

NGA-West2 資料庫

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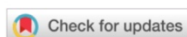
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摘要

NGA-West 2 計畫資料庫是在其前身的基礎上進一步擴展，新增了 2000 年後全球活躍構造區淺層地殼地震的地動資料，以及 1998 年至 2011 年間加州發生的一組小至中等規模的地震，共收錄了 599 個地震事件的三分量記錄。資料庫所涵蓋的參數如下：規模(M)3.0 至 7.9、距斷層破裂面最短距離為 0.05 至 1533 公里、地表 30 公尺的剪力波速(V_{s30})範圍為 94 至 2100 公尺/秒(在距離超過 400 公里及 V_{s30} 高於 1200 公尺/秒或低於 150 公尺/秒時，數據較為稀少)。該資料庫也包含經過統一處理的時間序列與反應譜值，包含 111 個週期(0.01 秒至 20 秒)與 11 種阻尼比。其中，地動資料、震源、傳播路徑與場址條件的詮釋資料均經過地動預估式開發者及專題工作小組的嚴格檢查。

關鍵字：NGA West2、強地動、資料庫、地震。



NGA-West2 Database

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The NGA-West2 project database expands on its predecessor to include worldwide ground motion data recorded from shallow crustal earthquakes in active tectonic regimes post-2000 and a set of small-to-moderate-magnitude earthquakes in California between 1998 and 2011. The database includes 21,336 (mostly) three-component records from 599 events. The parameter space covered by the database is M 3.0 to M 7.9, closest distance of 0.05 to 1,533 km, and site time-averaged shear-wave velocity in the top 30 m of $V_{S30} = 94$ m/s to 2,100 m/s (although data becomes sparse for distances >400 km and $V_{S30} > 1,200$ m/s or <150 m/s). The database includes uniformly processed time series and response spectral ordinates for 111 periods ranging from 0.01 s to 20 s at 11 damping ratios. Ground motions and metadata for source, path, and site conditions were subject to quality checks by ground motion prediction equation developers and topical working groups. [DOI: 10.1193/070913EQS197M]

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