

ShakeAlert Post-Alert Summary

An overview of the performance of ShakeAlert during this event

Earthquake

M3.5 - 16 miles E of Bakersfield
 ANSS origin (Local): 2019-06-09 19:41:11.2
 ANSS origin (UTC): 2019-06-10 02:41:11.2
 ShakeAlert alert (UTC): 2019-06-10 02:41:19.5
 ShakeAlert Event ID ew189

Summary Report

Speed of Alert:

Initial alert after origin time: 8.3 s
 Final alert update after origin time: 33.6 s

Magnitude Accuracy:

Initial ShakeAlert: M 3.6
 Final ShakeAlert: M 3.5
 ANSS report: 125 s after origin, M3.5

Distance From Alert to Reviewed Location

Initial alert: 4.0 km, 2.5 miles E
 Final alert: 2.1 km, 1.3 miles E

Number of stations reporting

1 within 10 km of epicenter
 46 within 100 km of epicenter
 88 used in final ShakeAlert update

Performance for Nearby Cities

City	Distance	Warning Time*	MMI*
Bakersfield	16 km	~0 sec	<2
Arvin	23 km	~0 sec	<2
Shafter	40 km	~3.3 sec	<2
Los Angeles	160 km	~37.0 sec	<2

Zone Shaken by S-wave Before Alert: 30 km (18 mi)

Footnotes

- 1) *MMI -- Modified Mercalli Intensity: a scale to measure ground shaking.
- 2) "Warning Time": Time between alert production and arrival of the S-wave at a chosen site.
- 3) For moderate earthquakes, the 'final' alert area may be little changed from the initial.

Disclaimer

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Figure 1. ShakeAlert earthquake location (red dot). Star is regional network epicenter. Polygon is the predicted outer range for felt ground motion (MMI 2). Red circle is locus of peak shaking when the alert was released. Shaking takes 10 s to expand from circle to circle.



Figure 2. Polygons show shaking intensity contours for the final ShakeAlert. Shaking of intensity 3 or less often is not felt. Star shows the regional network epicenter.