

**PROGRESS REPORT: UNR SEISMOLOGICAL LABORATORY SCEC  
FUNDED RESEARCH FOR THE PERIOD Jan 1, 2000 –Feb 1, 2001**

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During this period we:

1. Further documented the distribution of precarious rocks near the San Andreas fault and the Banning fault, as well as at miscellaneous other sites in Southern California.
2. Made preliminary estimates of toppling accelerations for various precarious rocks.
3. Deployed temporary broadband instruments to determine site effects at precarious rock sites (Aliso Canyon and Devil's Punch Bowl).
4. Worked with Rob Abbot and John Louie to determine site effects at some precarious rock sites.
5. Further quantified the precarious rock methodology using computer programs and shake table tests of objects of various shapes (exposed to ground motions of various types, including theoretical seismograms and seismograms from the recent Turkey earthquake).
6. Documented the distribution of shattered rock on the hanging wall of thrust faults in S. Calif.

Results of this research have been presented at the 2000 SSA meeting and the Dec. 2000 AGU meeting.

A paper titled:

- Brune, J. N. (2001). Shattered Rock and Precarious Rock Evidence for strong asymmetry in ground motions during thrust faulting, *Bull. Seism. Soc. Am.*, in press. SCEC contribution number is 526.
- Anderson, J. G., Brune, J. N., Anooshehpour, R., and Ni, S. (2000). New ground motion data and concepts in seismic hazard analysis, *Current Science*, **79**, 1278-1290. SCEC contribution number is 532.
- Anooshehpour, A., Brune, J. N. (2000), Methodology for obtaining constraints on ground motion from field tests of precariously balanced rocks, submitted to *Bull. Seism. Soc. Am.* (in revision).