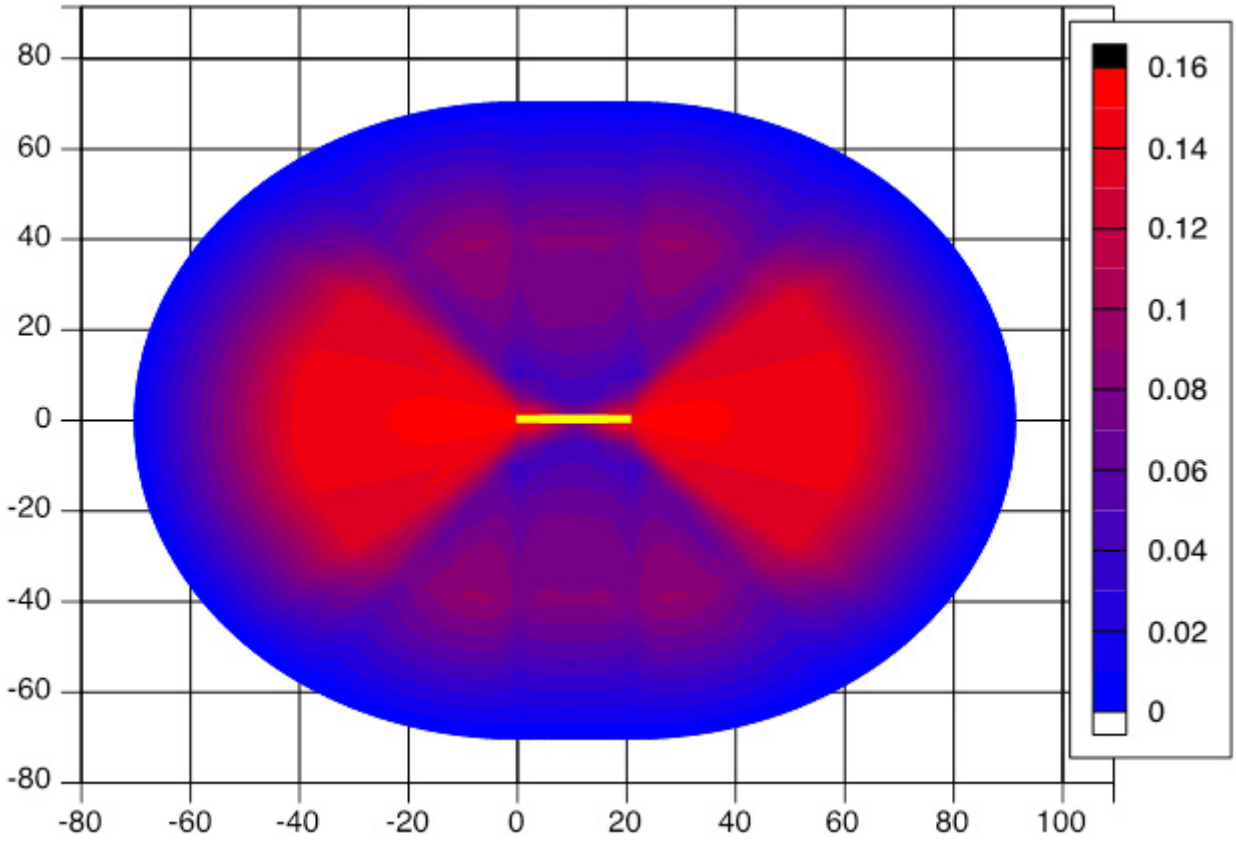

Figure B.19 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture.**

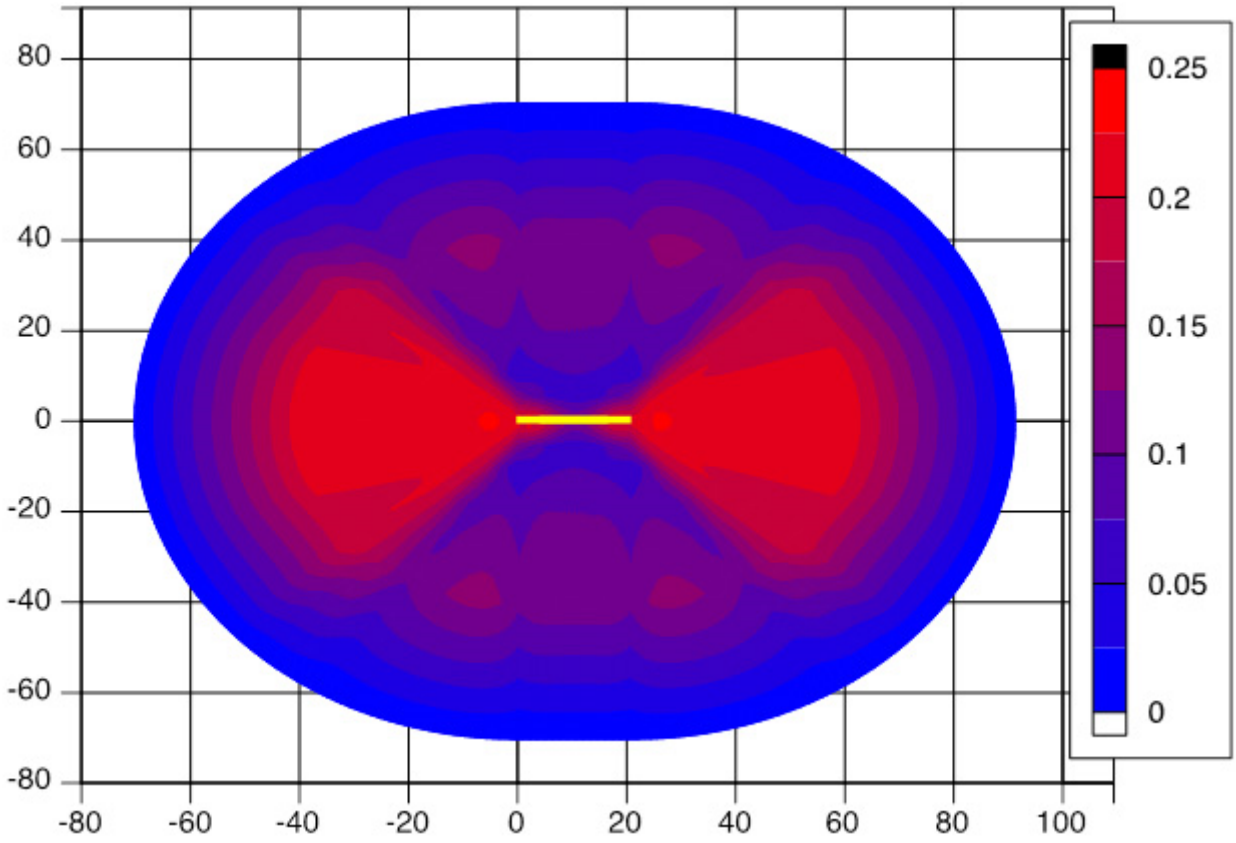

Figure B.20 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture.**

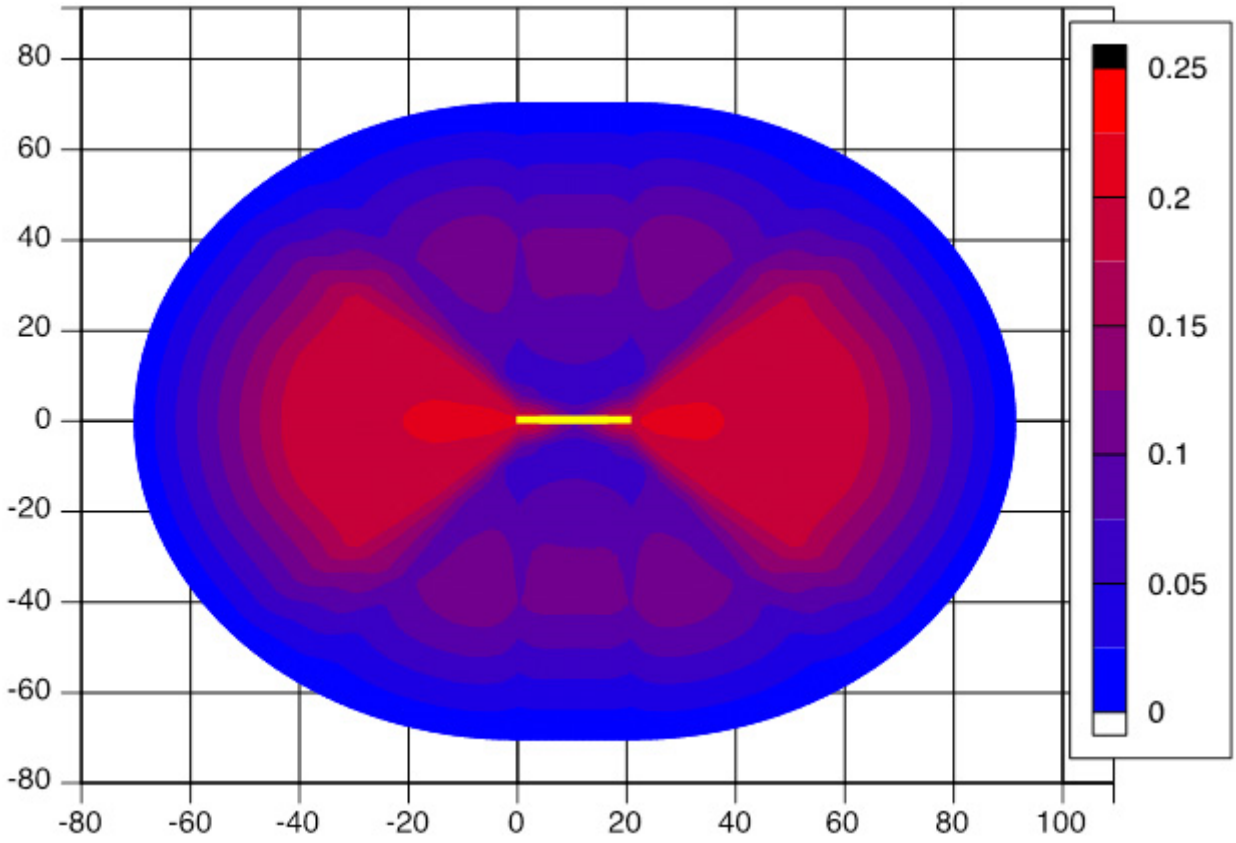

Figure B.21 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture.**

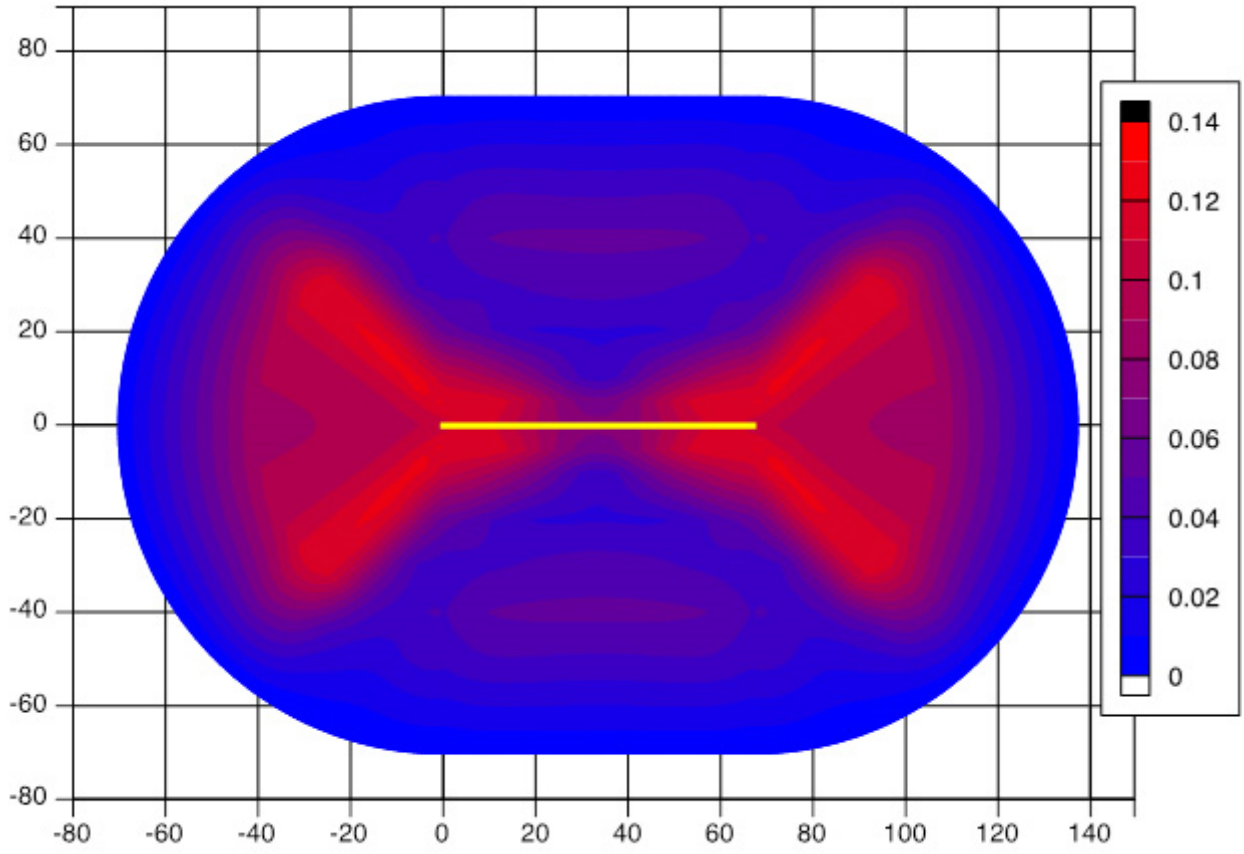

Figure B.22 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture.**

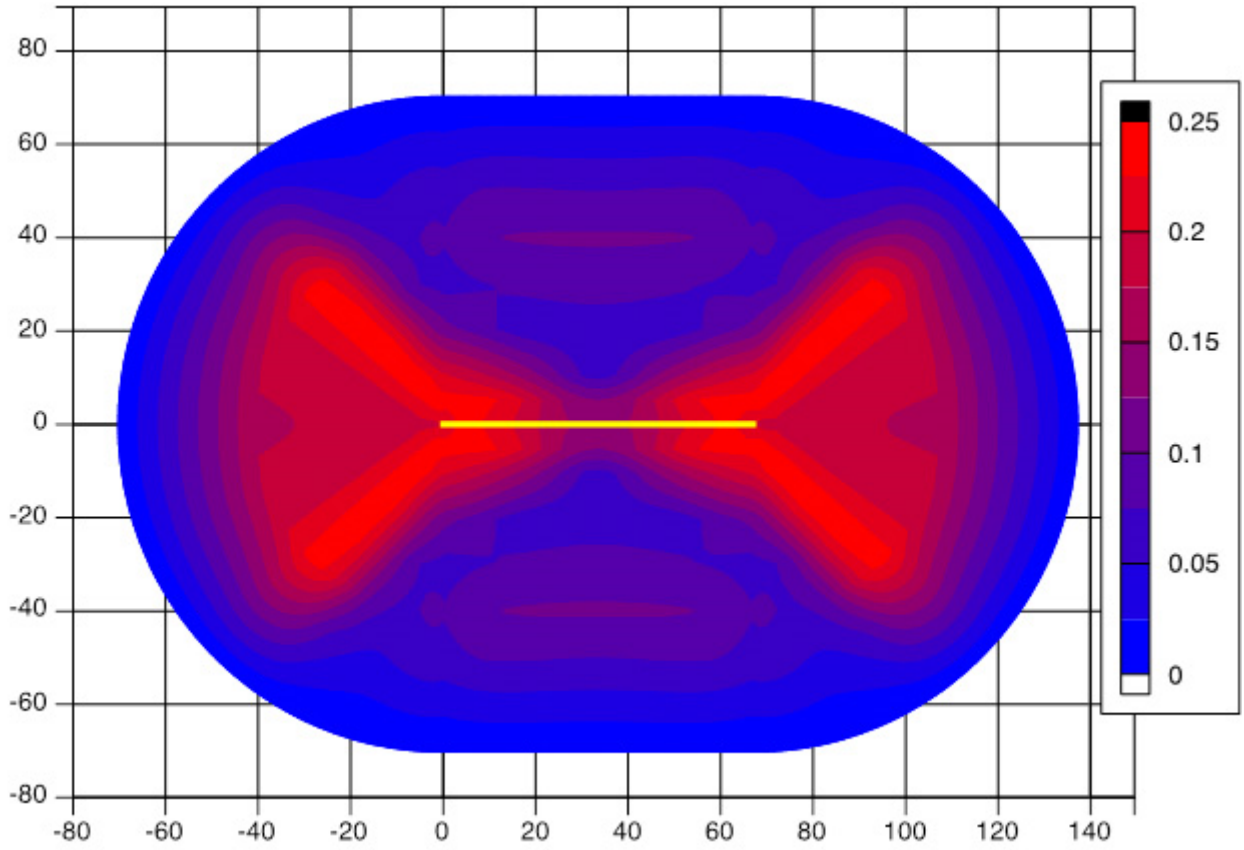

Figure B.23 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture.**

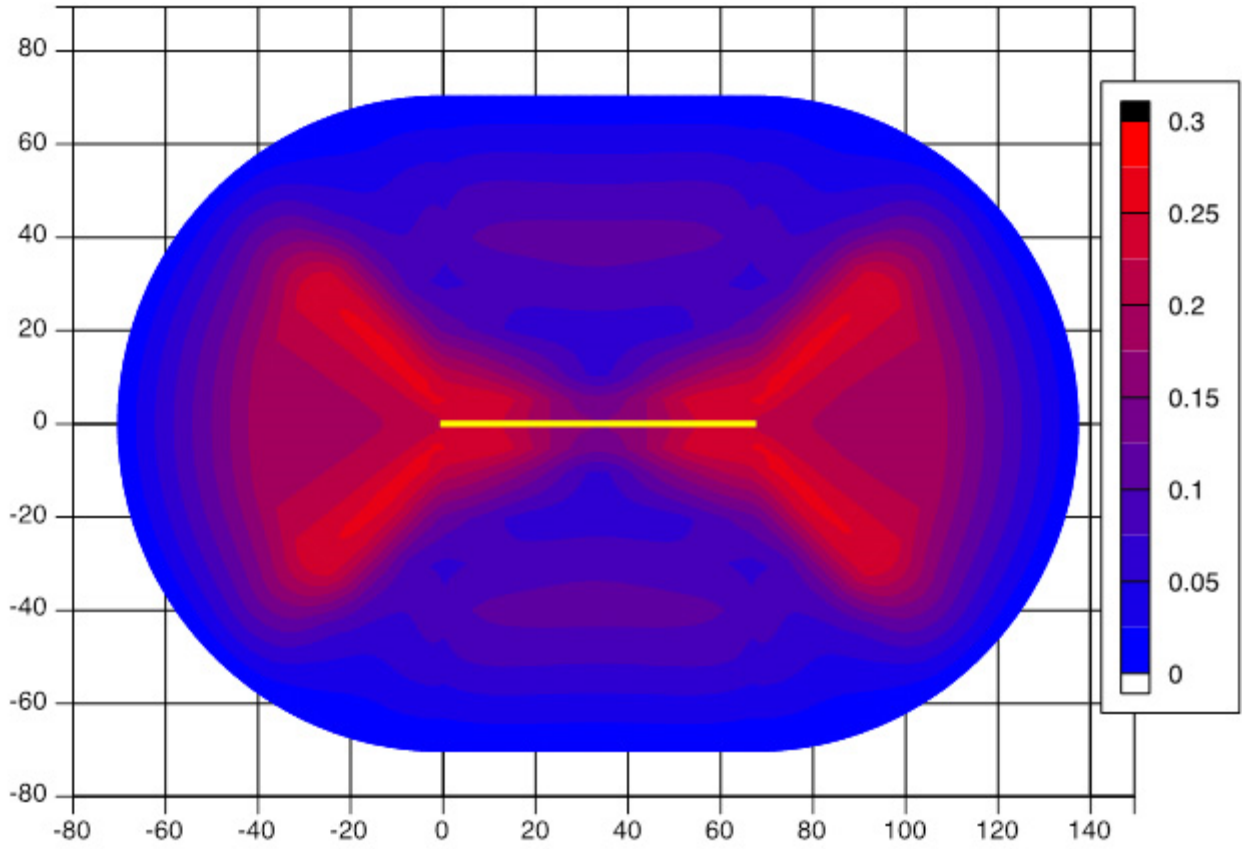

Figure B.24 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture.**

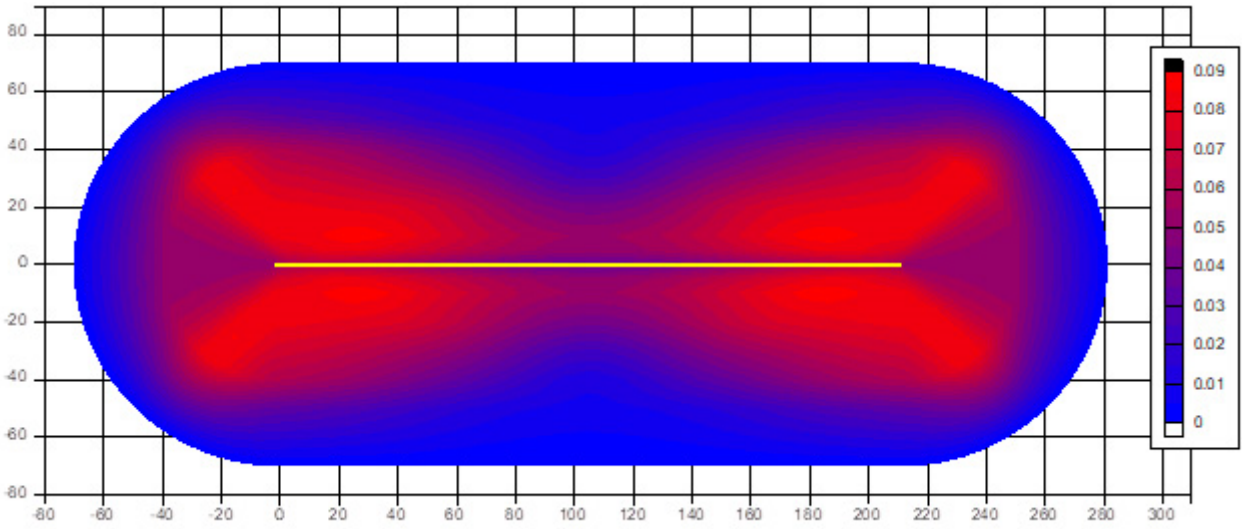

Figure B.25 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture.**

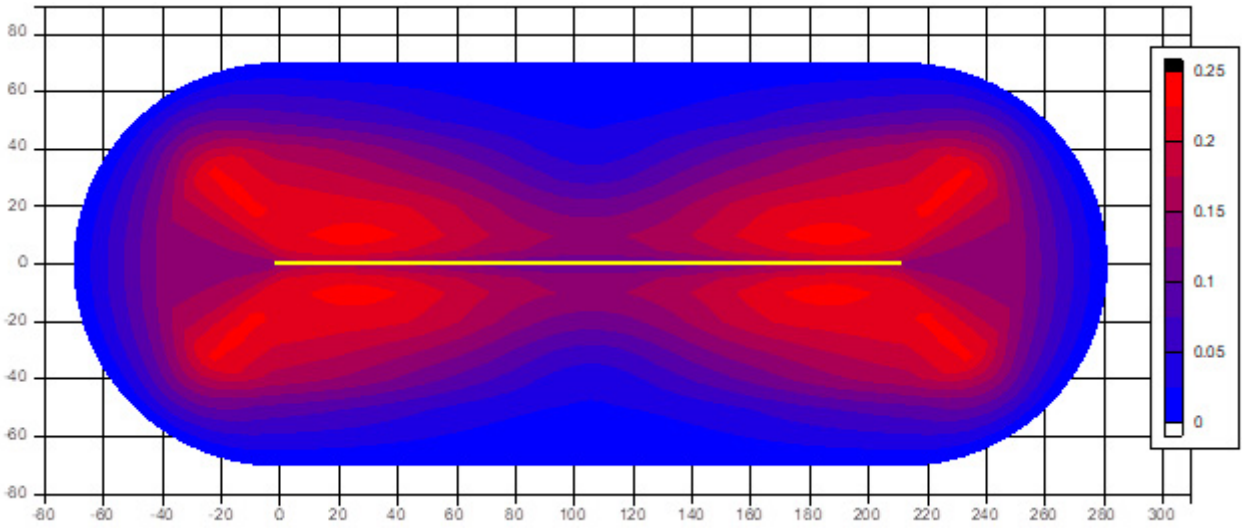

Figure B.26 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture.**

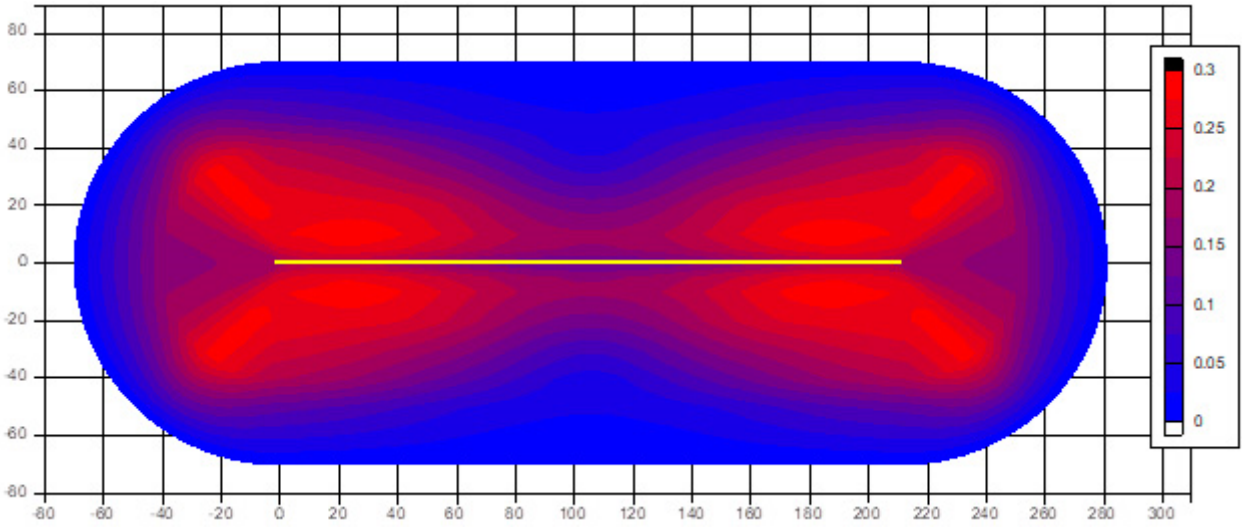

Figure B.27 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture.**

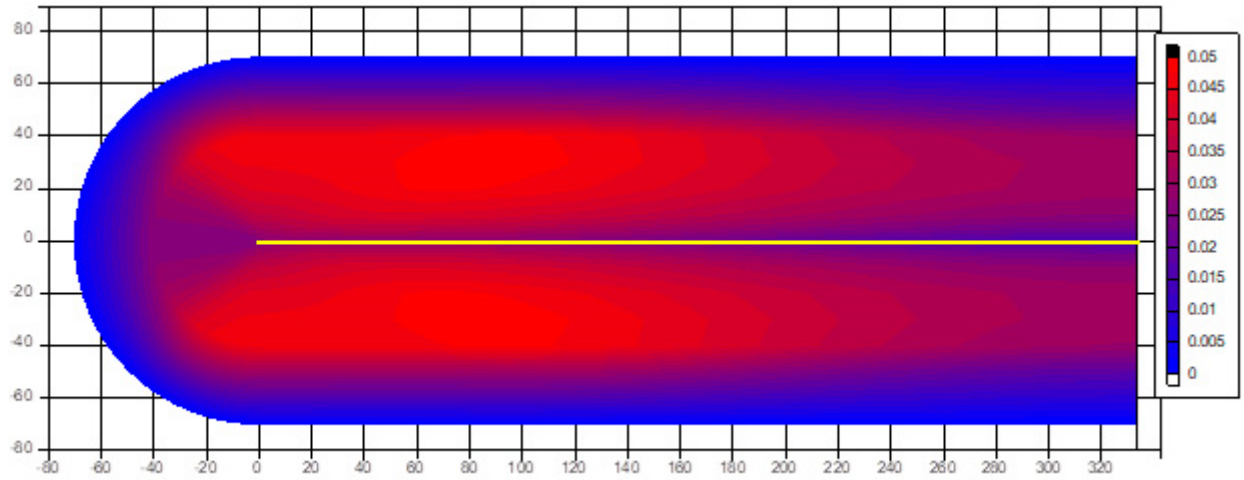

Figure B.28 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture.**

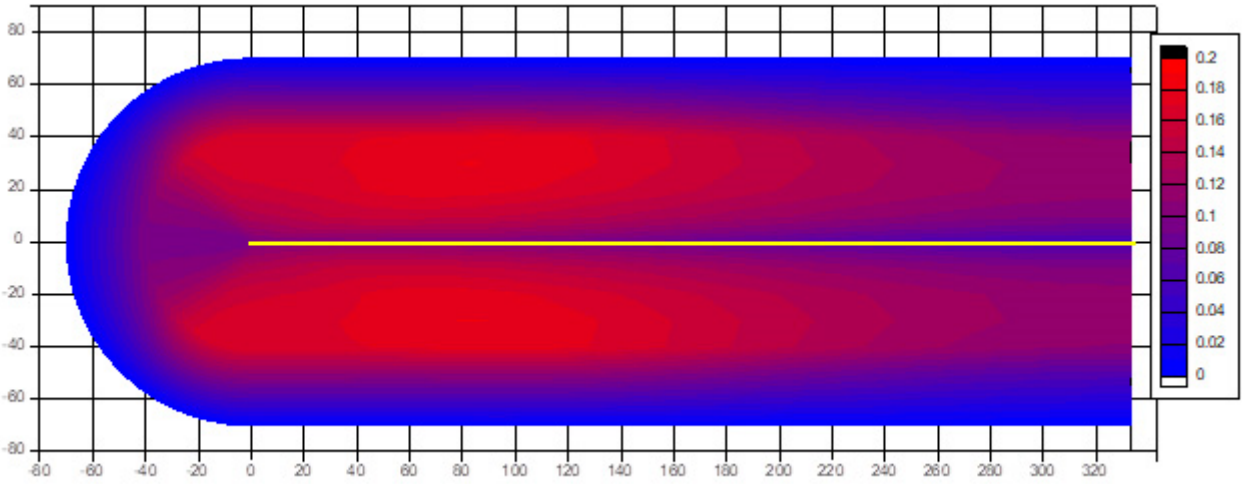

Figure B.29 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture.**

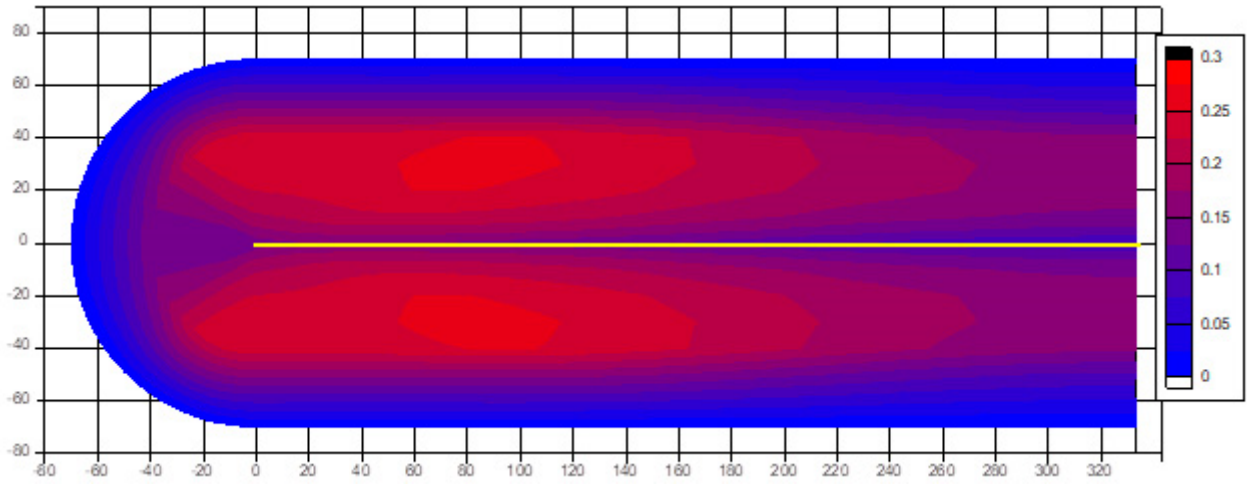

Figure B.30 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture.**

B.1.3 Changes in the Standard Deviation of the Log Normal 5% Damped Pseudo-Spectral Acceleration with ϕ_2 Reduction

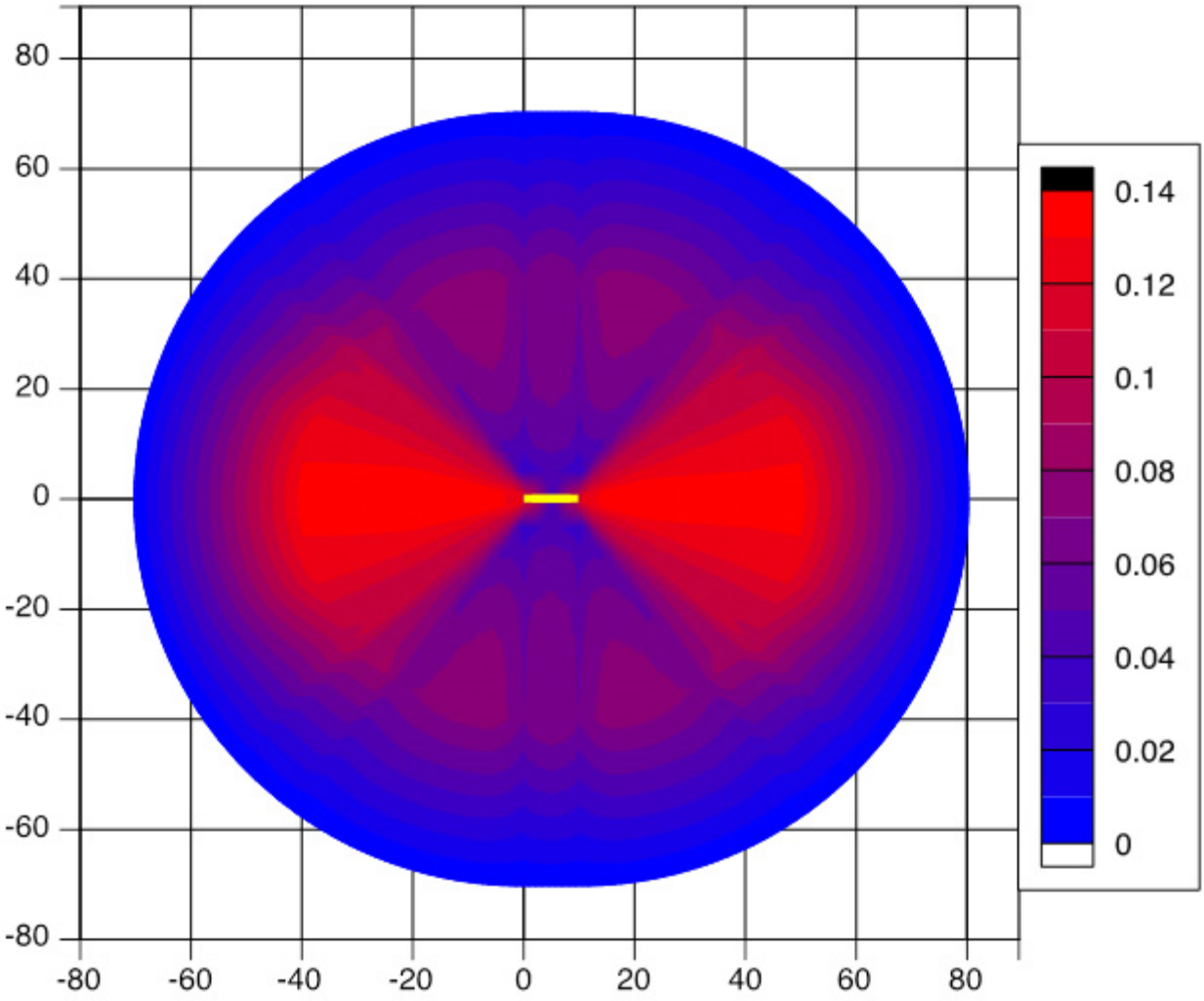

Figure B.31 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, strike–slip rupture with ϕ_2 reduction.**

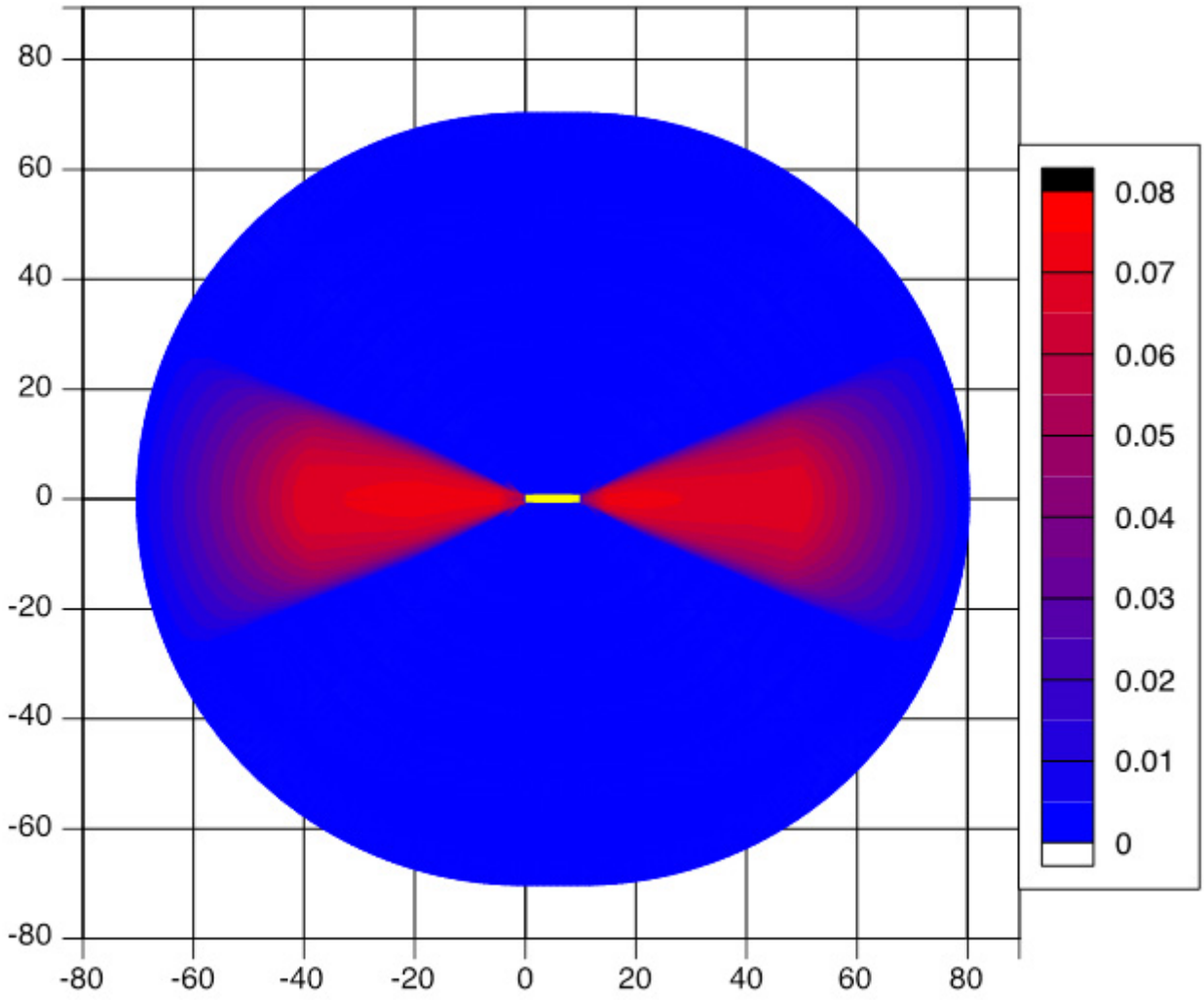

Figure B.32 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, strike–slip rupture with ϕ_2 reduction.**

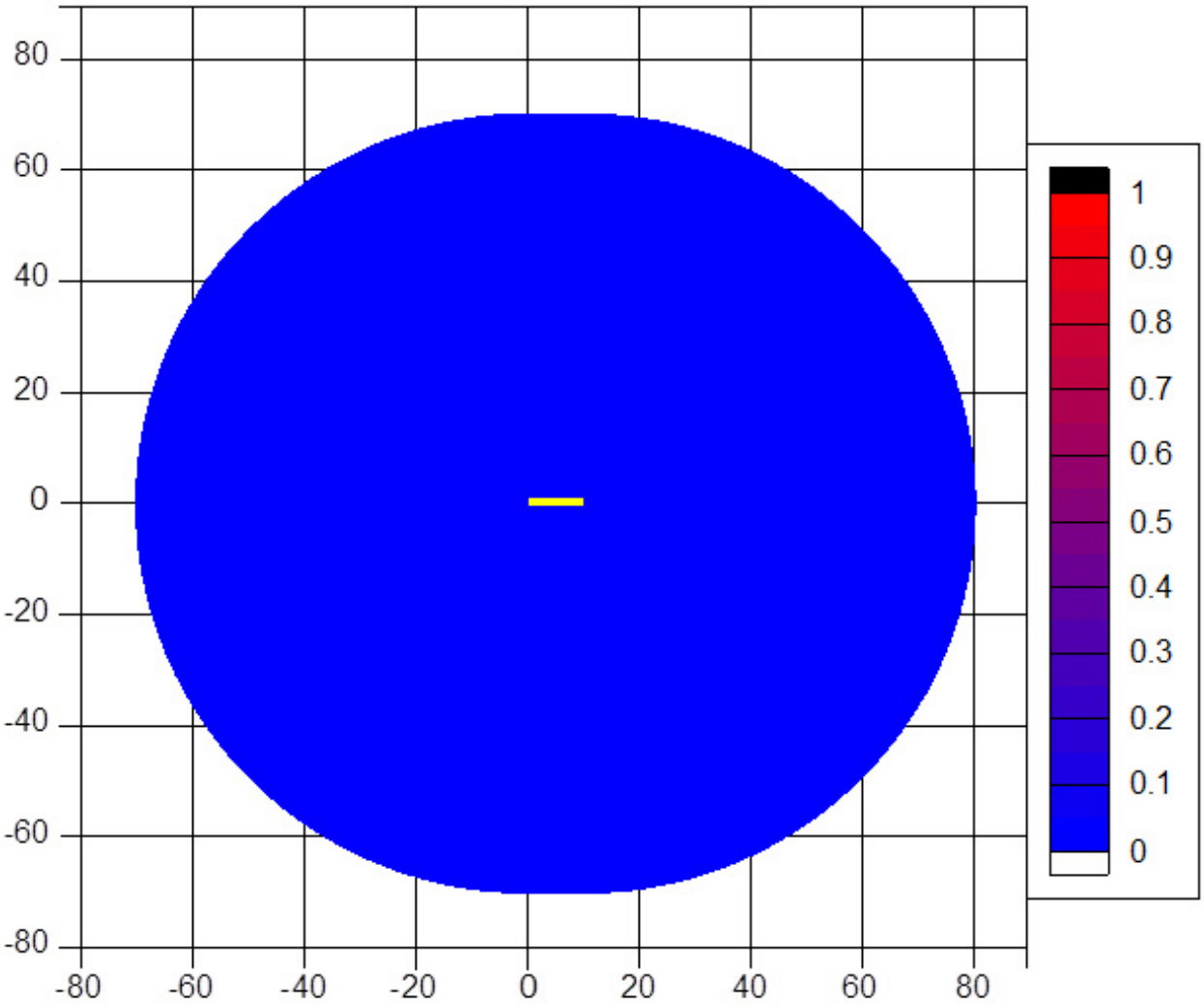

Figure B.33 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, strike–slip rupture with ϕ_2 reduction.**

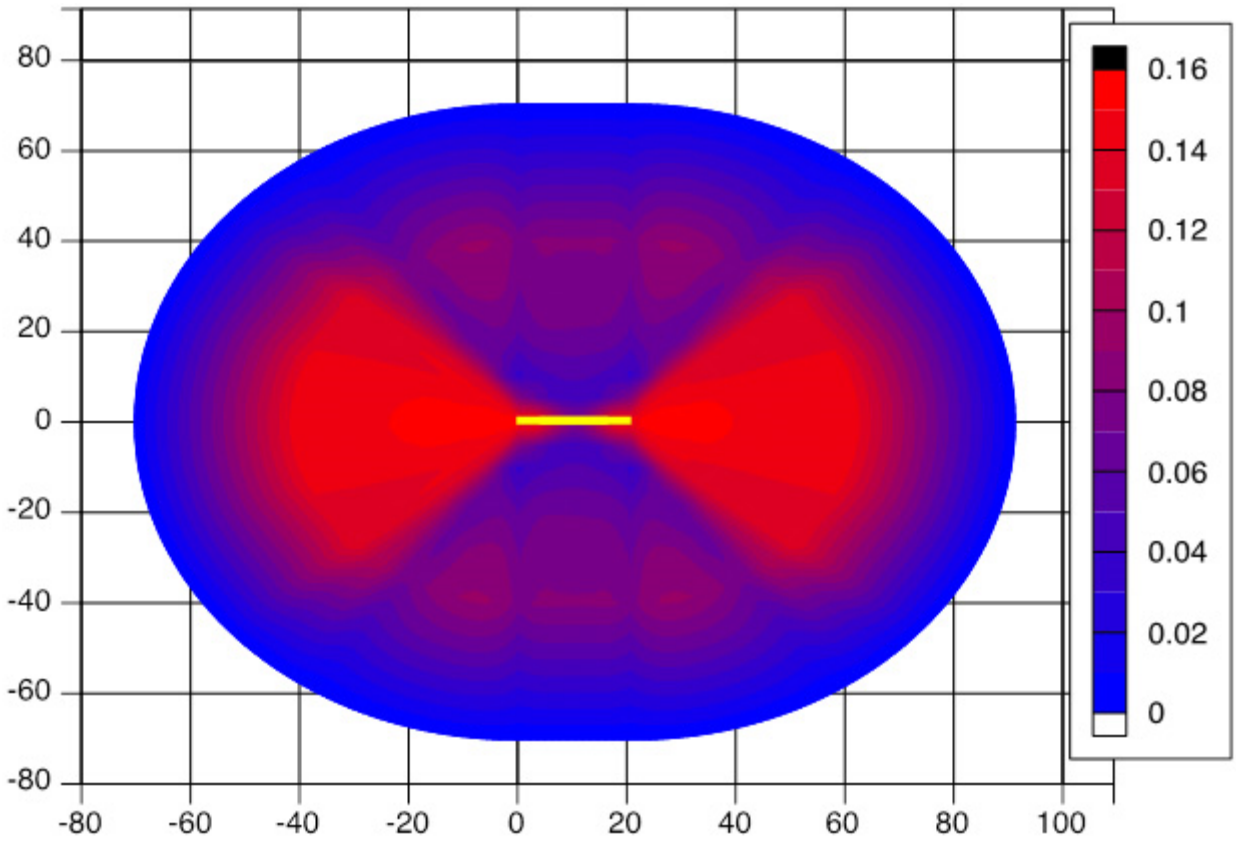

Figure B.34 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture with ϕ_2 reduction.**

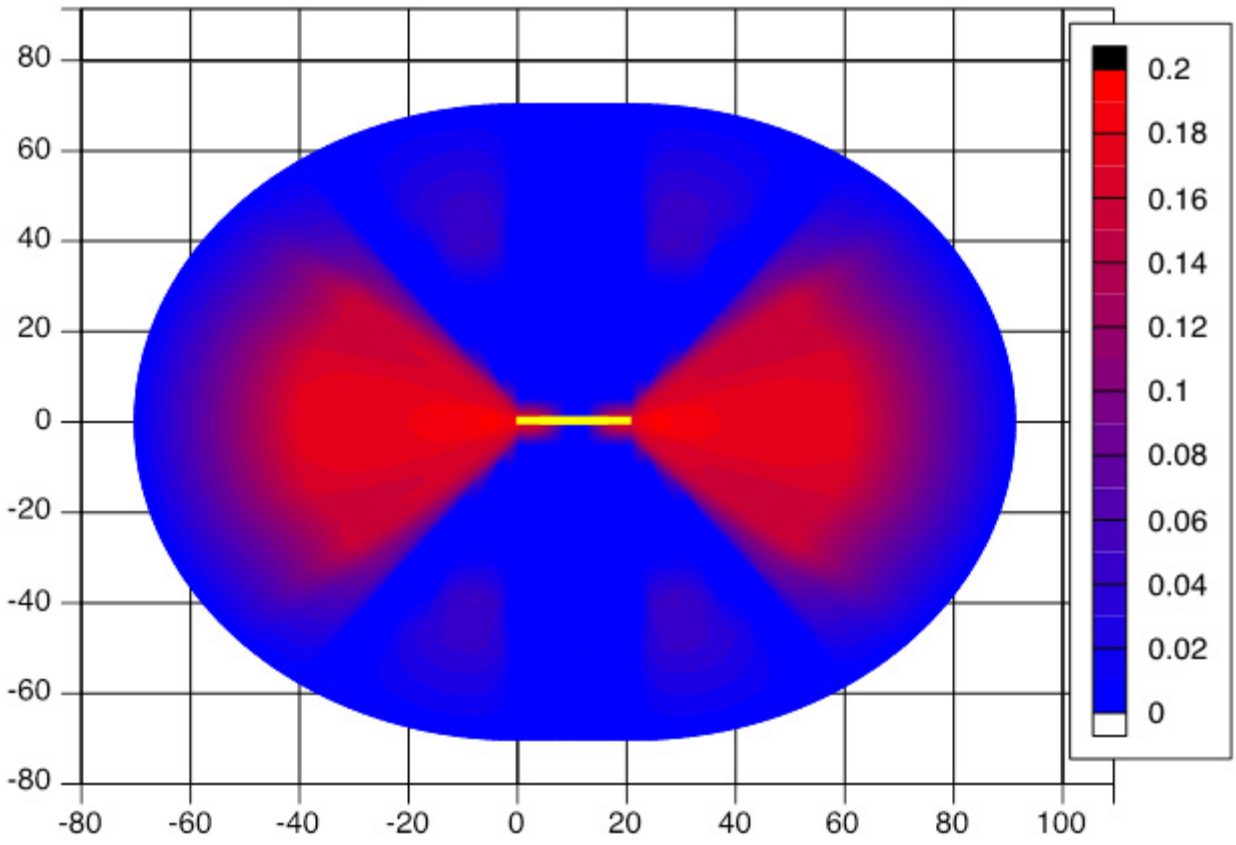

Figure B.35 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture with ϕ_2 reduction.**

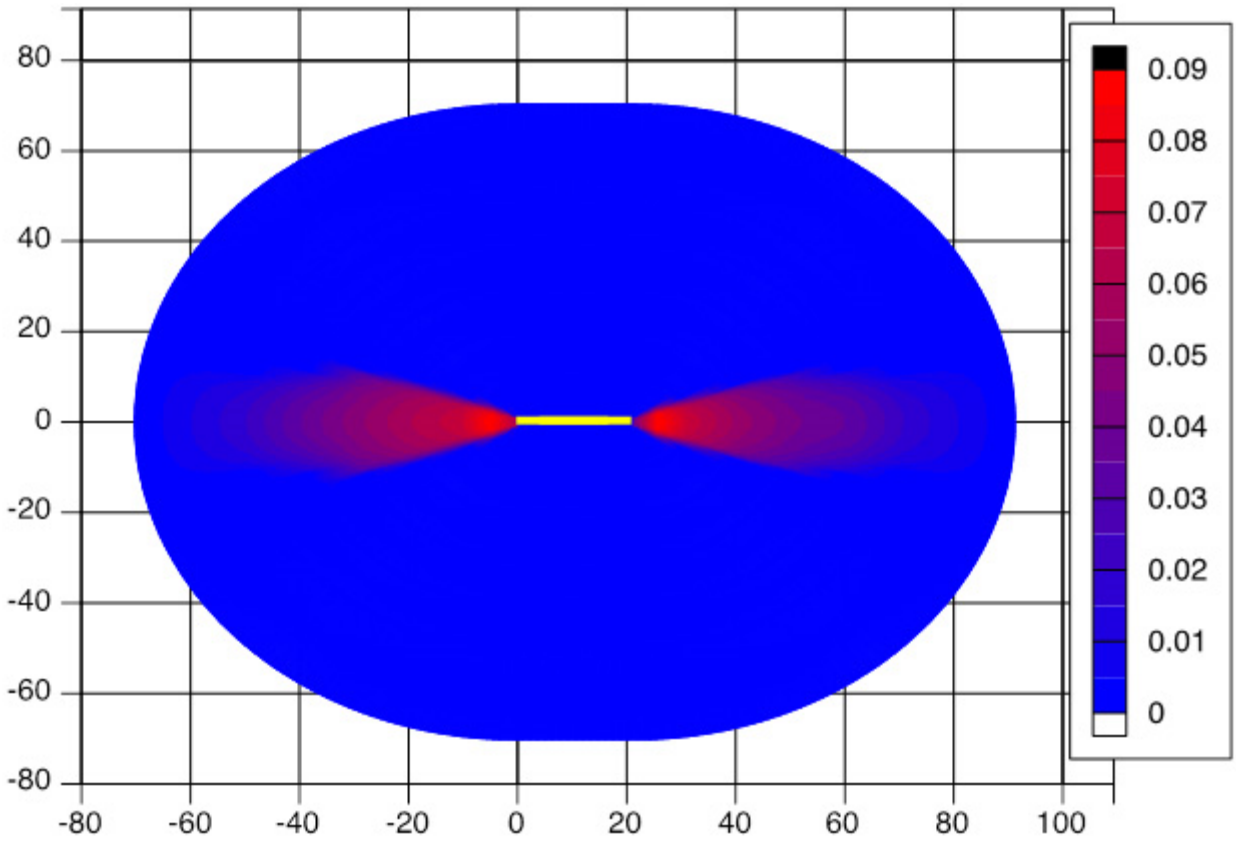

Figure B.36 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, strike–slip rupture with ϕ_2 reduction.**

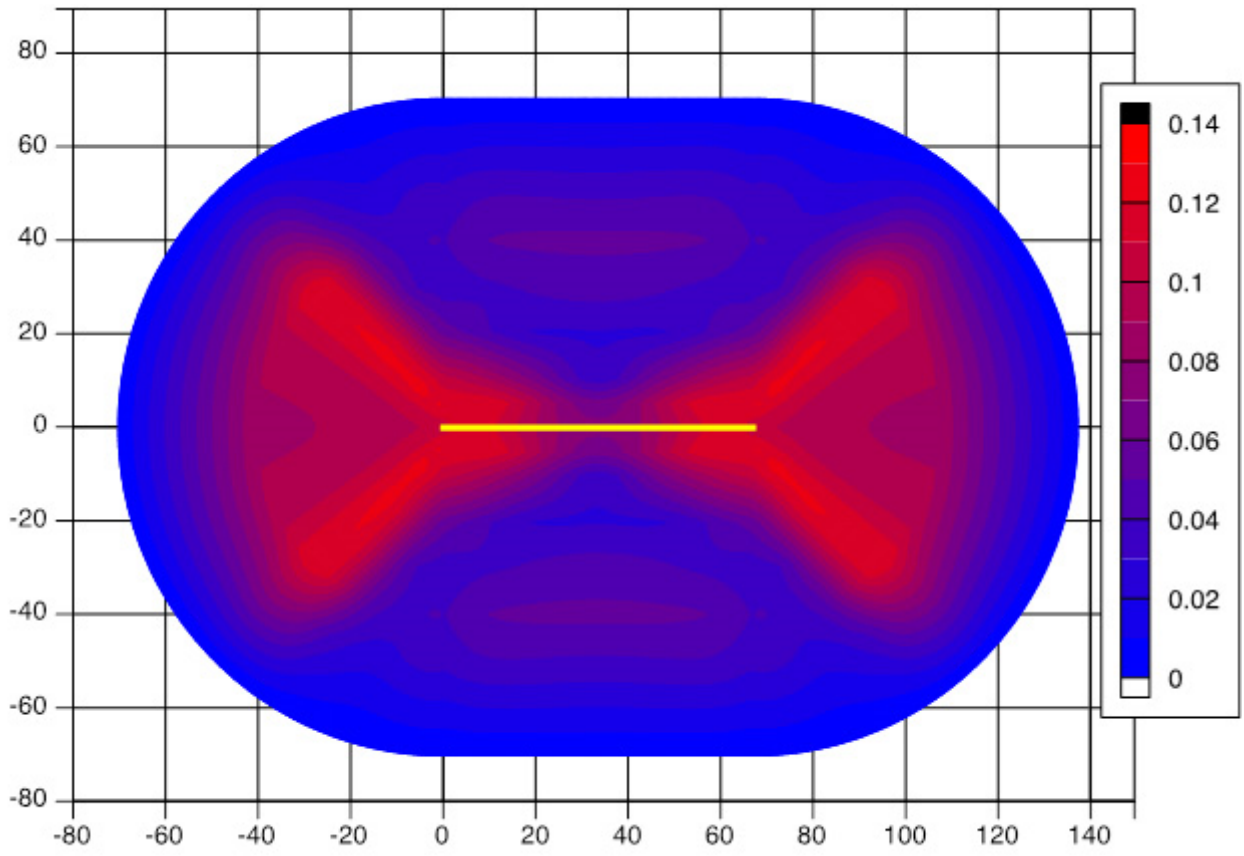

Figure B.37 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture with ϕ_2 reduction.**

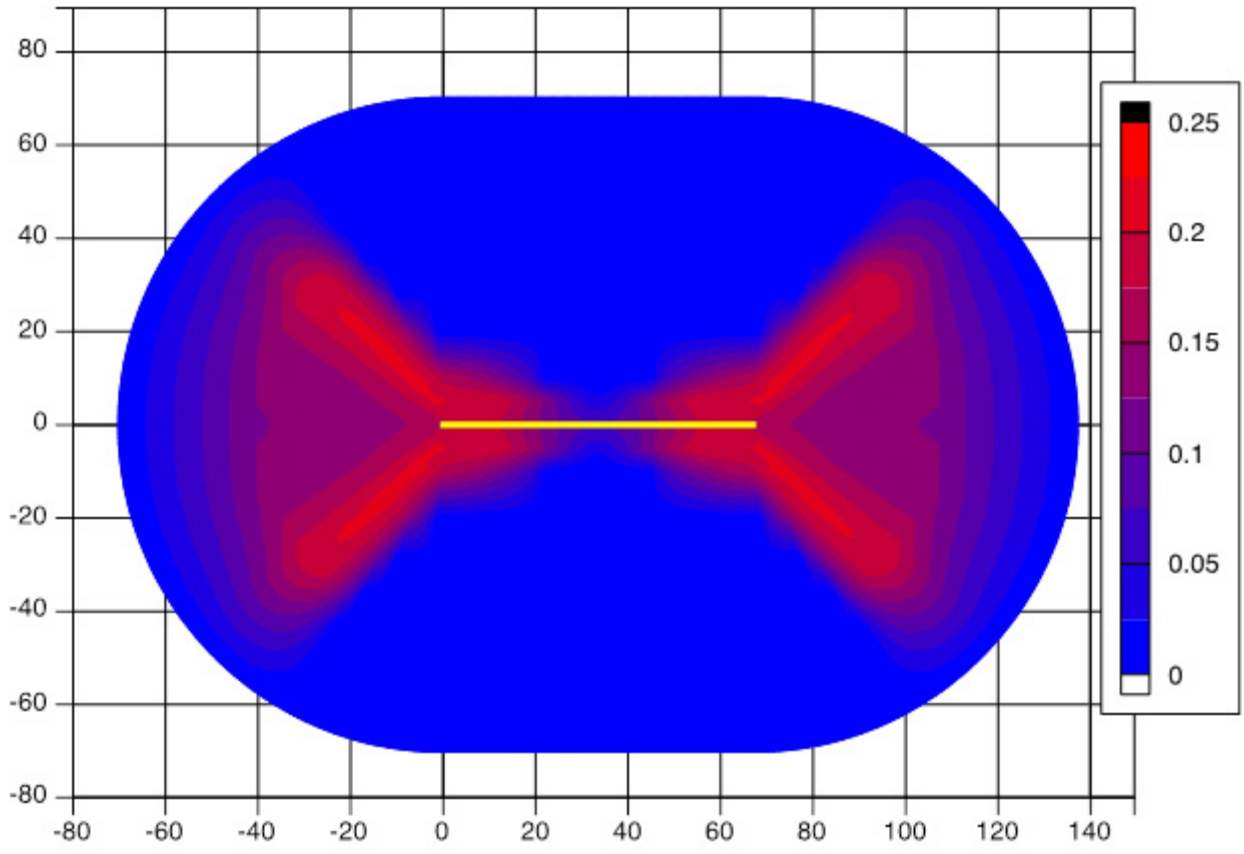

Figure B.38 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture with ϕ_2 reduction.**

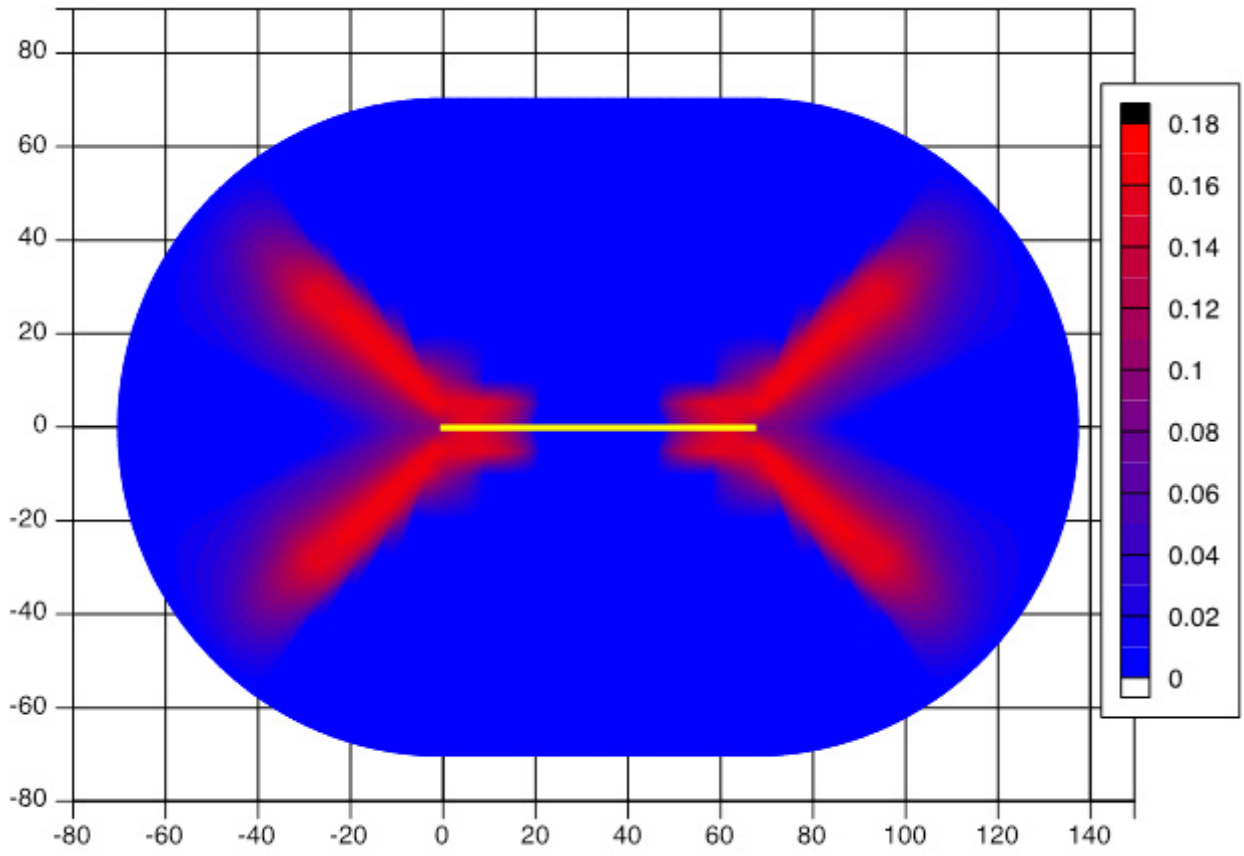

Figure B.39 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, strike–slip rupture with ϕ_2 reduction.**

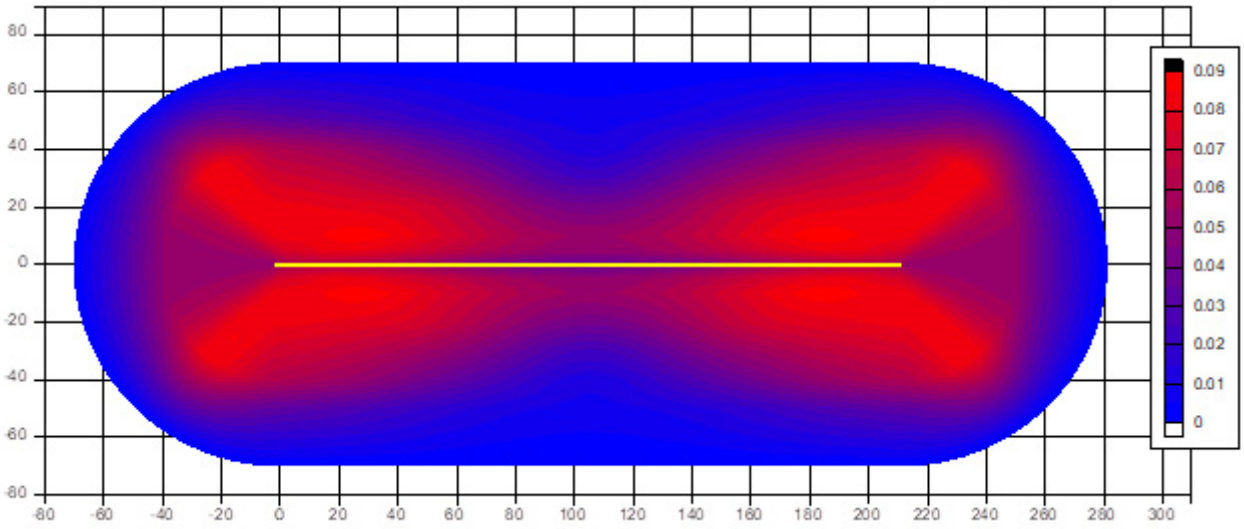

Figure B.40 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture with ϕ_2 reduction.**

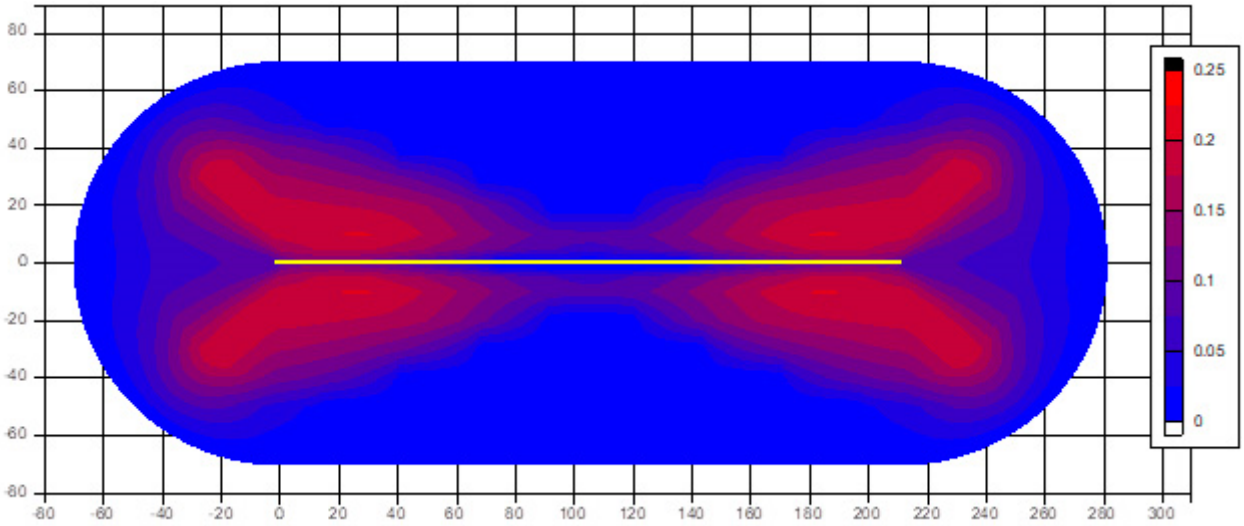

Figure B.41 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture with ϕ_2 reduction.**

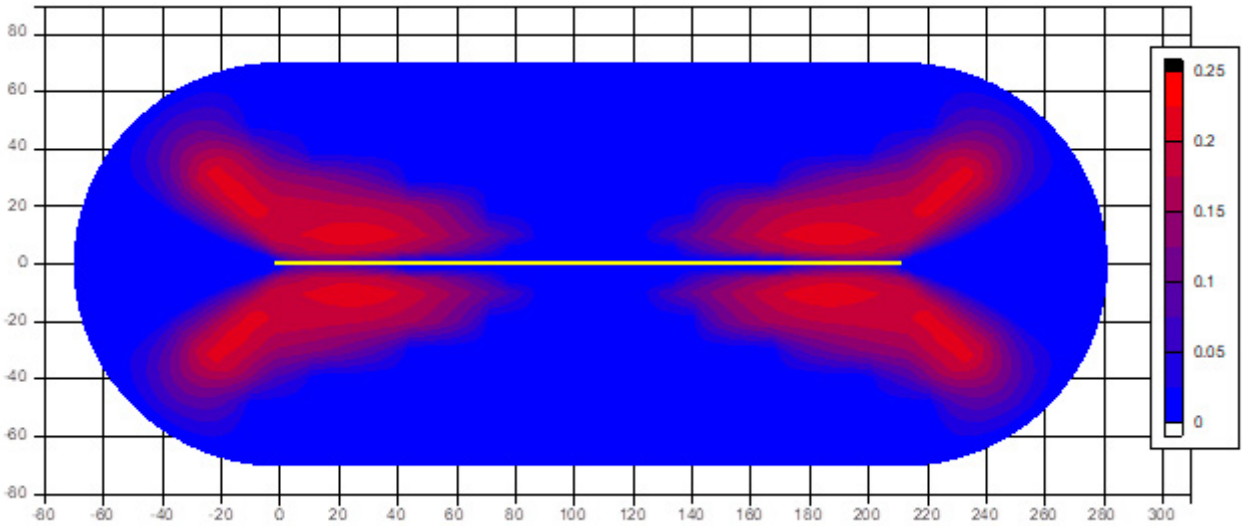

Figure B.42 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, strike–slip rupture with ϕ_2 reduction.**

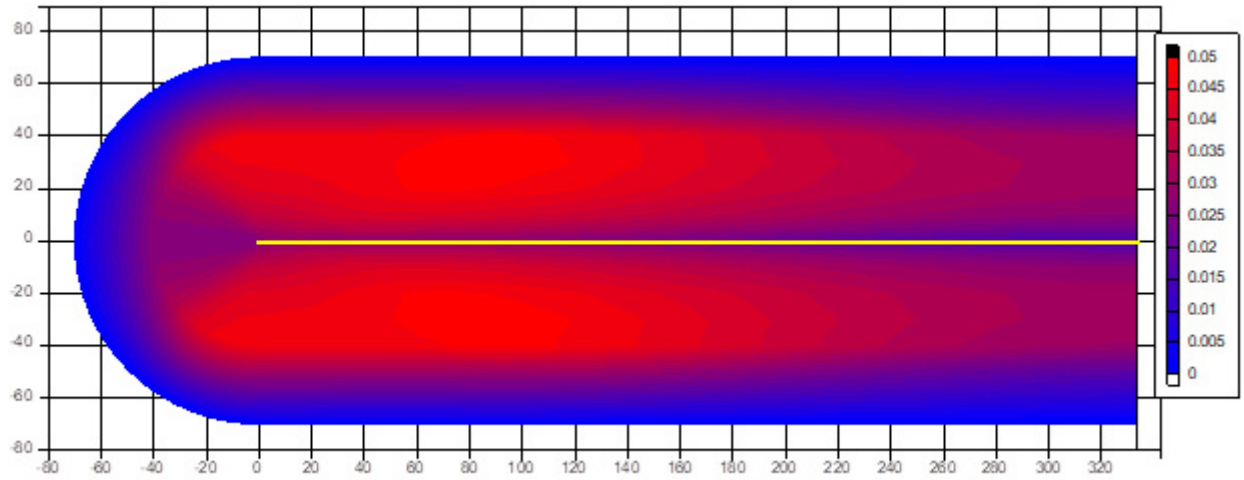

Figure B.43 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture with ϕ_2 reduction.**

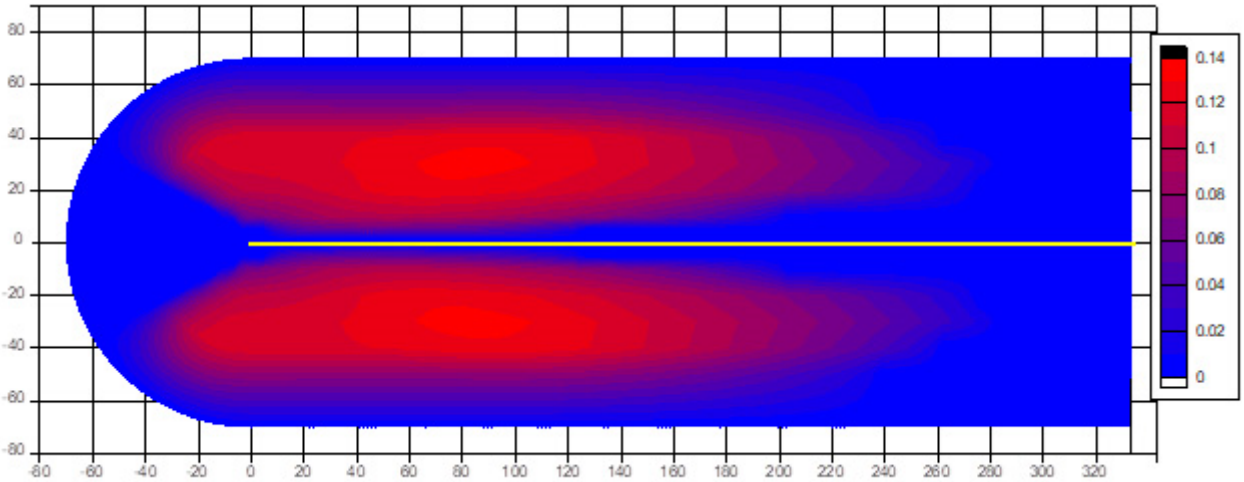

Figure B.44 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture with ϕ_2 reduction.**

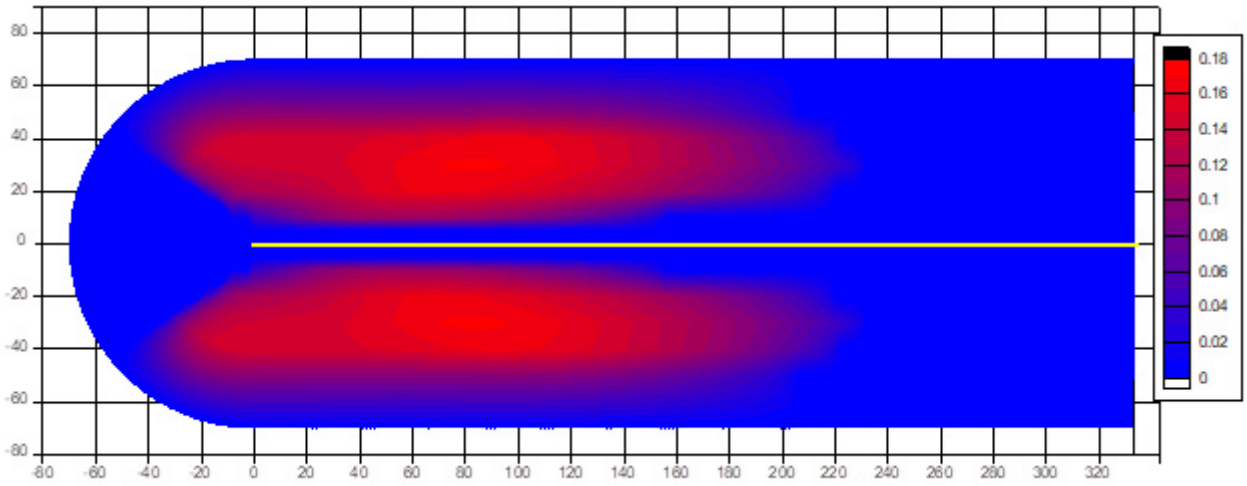

Figure B.45 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 8, strike–slip rupture with ϕ_2 reduction.**

B.2 REVERSE RUPTURE RESULTS

B.2.1 Changes in the Mean of the Log Normal 5% Damped Pseudo-Spectral Acceleration

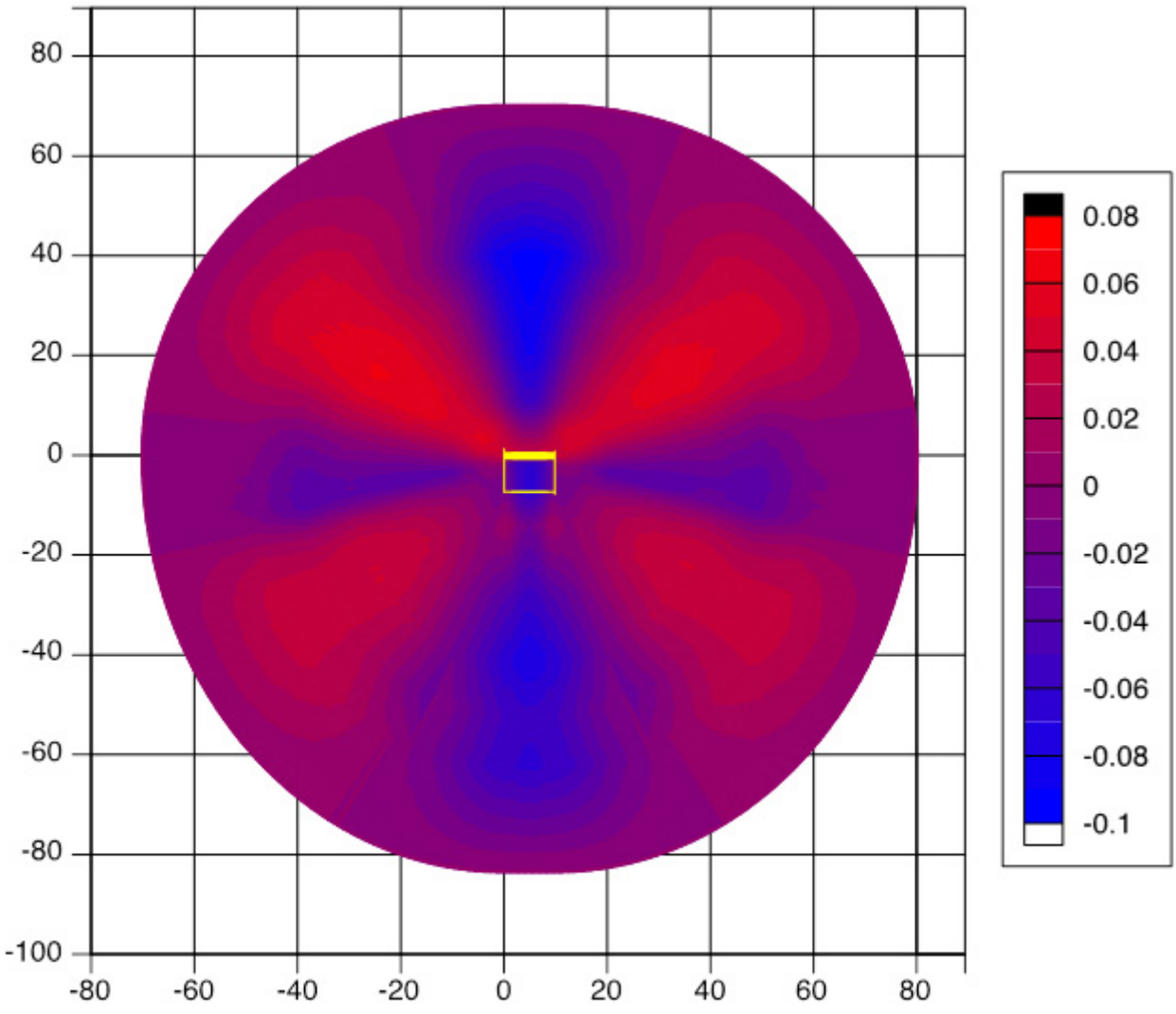

Figure B.46 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture.**

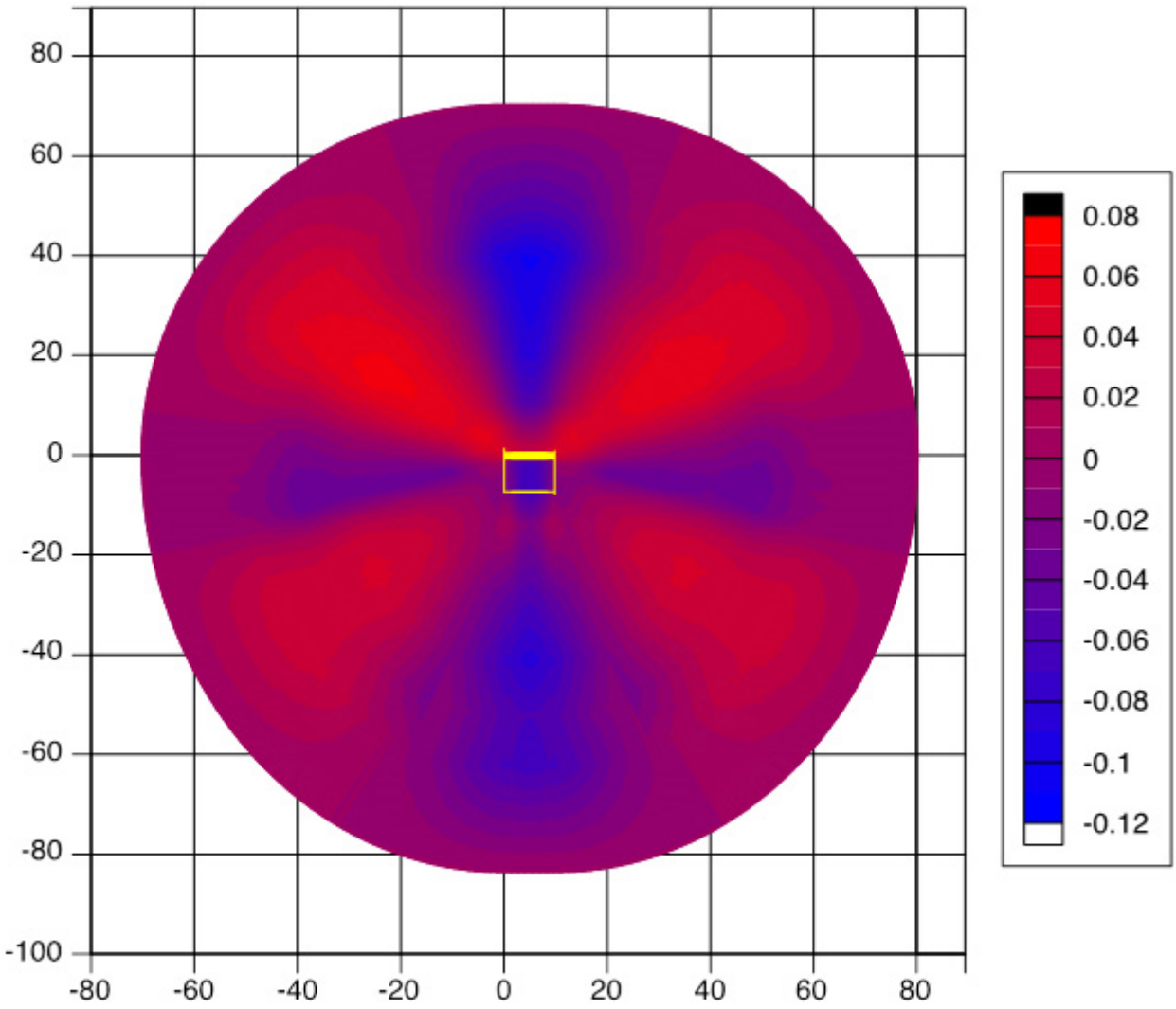

Figure B.47 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture.**

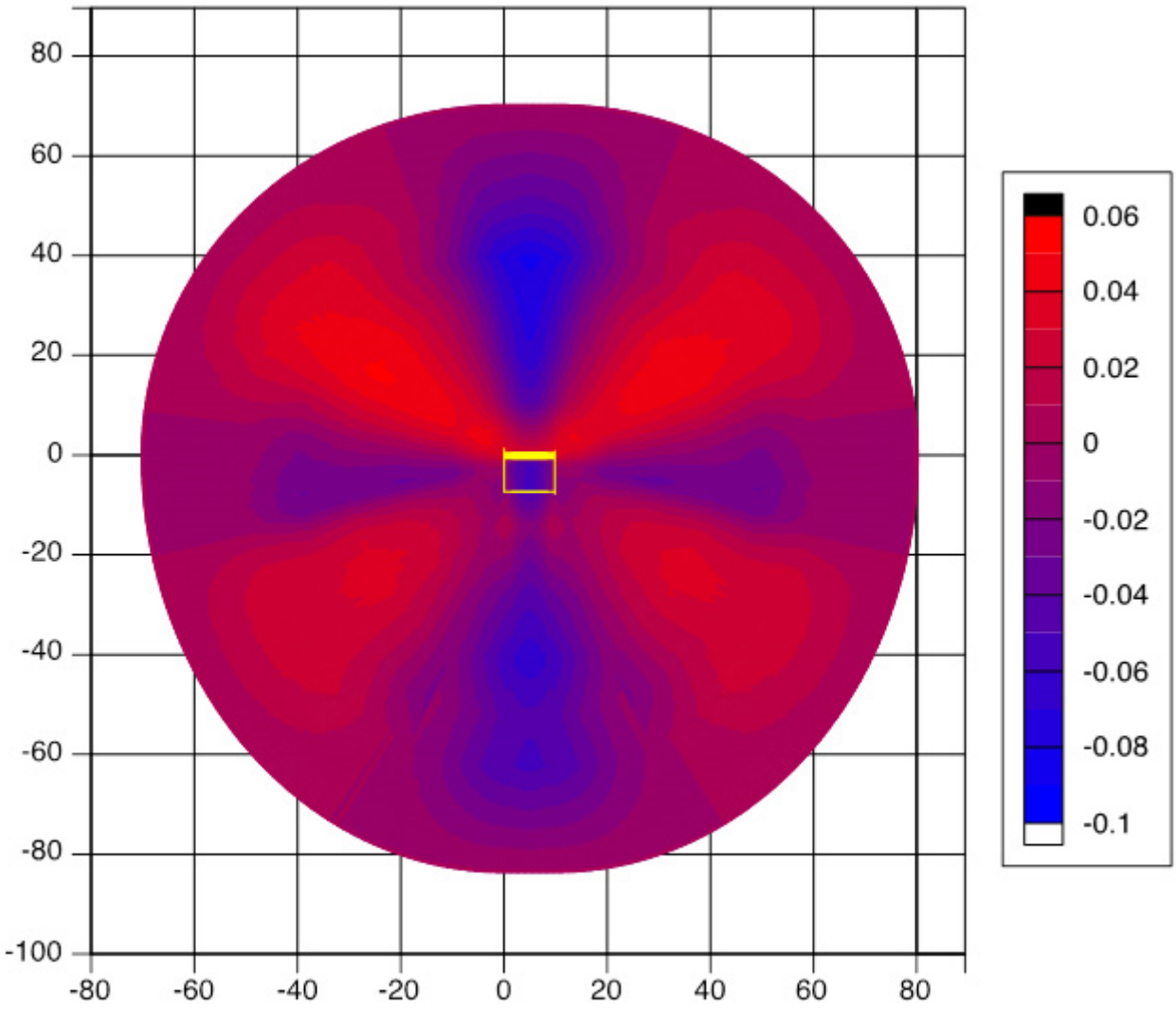

Figure B.48 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture.**

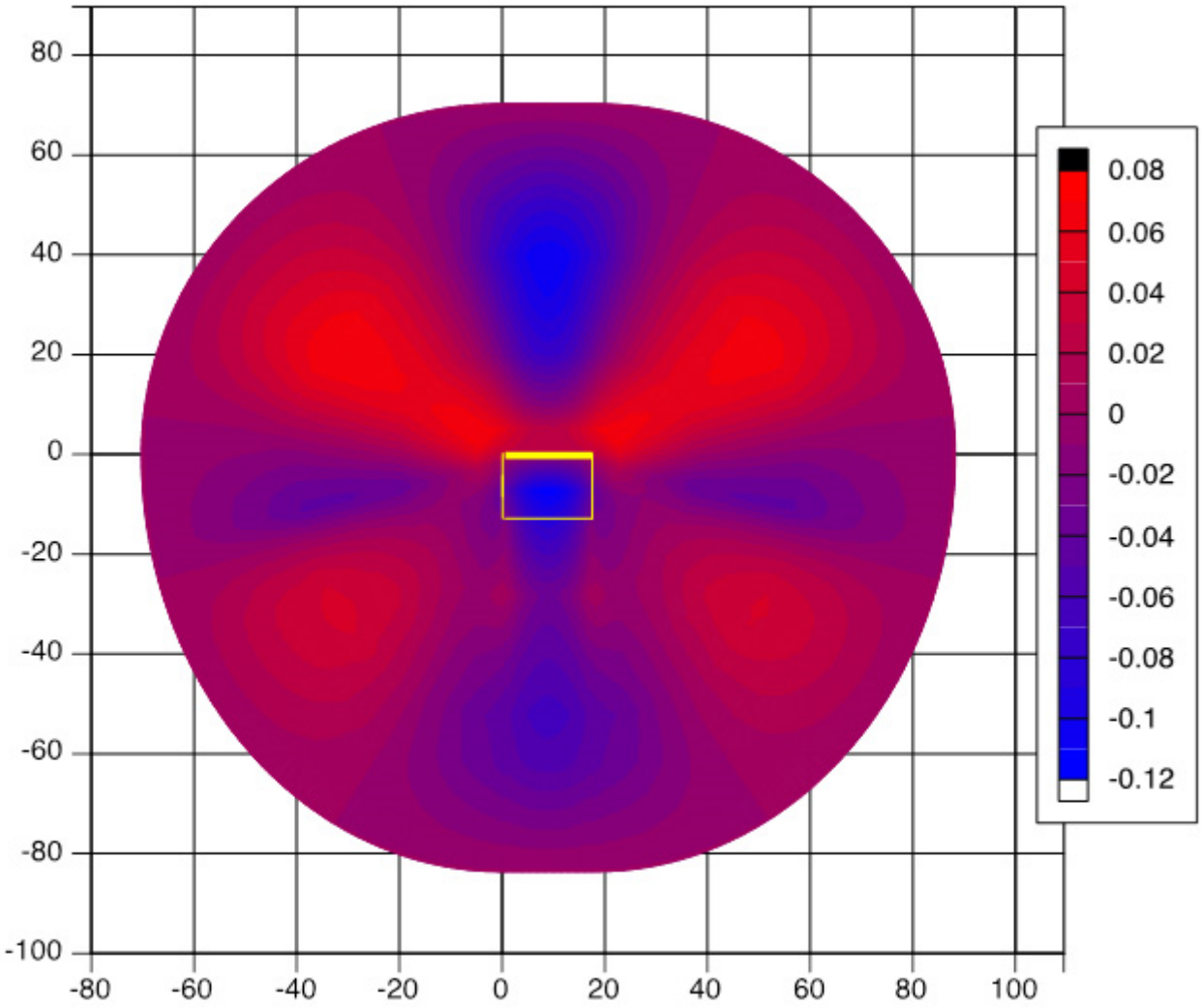

Figure B.49 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture.**

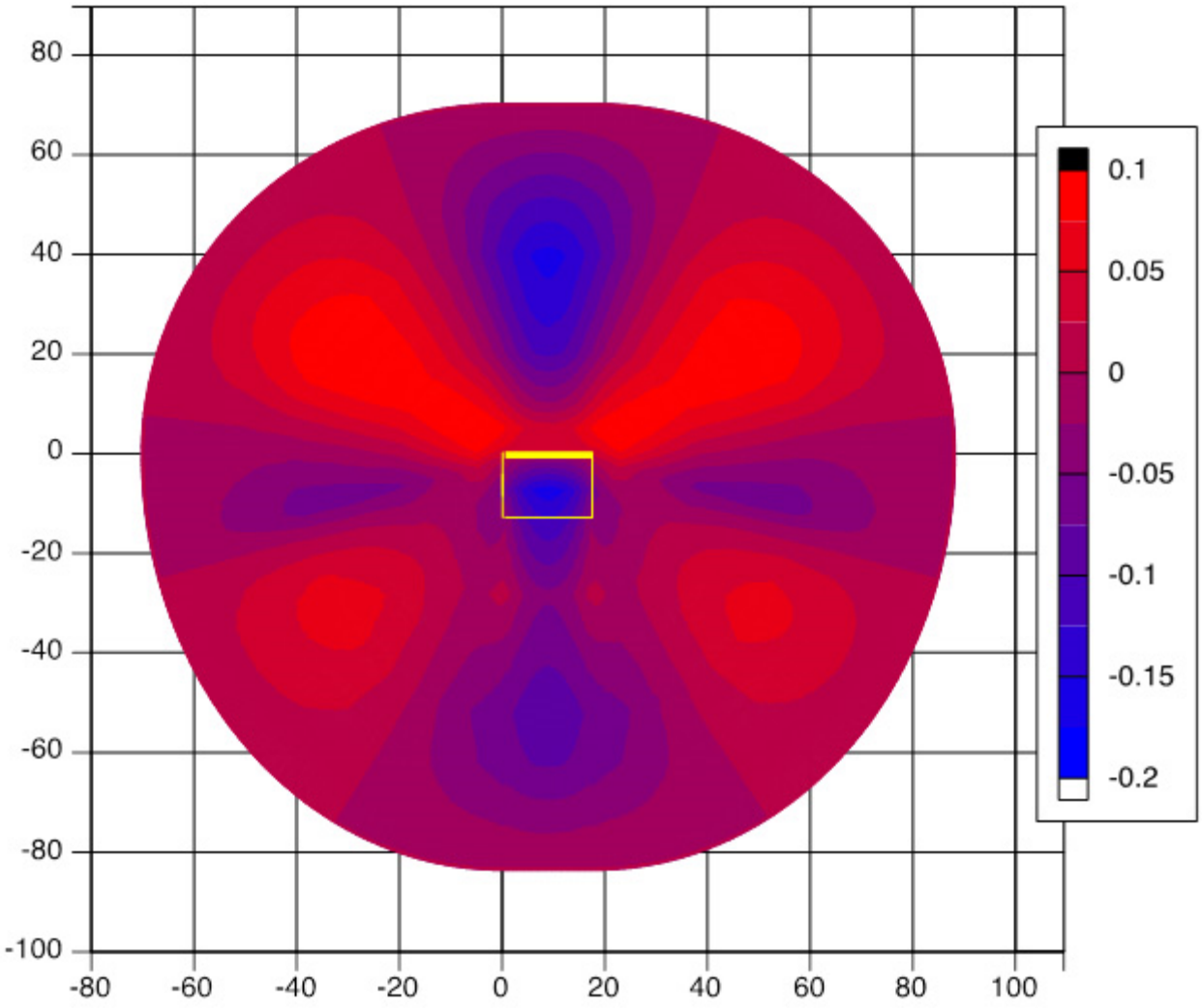

Figure B.50 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture.**

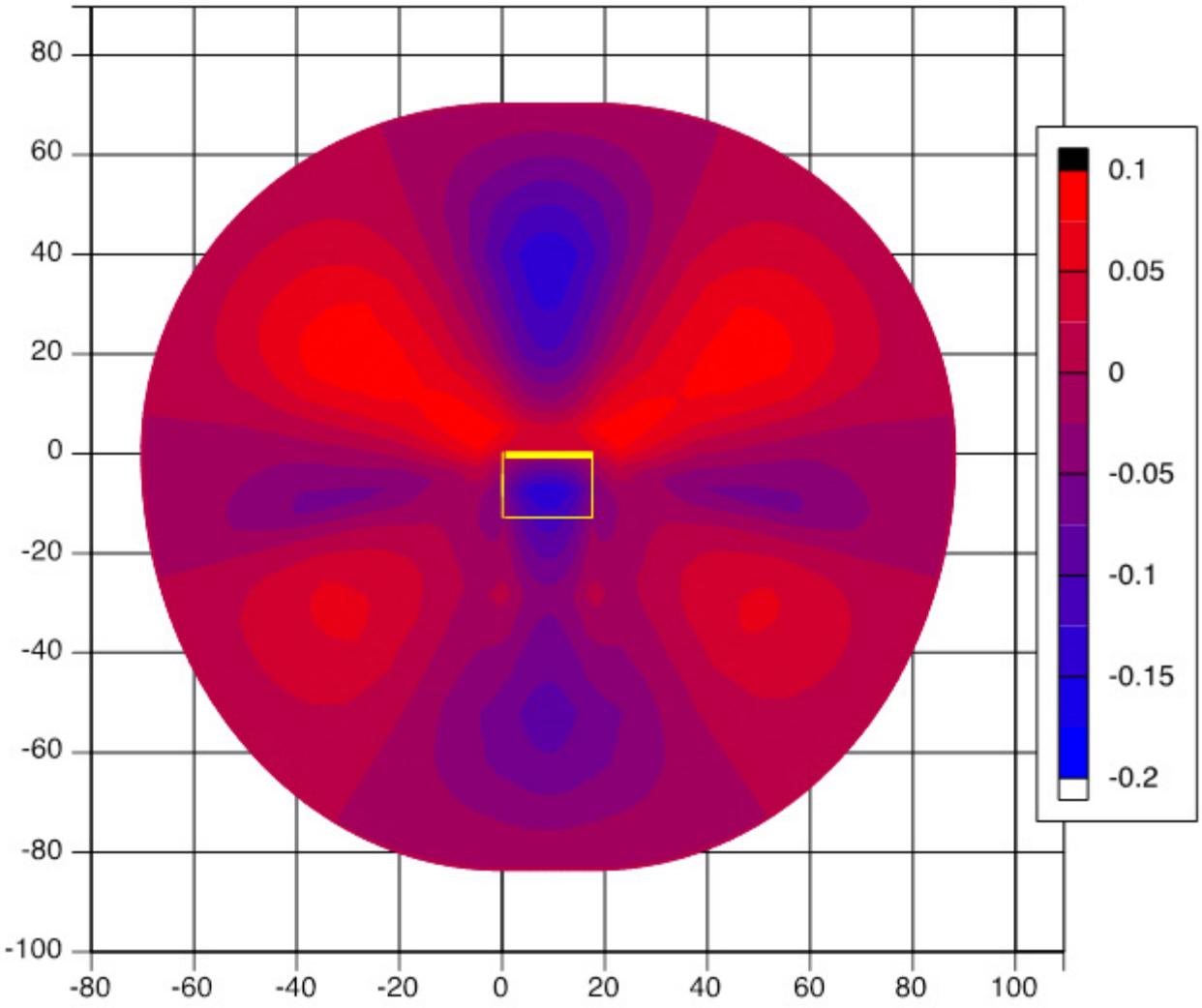

Figure B.51 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture.**

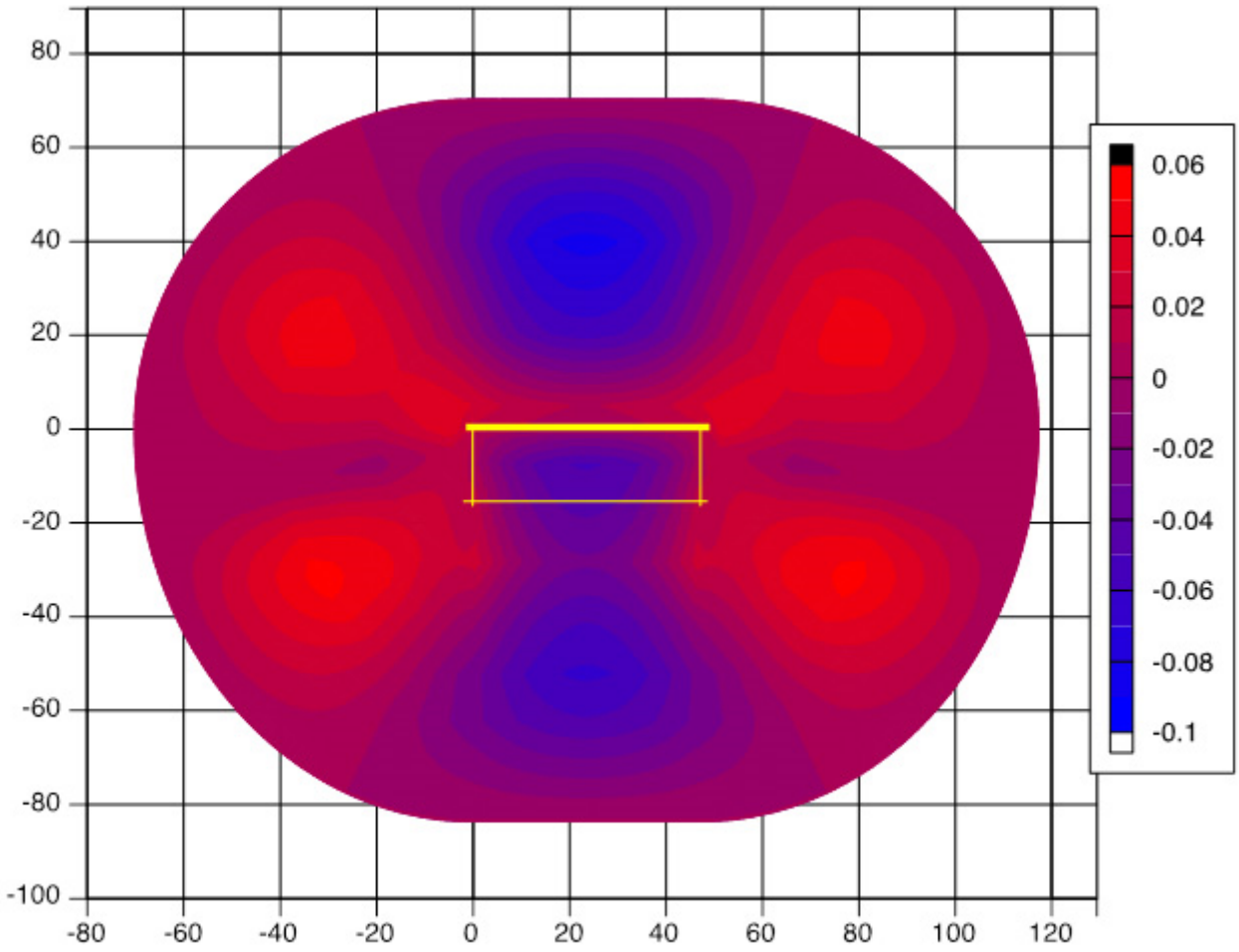

Figure B.52 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture.**

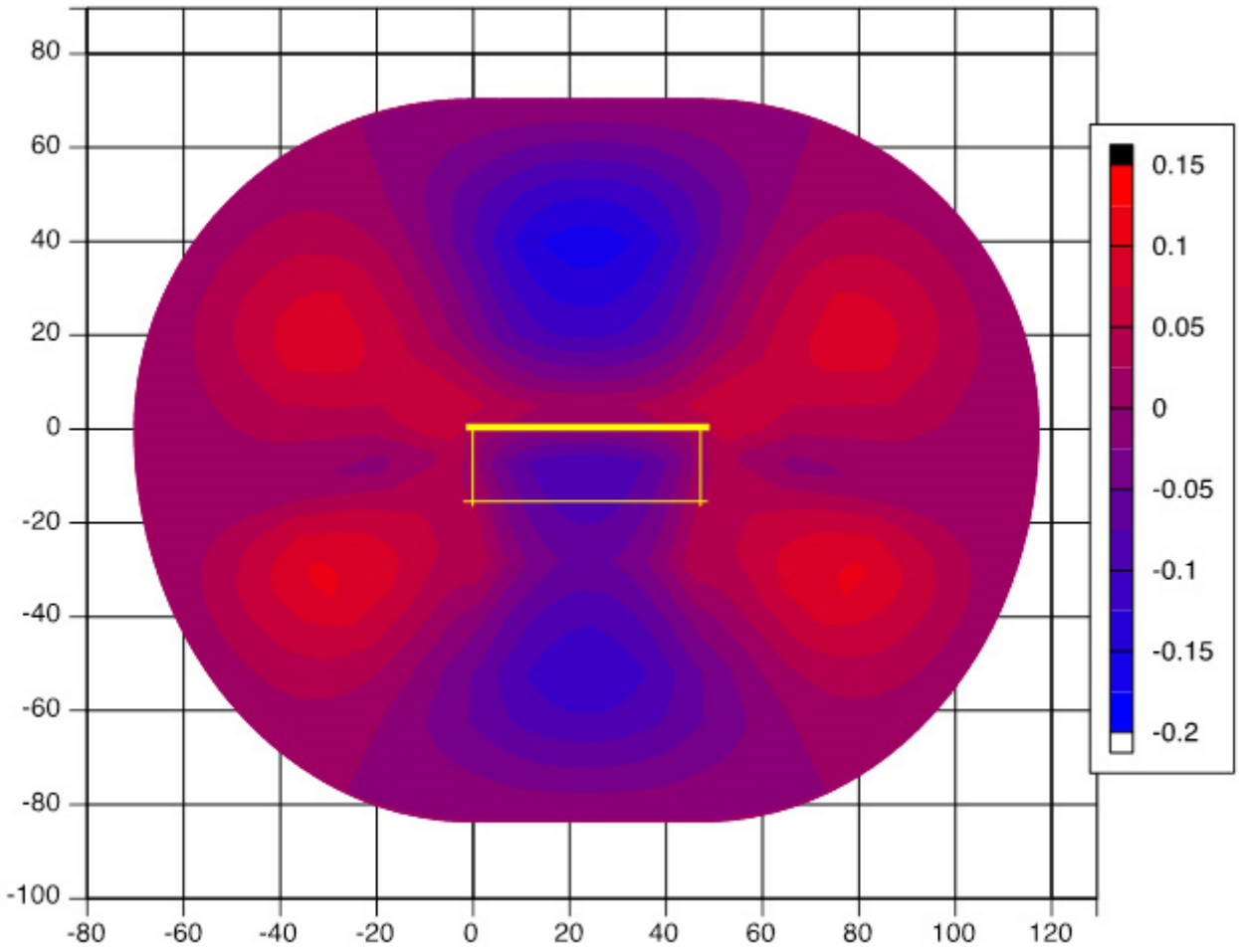

Figure B.53 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture.**

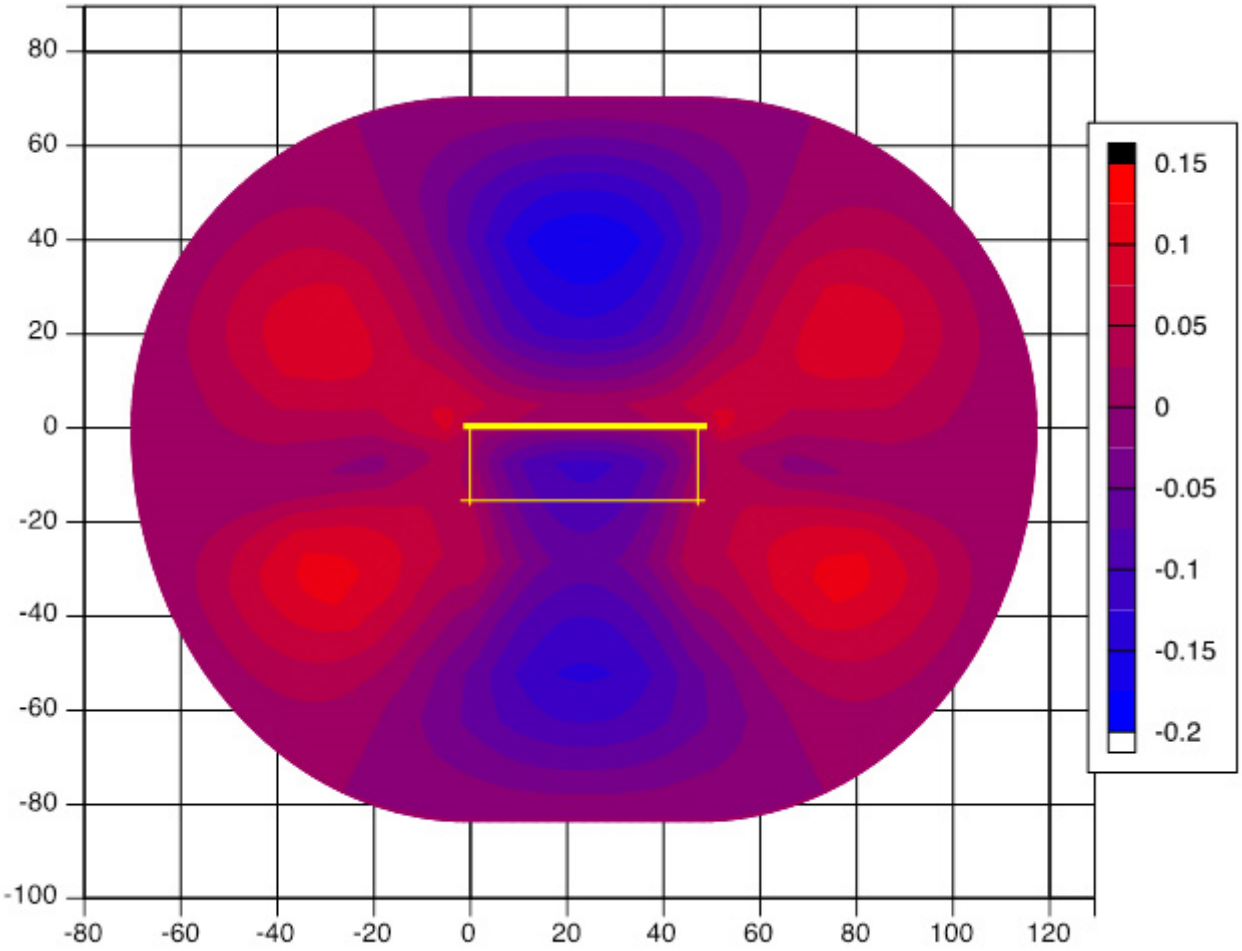

Figure B.54 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture.**

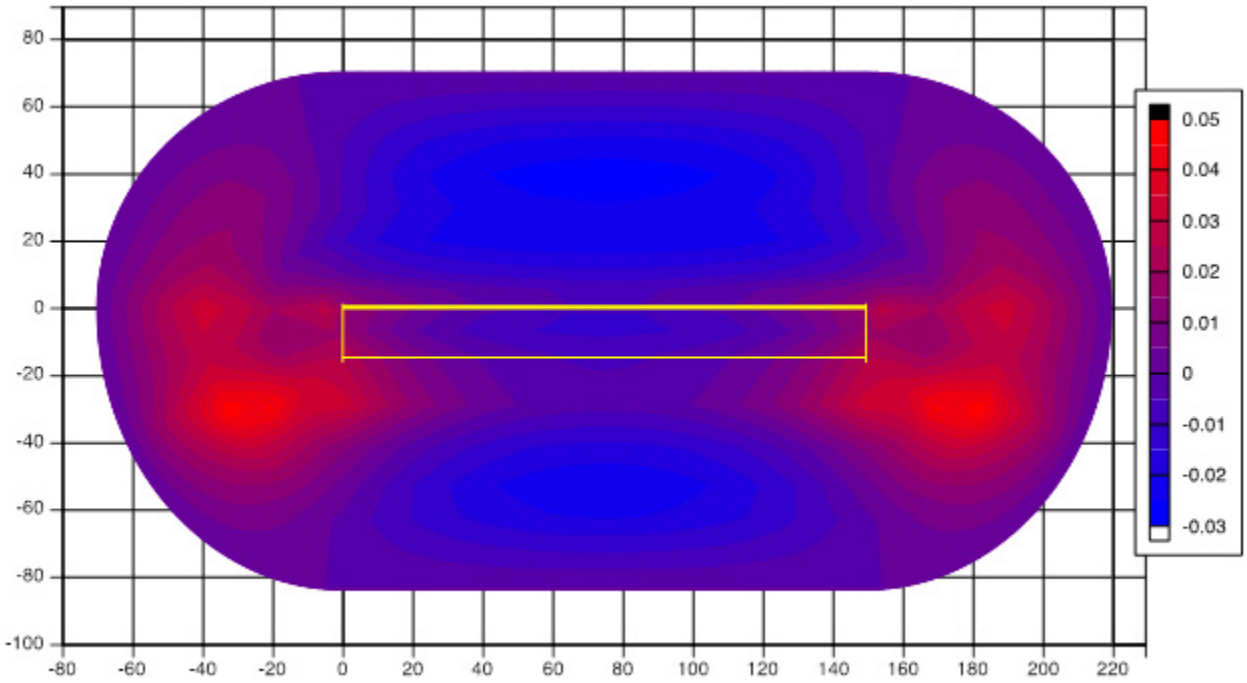

Figure B.55 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture.**

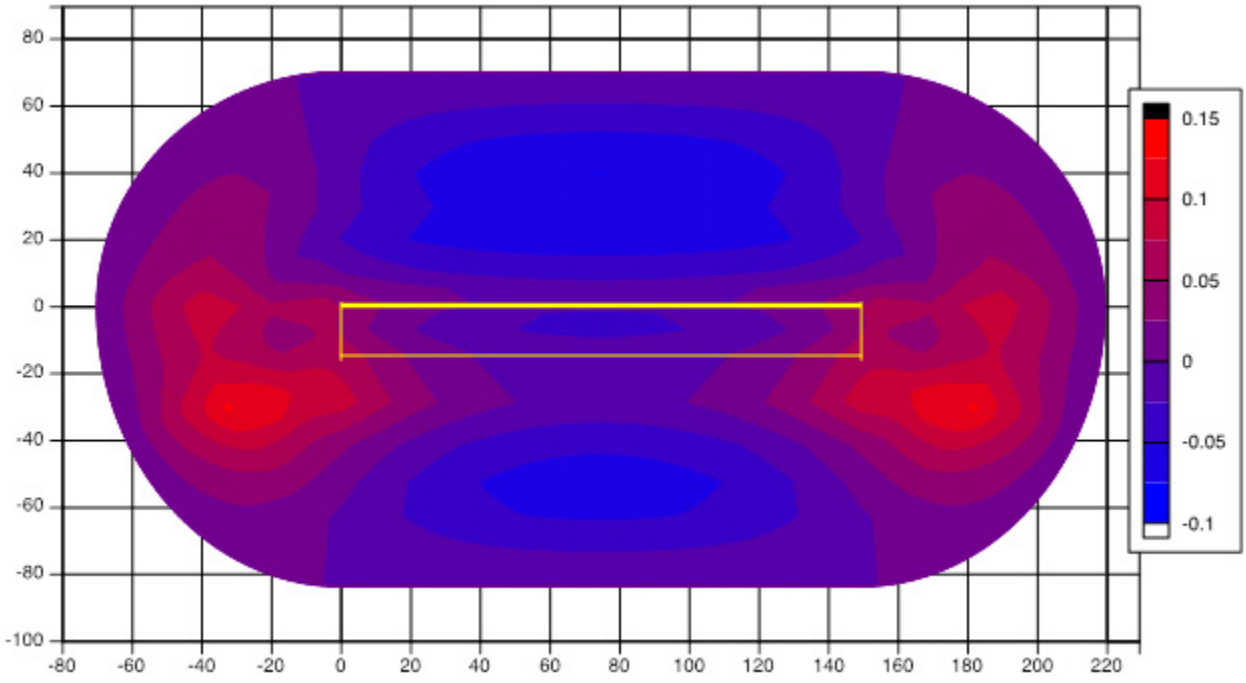

Figure B.56 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture.**

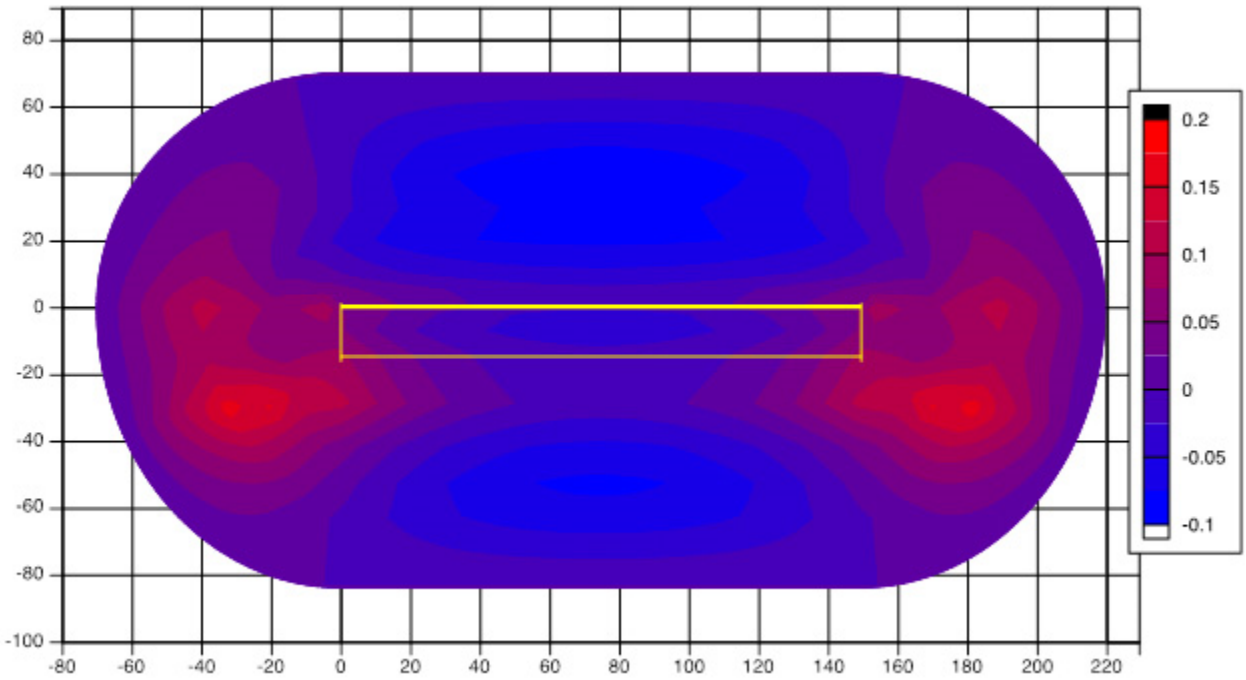

Figure B.57 **Change in the mean of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture.**

B.2.2 Changes in the Standard Deviation of the Log Normal 5% Damped Pseudo-Spectral Acceleration

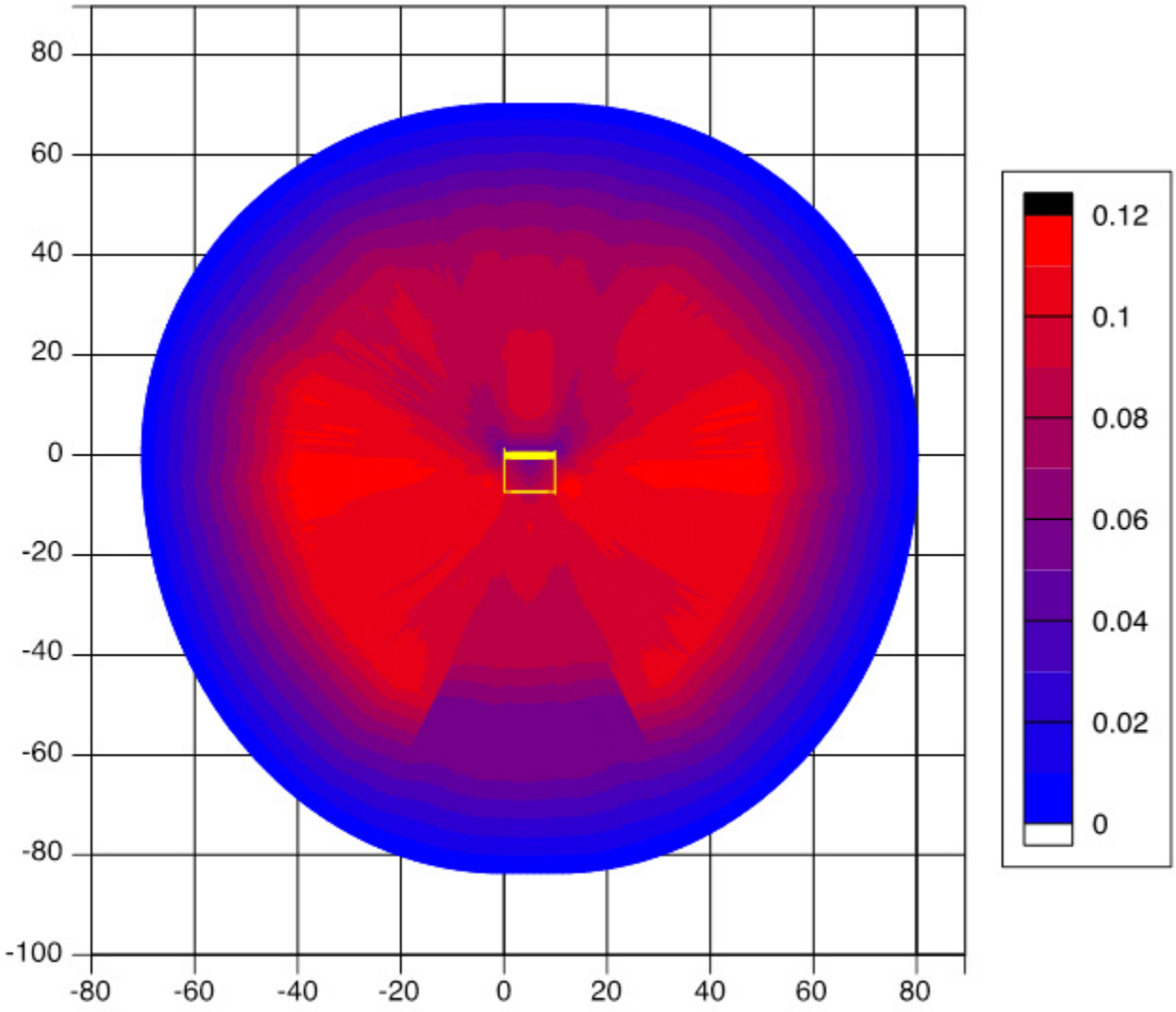

Figure B.58 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture.**

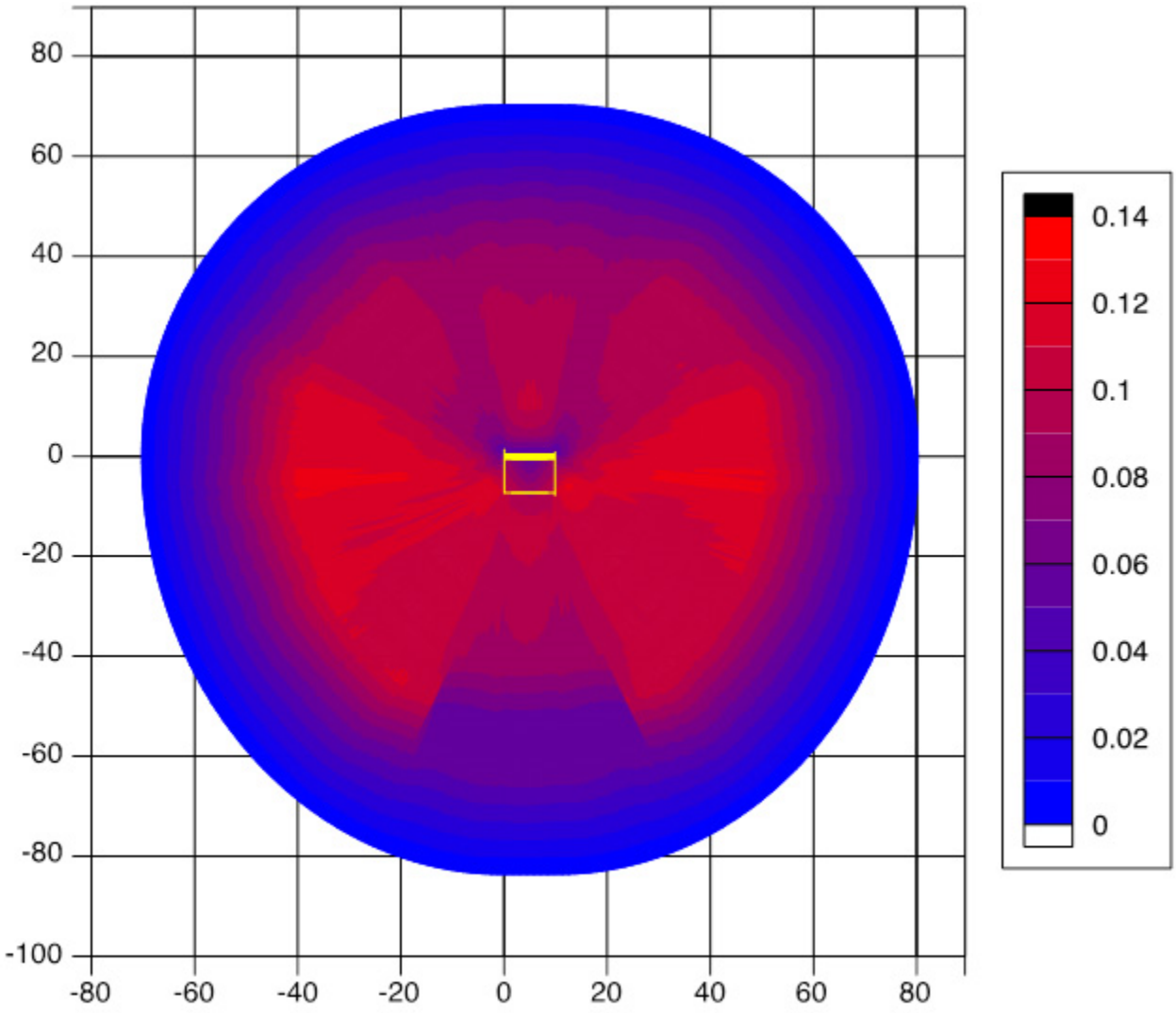

Figure B.59 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture.**

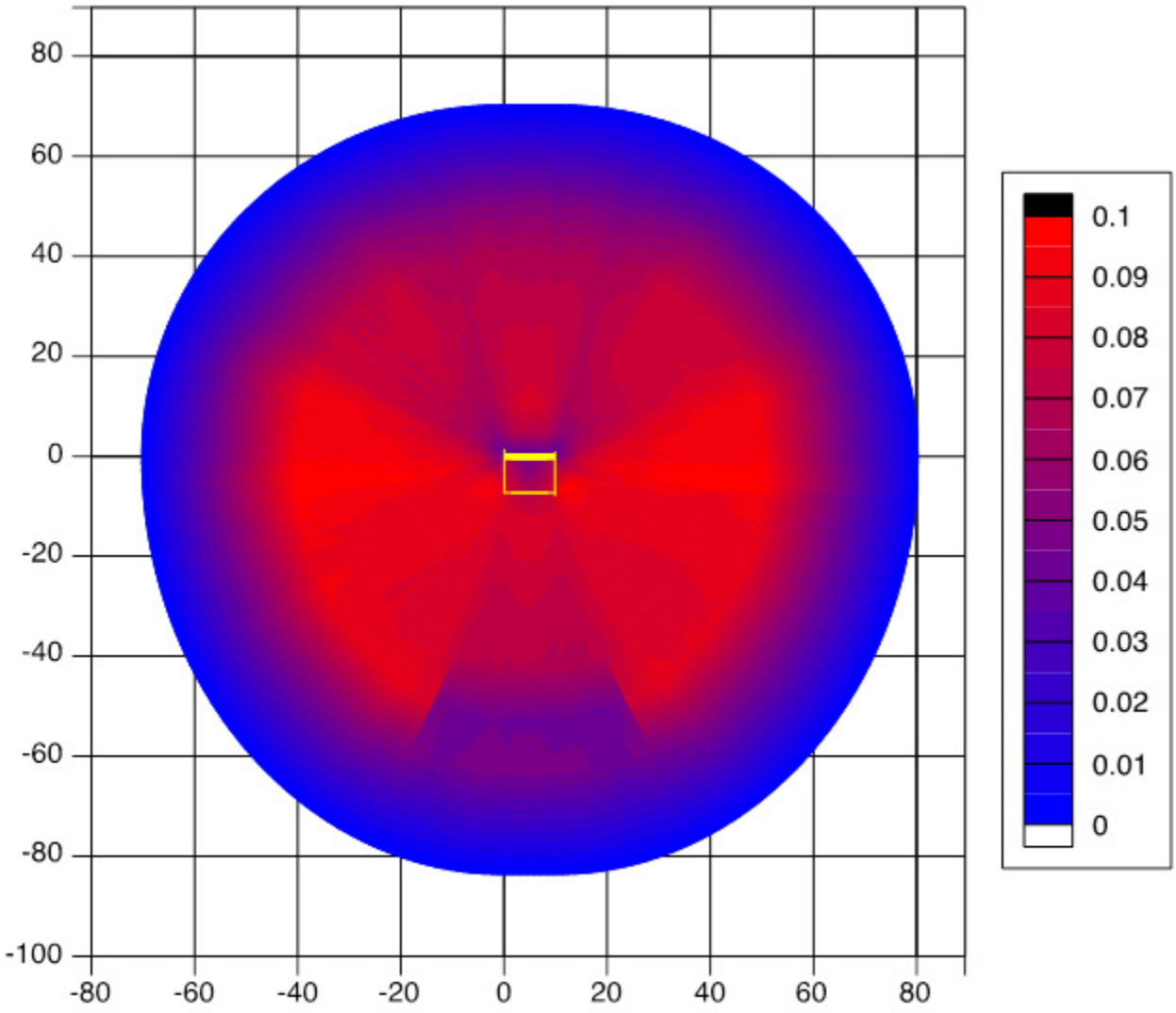

Figure B.60 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture.**

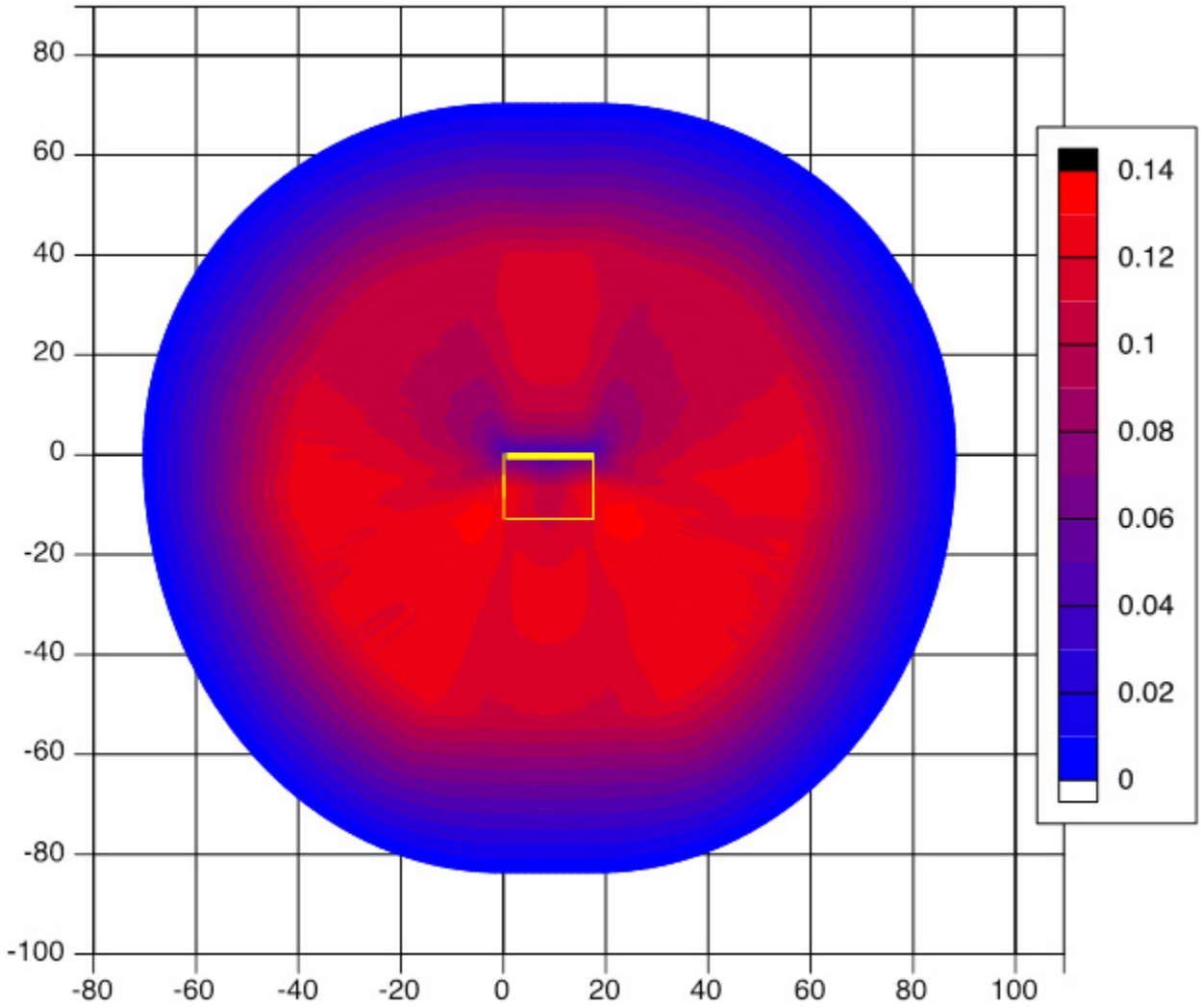

Figure B.61 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture.**

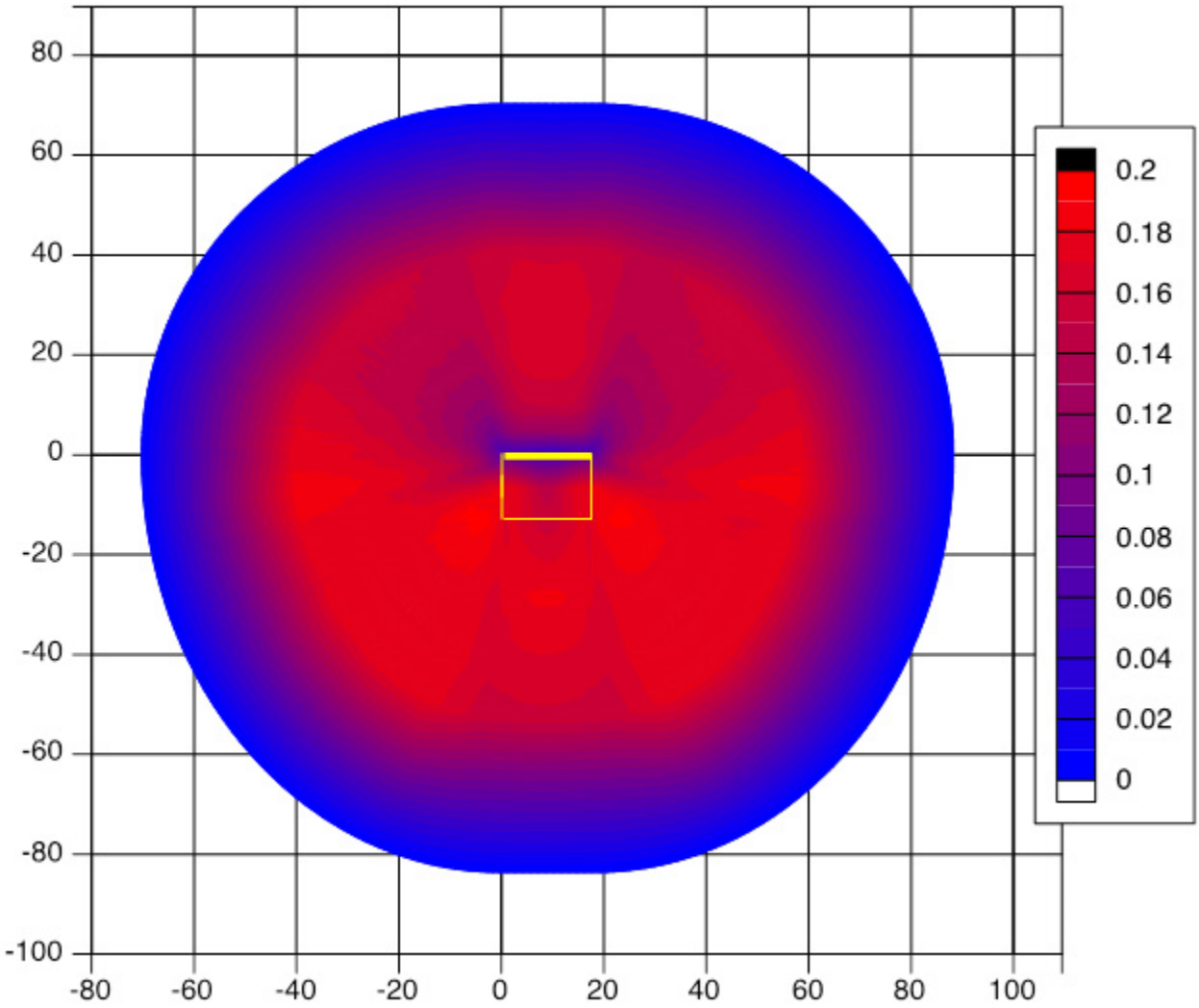

Figure B.62 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture.**

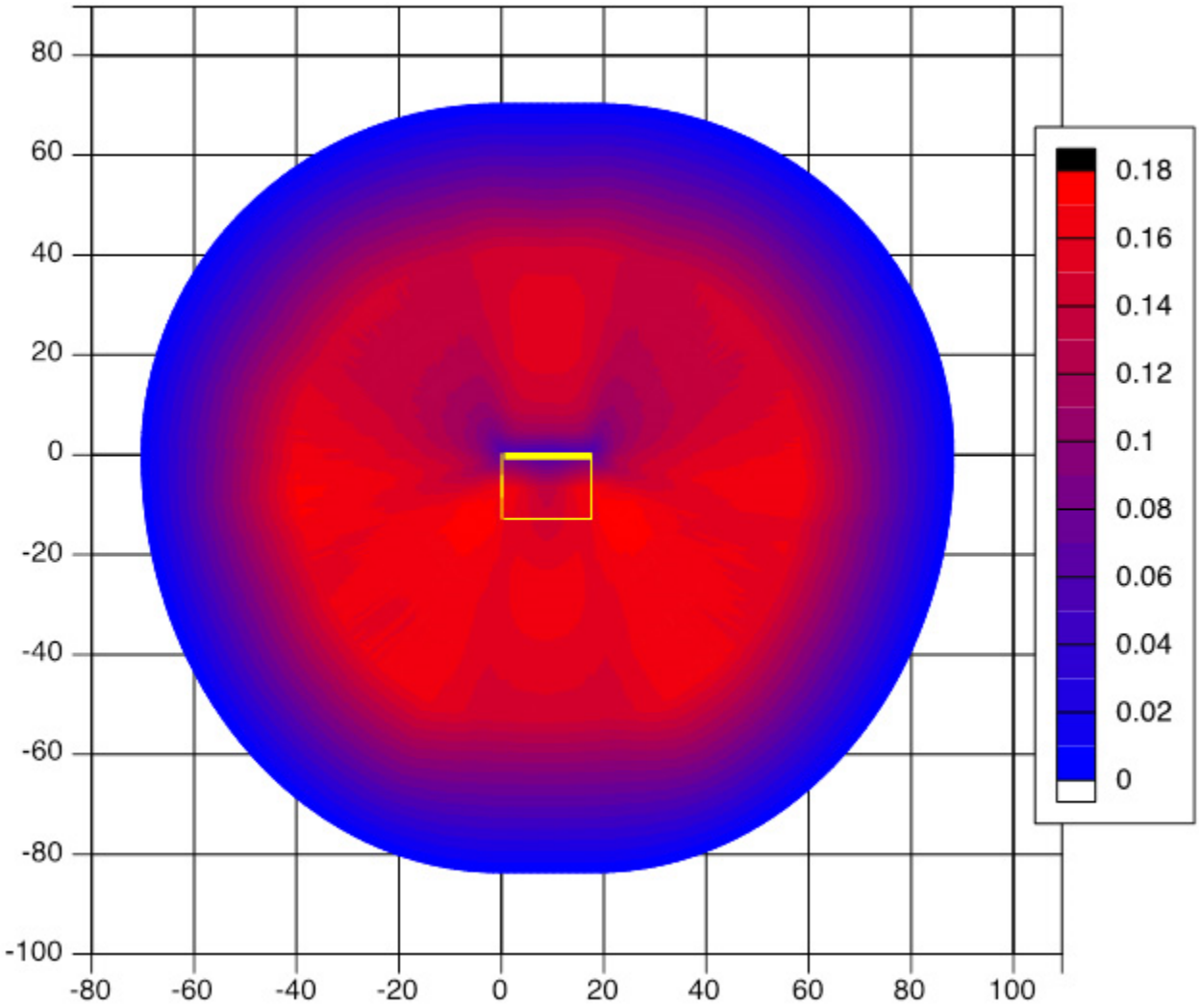

Figure B.63 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture.**

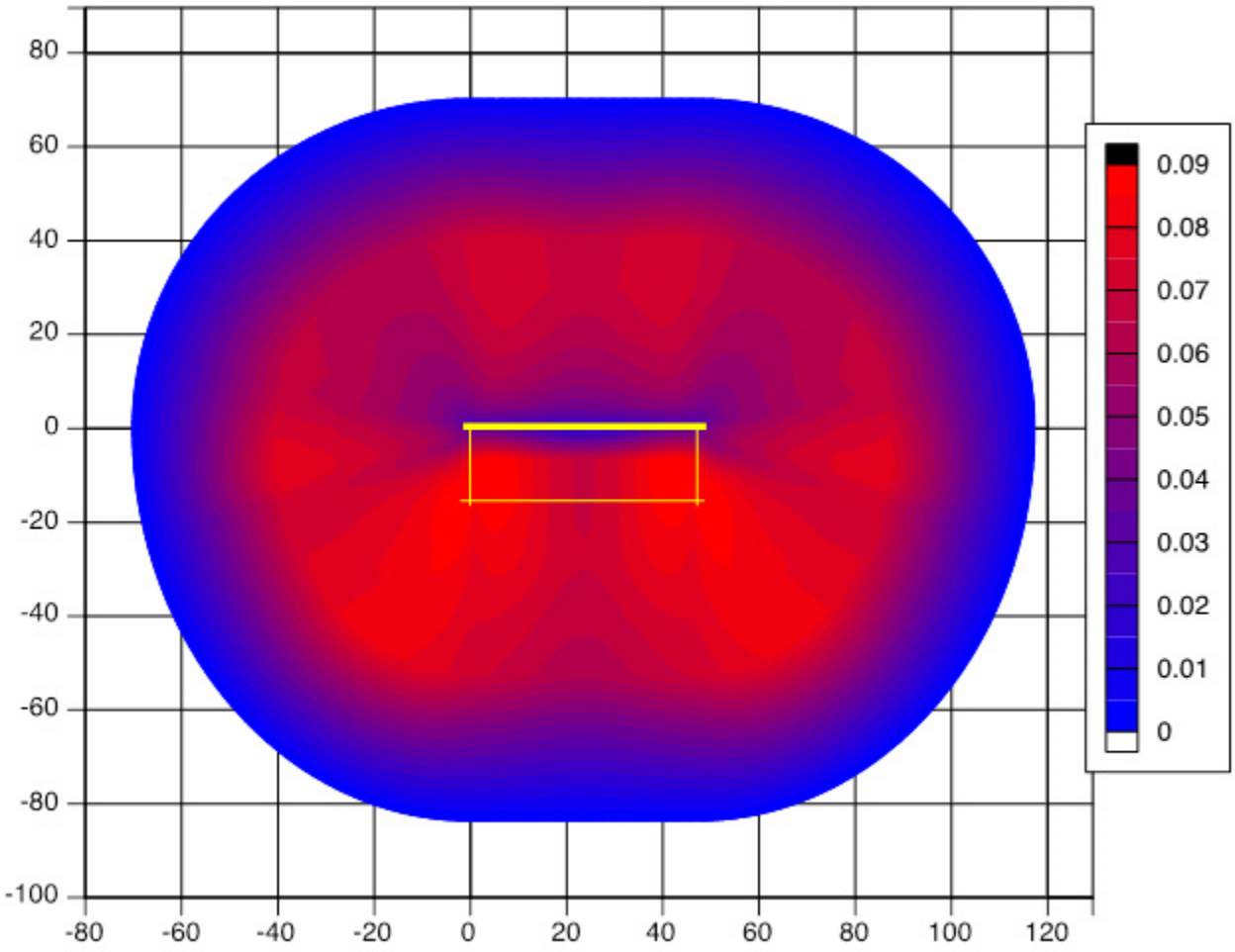

Figure B.64 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture.**

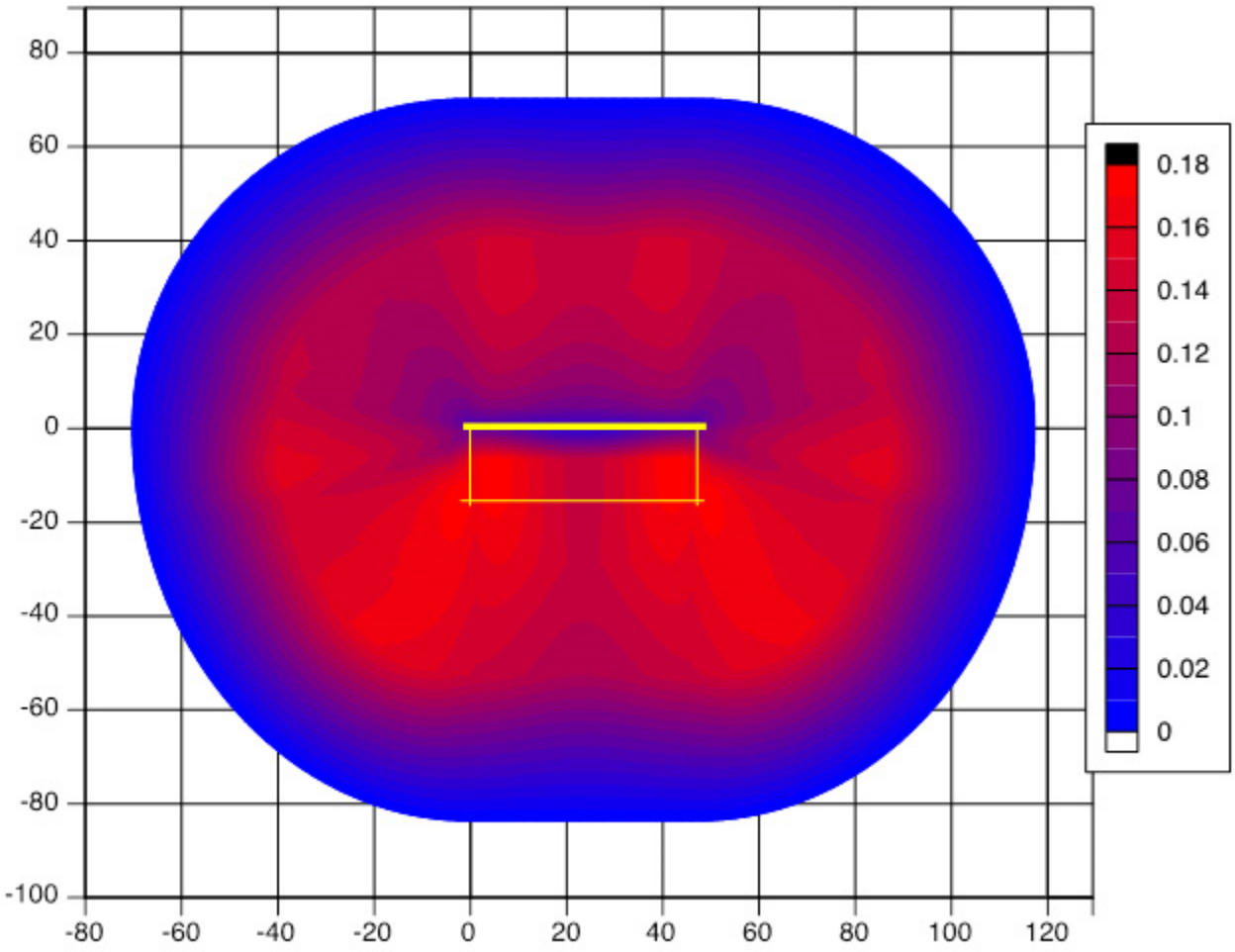

Figure B.65 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture.**

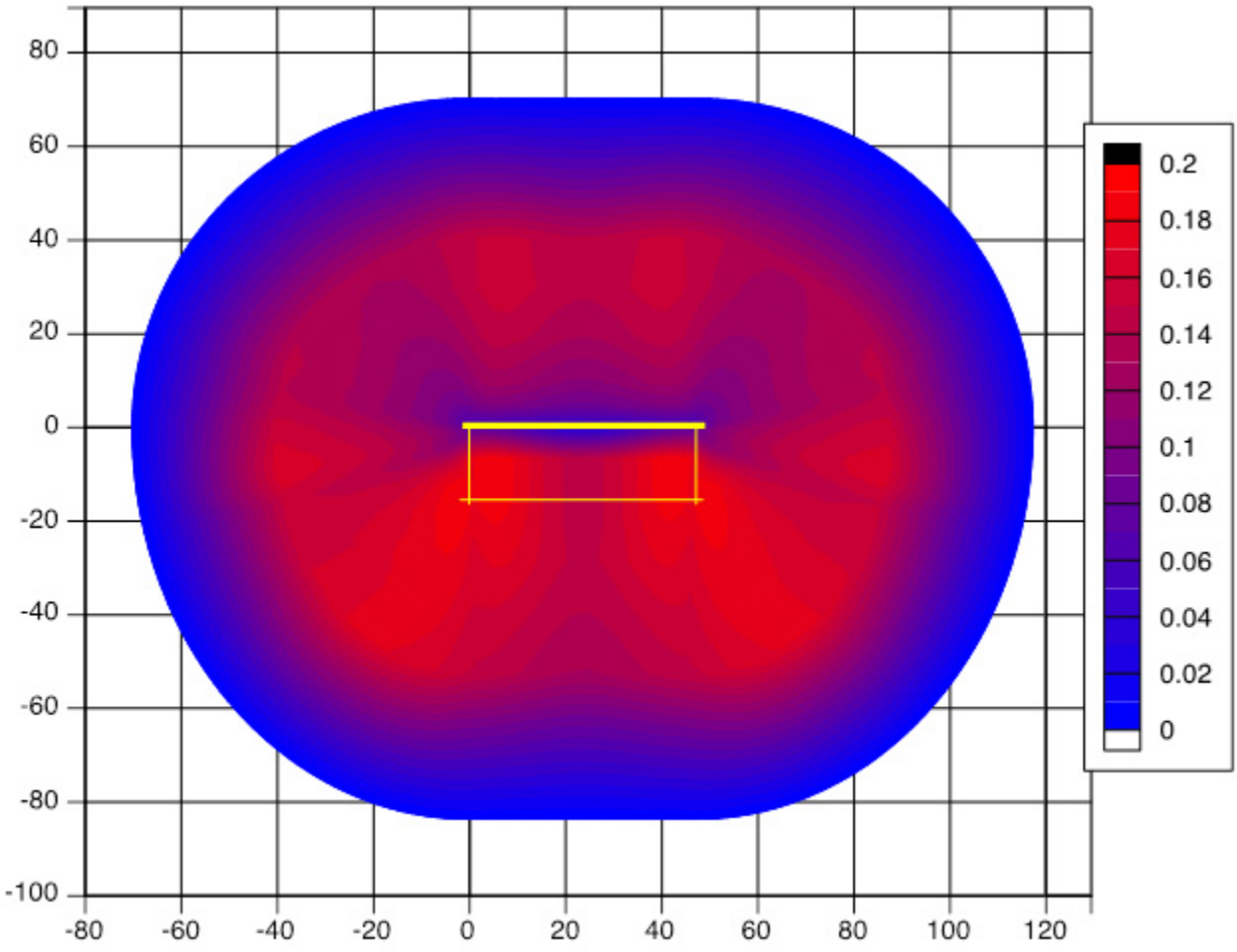

Figure B.66 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture.**

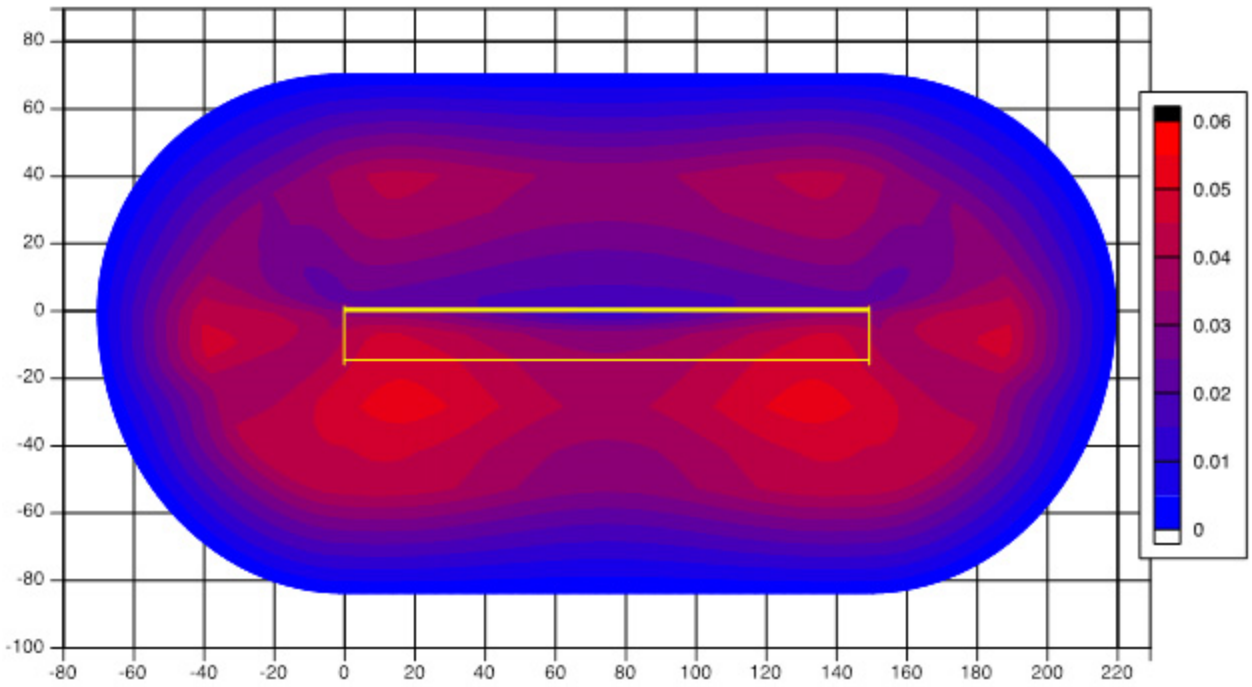

Figure B.67 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture.**

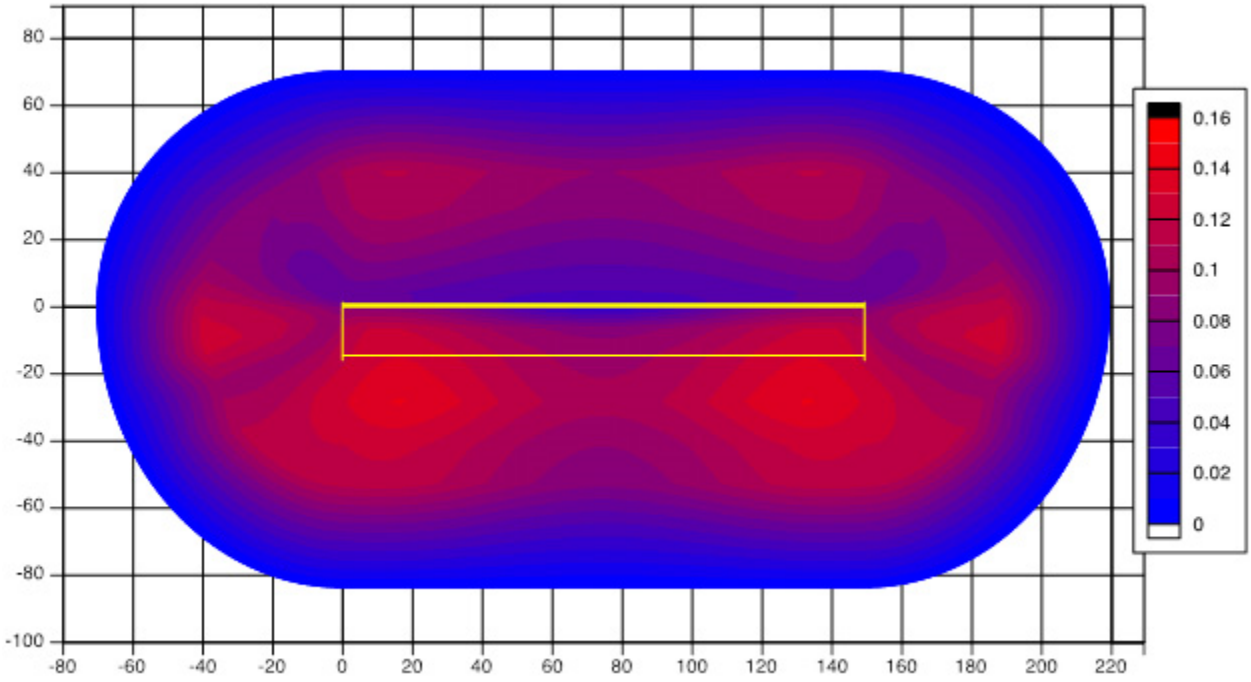

Figure B.68 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture.**

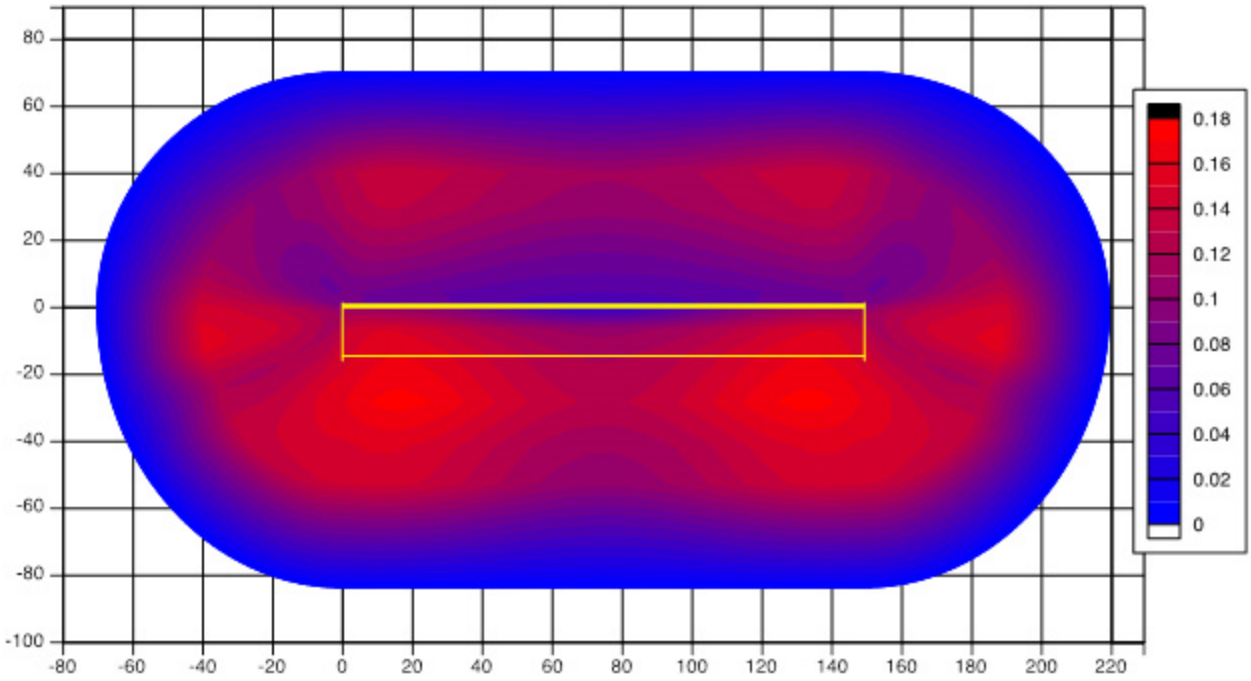

Figure B.69 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture.**

B.2.3 Changes in the Standard Deviation of the Log Normal 5% Damped Pseudo-Spectral Acceleration with ϕ_2 Reduction

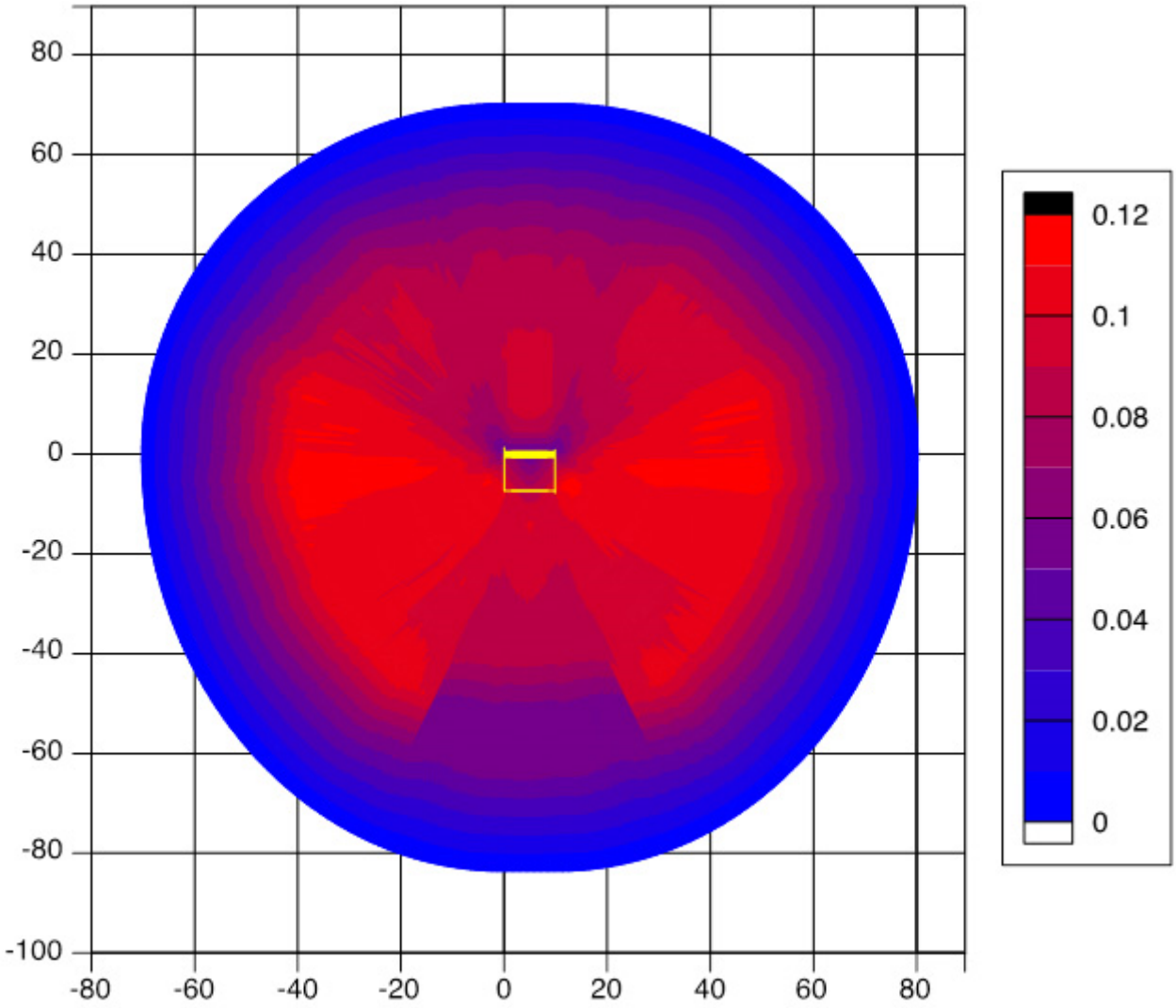

Figure B.70 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture with ϕ_2 reduction.**

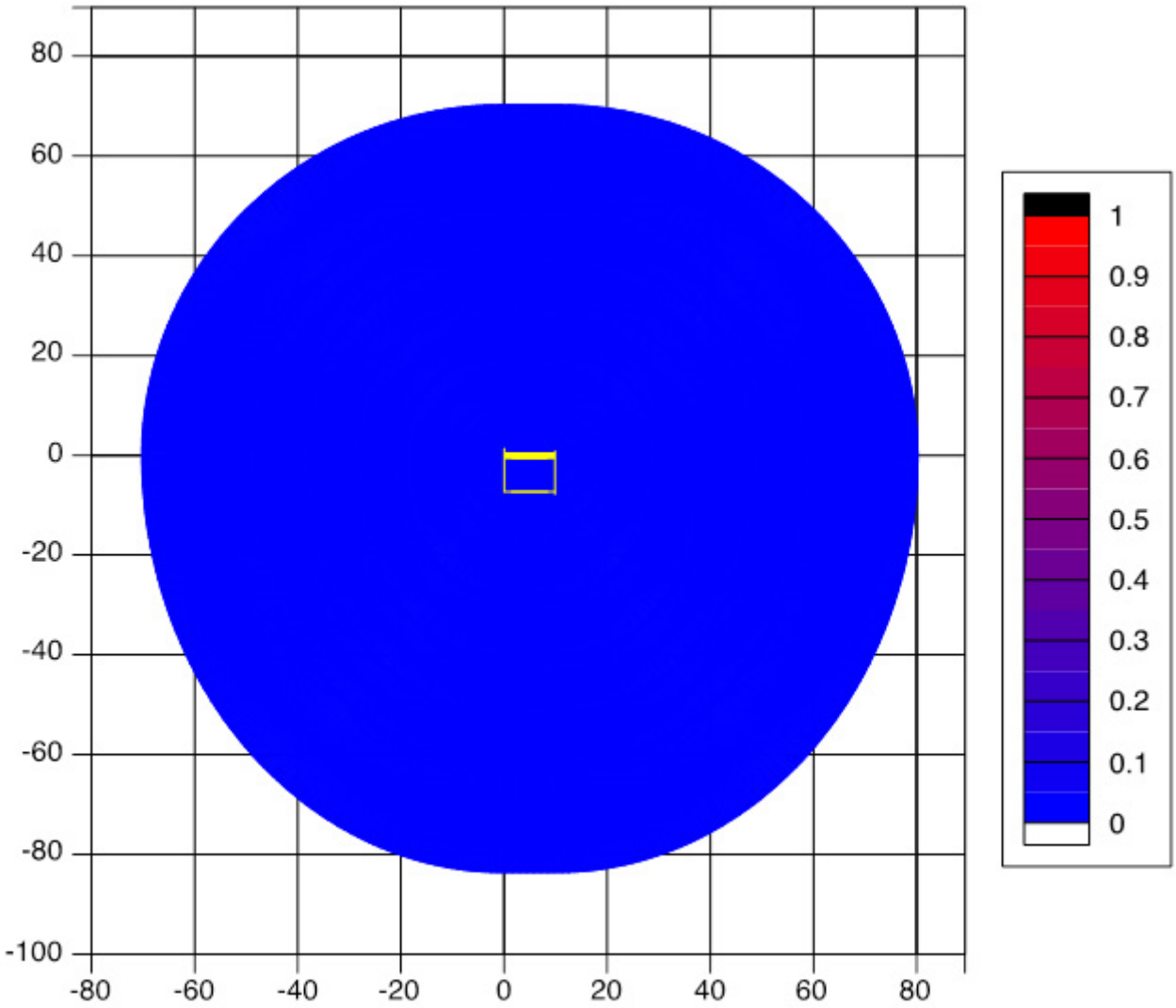

Figure B.71 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture with ϕ_2 reduction.**

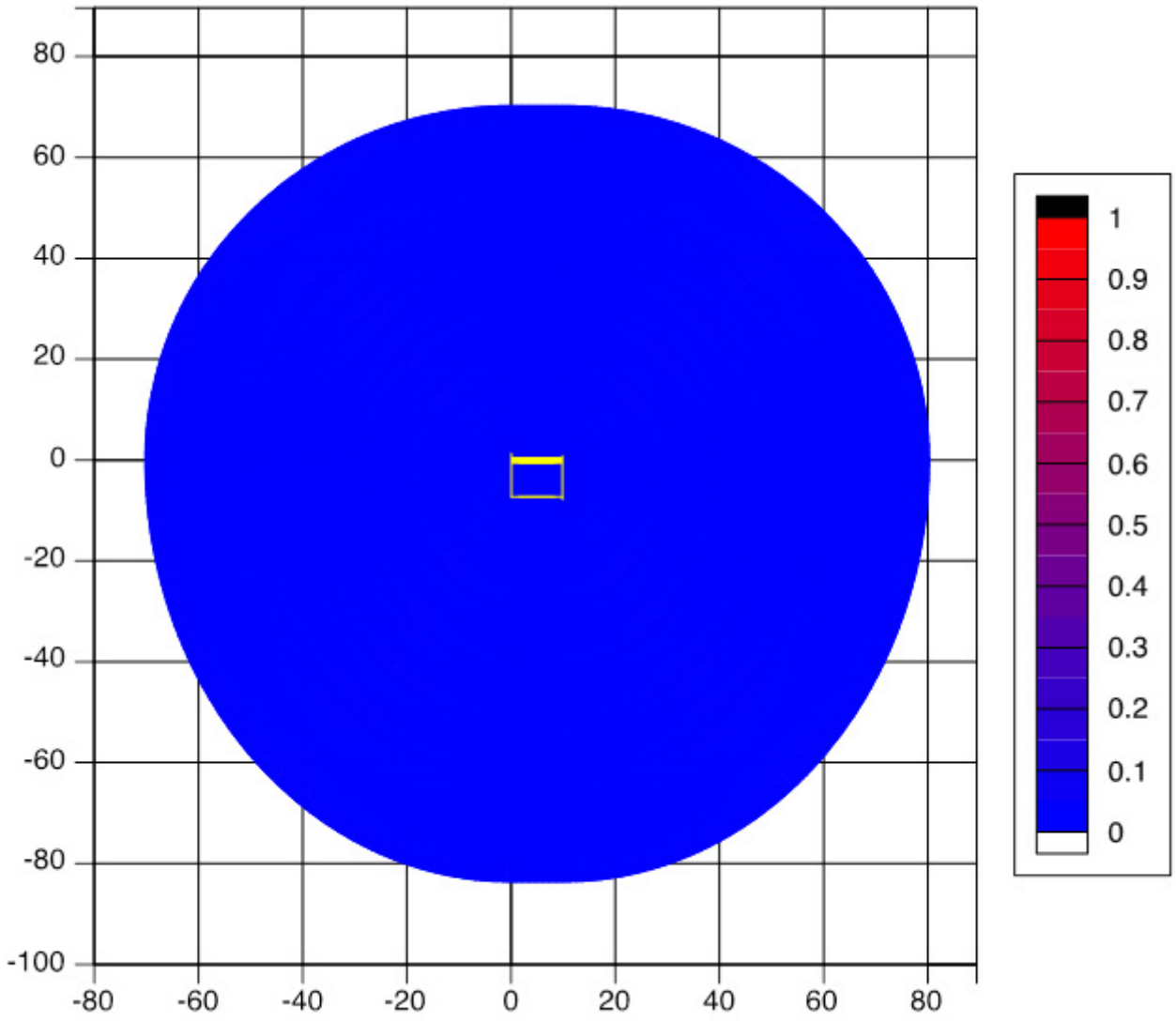

Figure B.72 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6, reverse rupture with ϕ_2 reduction.**

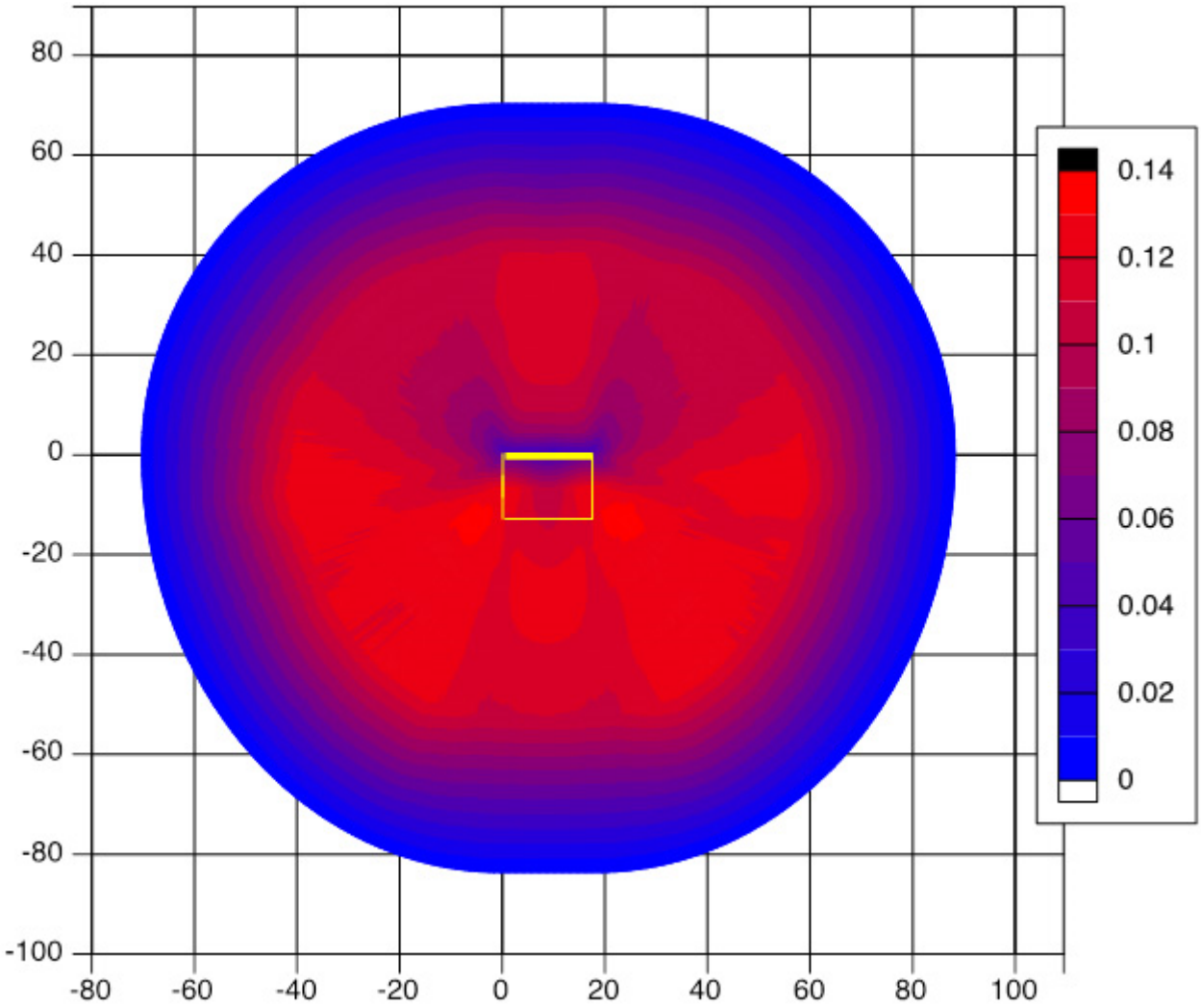

Figure B.73 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture with ϕ_2 reduction.**

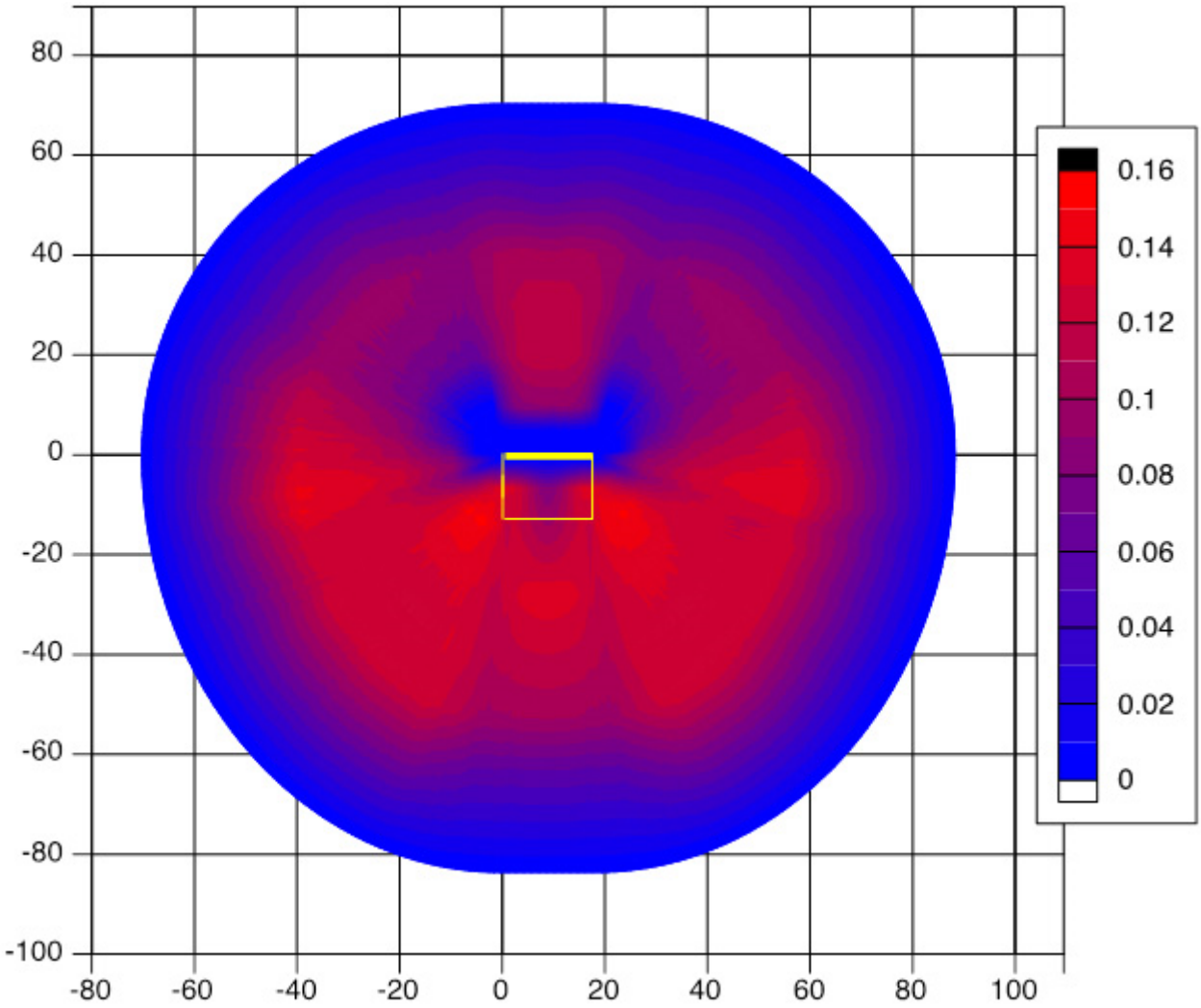

Figure B.74 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture with ϕ_2 reduction.**

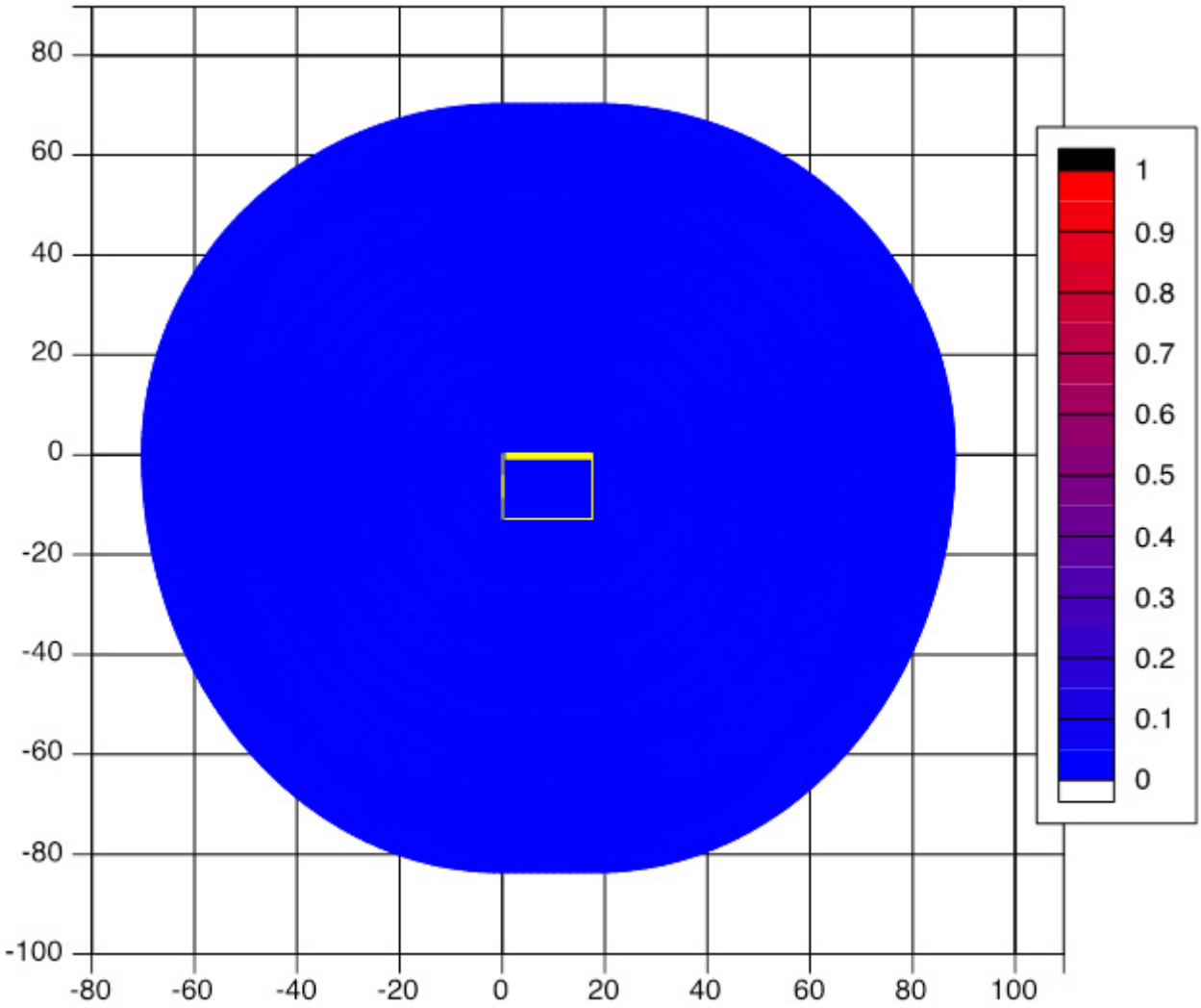

Figure B.75 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 6.5, reverse rupture with ϕ_2 reduction.**

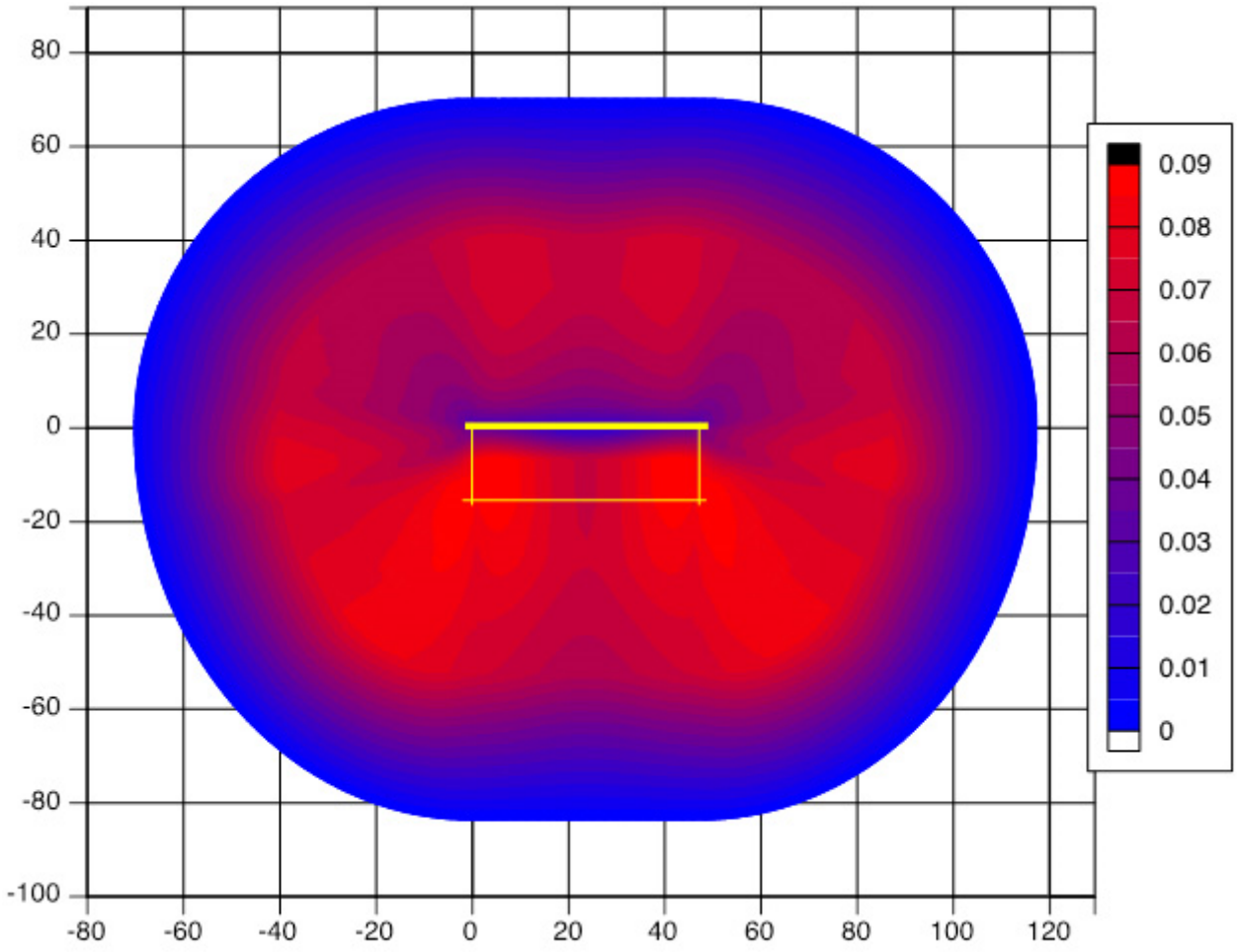

Figure B.76 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture with ϕ_2 reduction.**

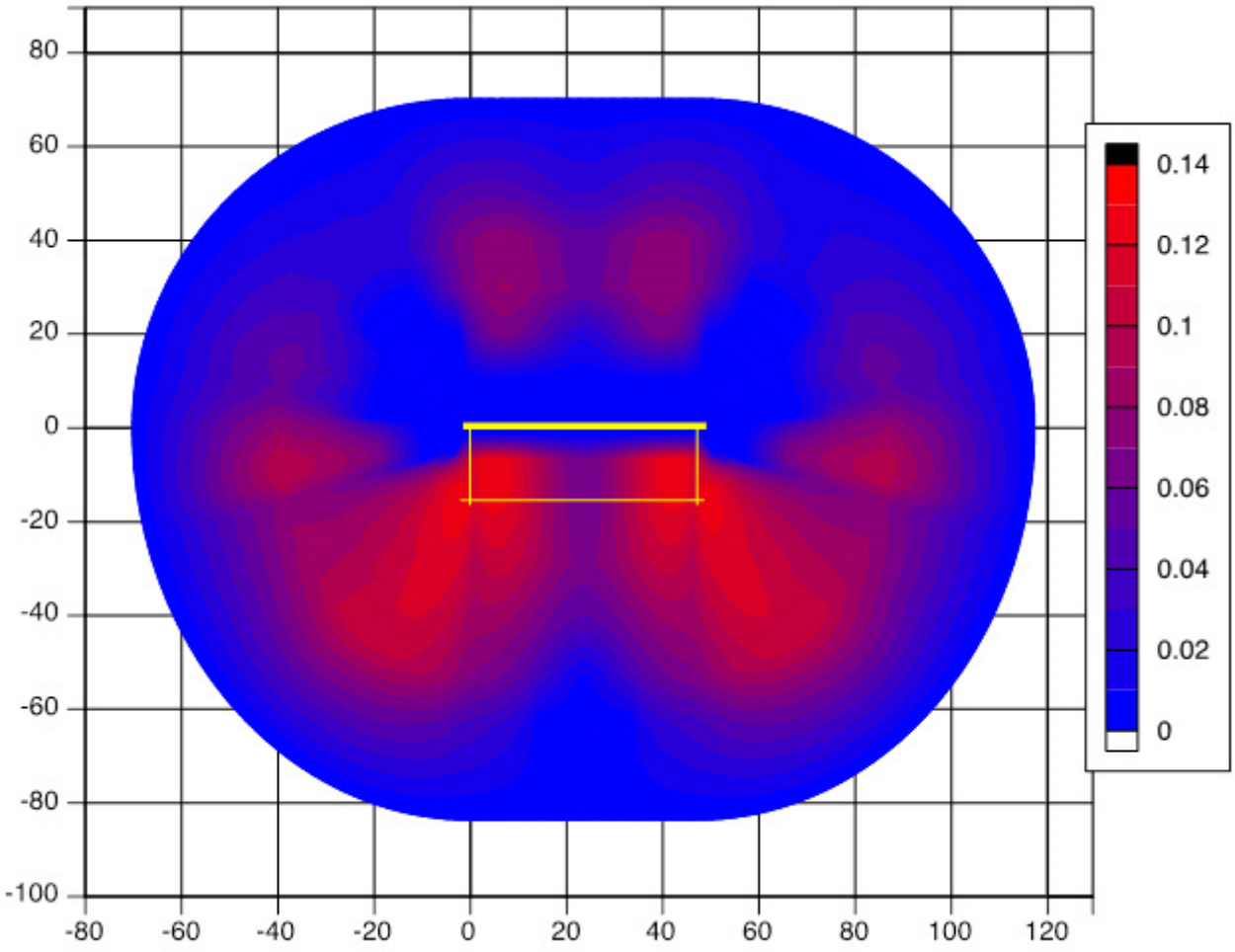

Figure B.77 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture with ϕ_2 reduction.**

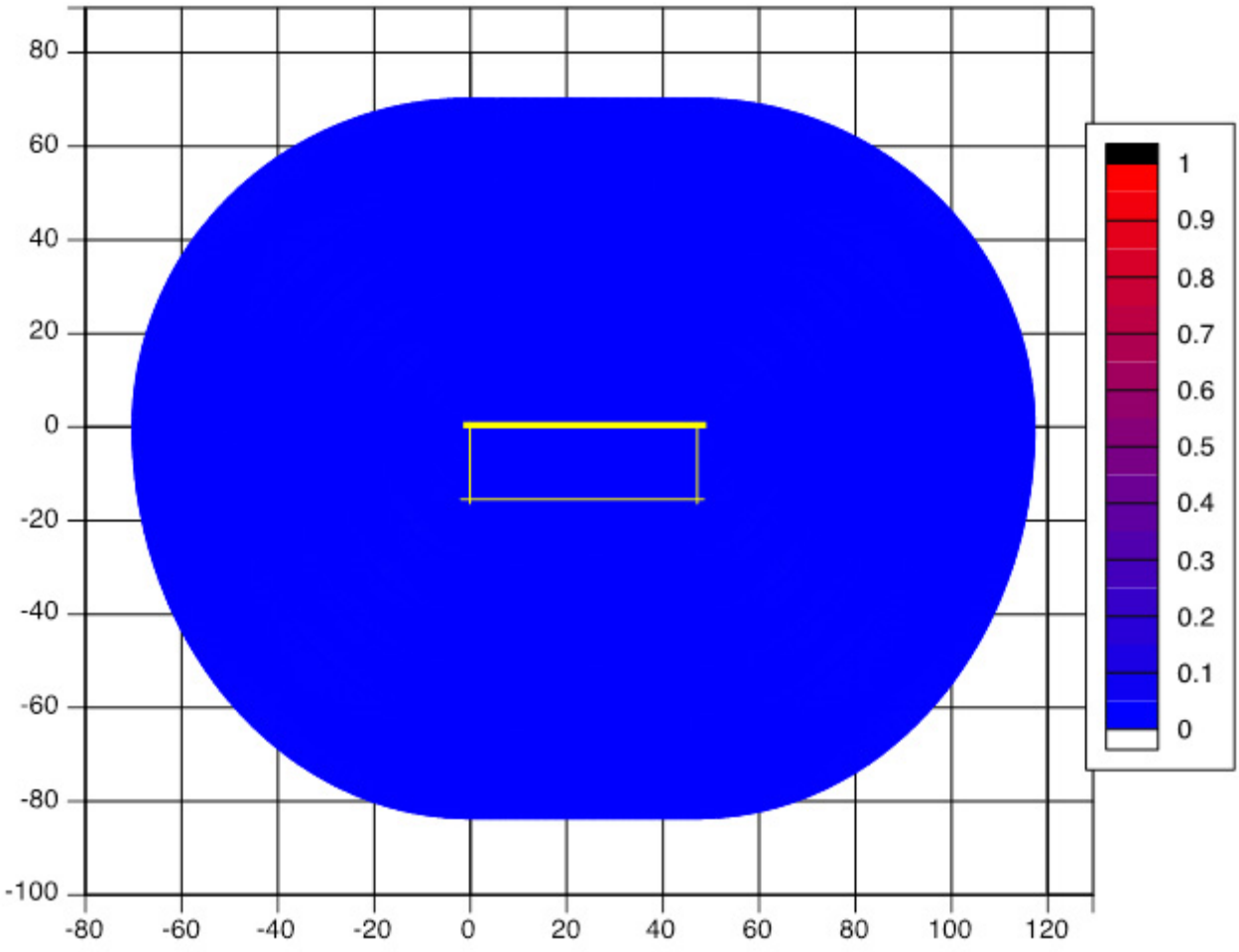

Figure B.78 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7, reverse rupture with ϕ_2 reduction.**

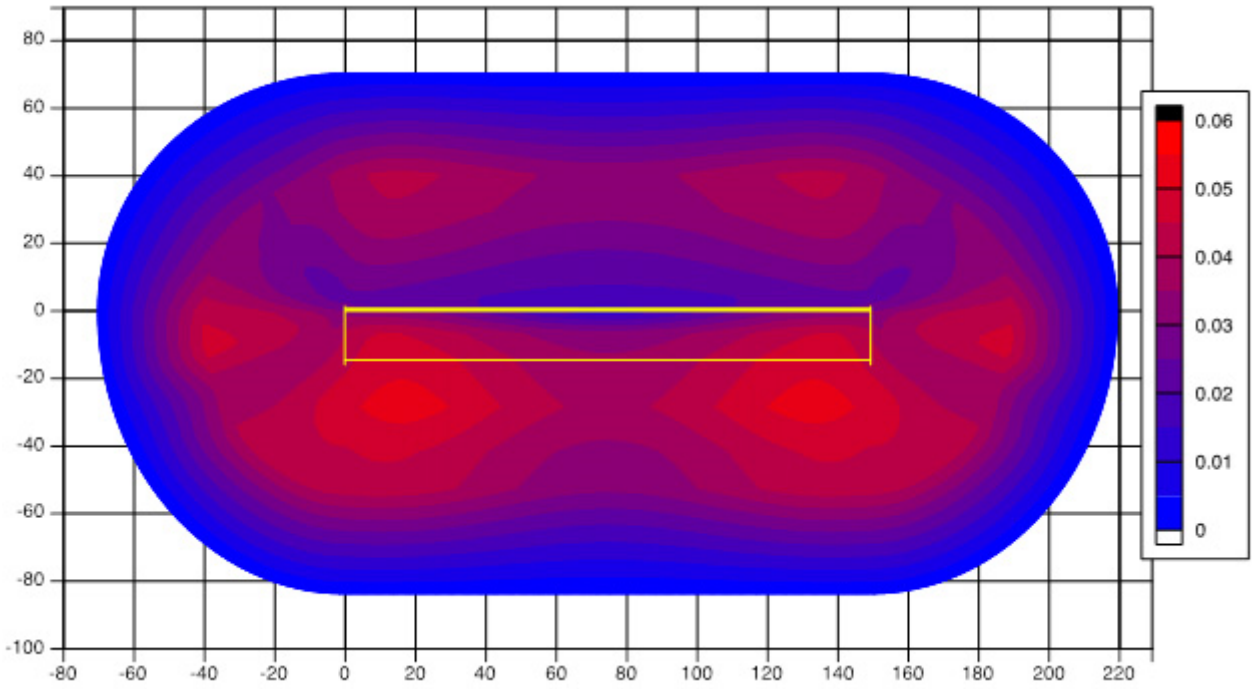

Figure B.79 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 1 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture with ϕ_2 reduction.**

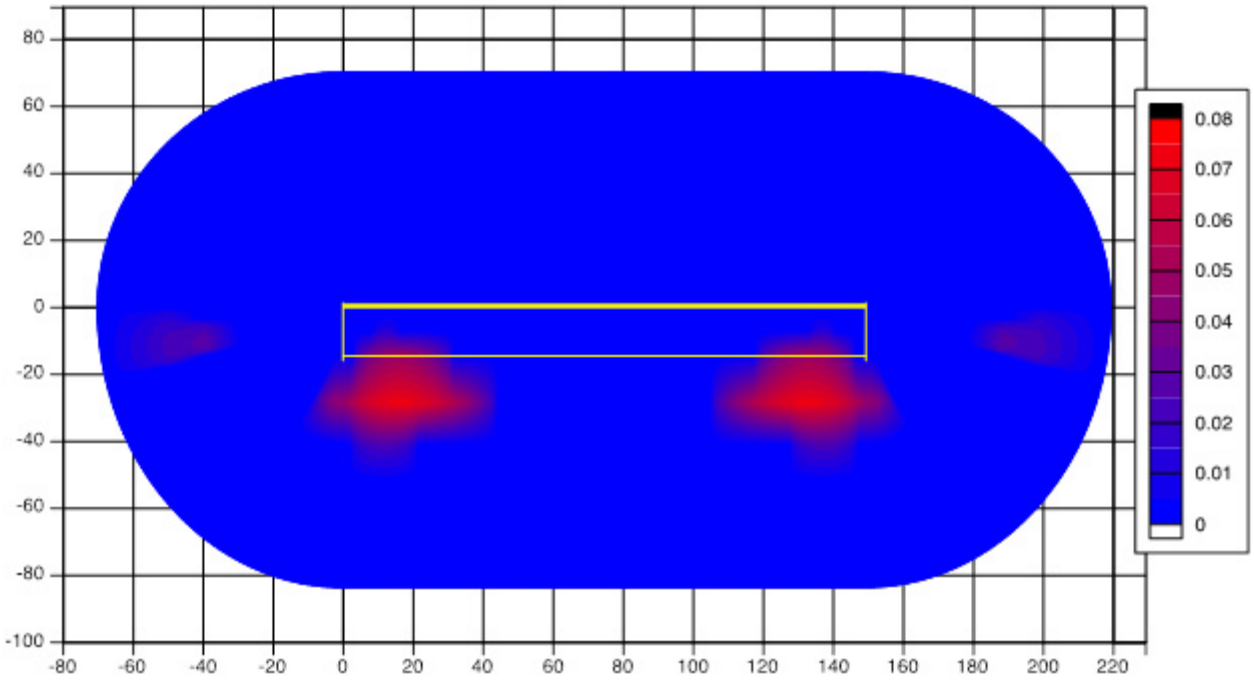

Figure B.80 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 3 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture with ϕ_2 reduction.**

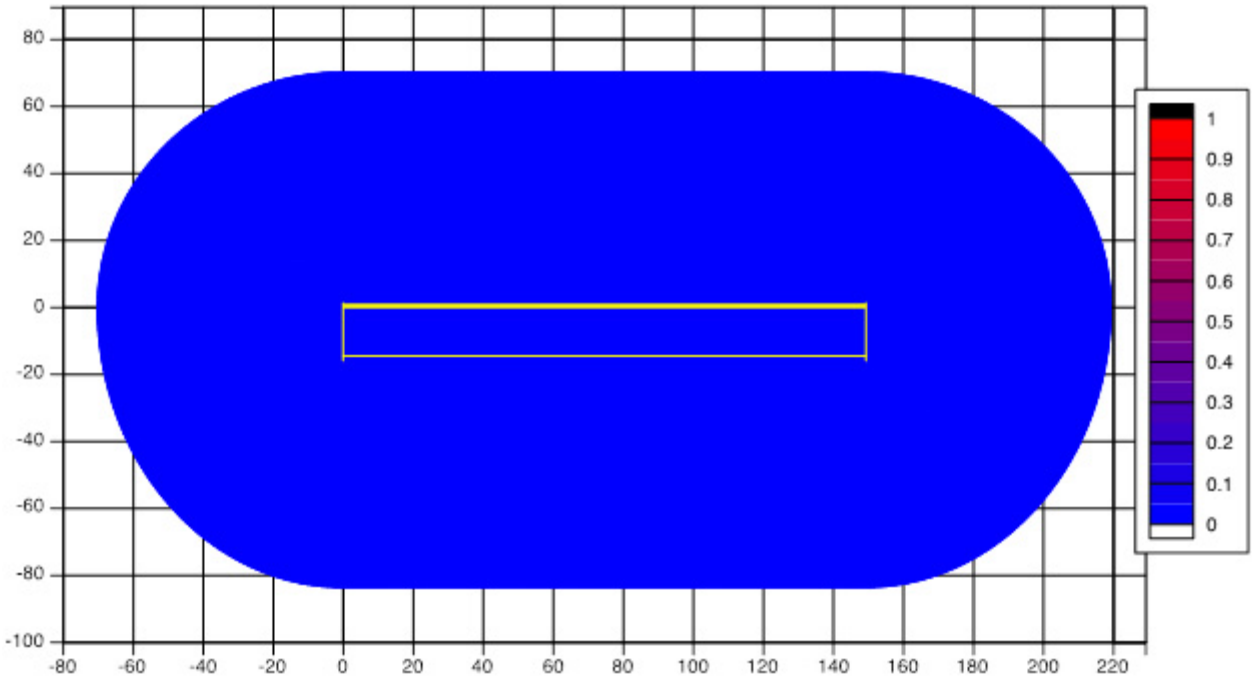

Figure B.81 **Change in the standard deviation of the natural log of the 5% damped pseudo-spectral acceleration at 5 sec due to the randomization of hypocenters using a uniform hypocentral distribution for a moment-magnitude 7.5, reverse rupture with ϕ_2 reduction.**