

EXPLANATION

This plate shows the graphical solutions and control points for different possible distances from the energy-release center to the boundary of sand blows for the December 16, 1811, earthquake.

Figure A shows the sand blow intensities and control points. Intensity outlines are the same as those shown on plate 8. Areas with no symbols either have no sand blows or are areas not in braided-stream alluvium or are not in Mississippi River meander-belt alluvium. Three epicenter locations are also shown. Control points (A, B, C, D, E, F, G, H, I, J) are locations along an idealized, smoothed sand blow boundary that would result from an energy-release center that extends from the general vicinity of Craighhead County—Mississippi County, Ark. boundary and thence northeast.

Figures B—E show different possible distances from control points to a zone describing an energy-release center. The control points and scale in figures B—E are the same as shown in figure A. Arcs drawn from control points are designated with primes; for example, an arc from point A has A' and A'' at the ends of the arc. Point O is the centroid of the arcs drawn from points A, B, and F.

- Sand blow intensities
- VH Generally very high
- H Generally high
- M Generally moderate
- L Generally low
- F Forested
- Earthquake epicenter locations (from Nuttli, 1979)
- December 16, 1811
- ▲ January 23, 1812
- February 7, 1812
- Major geologic and geographic features in the late Quaternary alluvium (from Saucier, 1964)
- Meander-belt deposits laid down since 1811–12
- Holocene point-bar deposits
- Obion River point-bar deposits
- Obion River terrace deposits
- Pleistocene/Holocene braided-stream deposits
- Backswamp deposits
- Low scarp—Teeth point in direction of topographically low side
- Inferred faults beneath alluvium
- Boundary of zone with many small faults
- Discrete faults
- Joints through loess

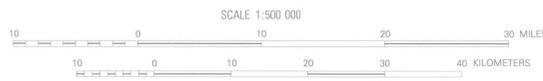


FIGURE A

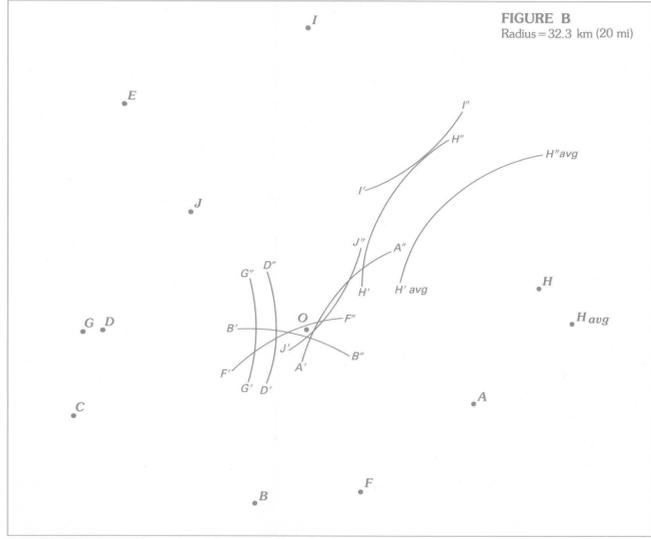


FIGURE B
Radius=32.3 km (20 mi)

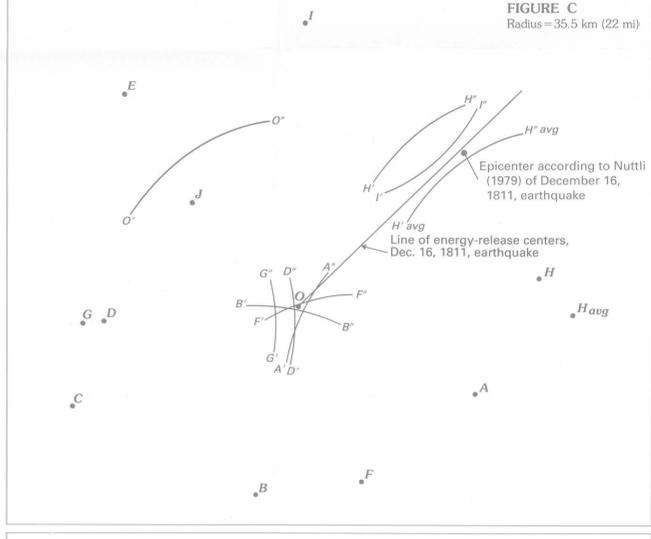


FIGURE C
Radius=35.5 km (22 mi)

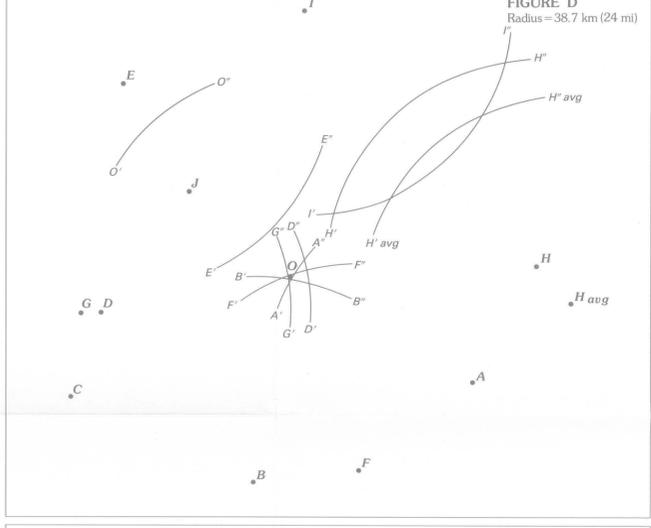


FIGURE D
Radius=38.7 km (24 mi)

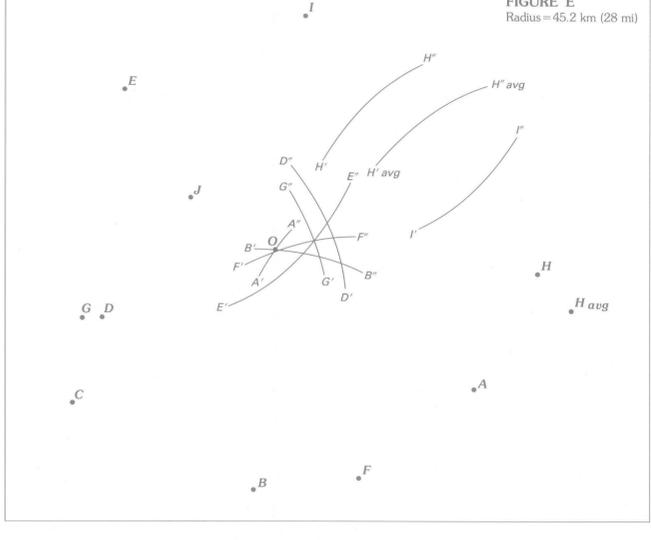


FIGURE E
Radius=45.2 km (28 mi)

Base from U.S. Geological Survey, 1:250,000
Blytheville 1970; Dyersburg 1970; Memphis 1978;
Paducah 1969; Poplar Bluff 1978