



Explanation

%g

200
160
120
80
60
50
40
30
20
18
16
14
12
10
8
6
4
2
0

+ 6.2 Point value of spectral response acceleration expressed as a percent of gravity

— 10 — Contour of spectral response acceleration expressed as a percent of gravity

Note: contours are irregularly spaced



Index map showing location of study area

DISCUSSION

The acceleration values contoured are the random horizontal component. Reference site condition is firm rock, defined as having an average shear-wave velocity of 760 m/sec in the top 30 meters, corresponding to the boundary between NEHRP site classes B and C.

In some situations, particularly in areas of high ground-motions (e.g., along the San Andreas Fault) there are discontinuous chains, or islands, of high ground-motion values. This is an artifact of the grid spacing used in the calculations. In most cases these chains should be replaced with continuous bands of high ground-motion values enclosing the chains.

Documentation, gridded values, and ARC/INFO coverages used to make the maps are available at: <http://geohazards.cr.usgs.gov/eq/>

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California portion of the map produced jointly with the California Division of Mines and Geology. Ken Rukstales prepared the ARC/INFO digital data and formatted the GIS versions of the maps.

REFERENCES

Frankel, A., Mueller, C., Barnhard, T., Perkins, D., Leyendecker, E.V., Dickman, N., Hanson, S., and Hopper, M., 1996, National Seismic-Hazard Maps: Documentation June 1996: U.S. Geological Survey Open-File Report 96-532, 110 p.

Frankel, A., Mueller, C., Barnhard, T., Perkins, D., Leyendecker, E.V., Dickman, N., Hanson, S., and Hopper, M., 1997, Seismic-Hazard Maps for the Conterminous United States: U.S. Geological Survey Open-File Report 97-131, 12 sheets, scale 1:7,000,000.

Petersen, M., Bryant, W., Cramer, C., Cao, T., Reiche, M., Frankel, A., Lienkaemper, J., McCrory, P., and Schwartz, D., 1996, Probabilistic Seismic Hazard Assessment for the State of California: California Division of Mines and Geology Open-File Report 96-08, 66 p., and U.S. Geological Survey Open-File Report 96-706, 66 p.

**SEISMIC-HAZARD MAPS FOR CALIFORNIA, NEVADA AND WESTERN ARIZONA/UTAH
MAP D - HORIZONTAL SPECTRAL RESPONSE ACCELERATION FOR 0.2 SECOND PERIOD (5% OF CRITICAL DAMPING)
WITH 10% PROBABILITY OF EXCEEDANCE IN 50 YEARS**

By

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1997

Digital data prepared with ARC/INFO 7.0.4 running under Solaris 2.5 on a UNIX workstation
Albers Equal-Area Conic Projection
Standard Parallels 29.5°N and 45.5°N
Central Meridian 118°W

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