

2011 - Yang, Hauksson and Shearer: Refined earthquake focal mechanism catalog for southern California (1981 - 2010)

A refined earthquake focal mechanism catalog for southern California using the HASH method and locations derived from waveform cross-correlation. Each focal mechanism is obtained from grid searching for the best-fitting double-couple focal mechanism solution to both the P-wave first motion records that were picked by network analysts, and the S/P amplitude ratios computed from three-component seismograms. This dataset includes around 179,000 focal mechanisms for earthquakes occurring 1981 through 2010 in southern California region.

REFERENCE:

Yang, W., E. Hauksson and P. M. Shearer, Computing a large refined catalog of focal mechanisms for southern California (1981 - 2010), *Bull. Seism. Soc. Am.*, Vol. 102-3, *In Press*. 2012.

Hauksson E., W. Yang and P. M. Shearer, Waveform relocated earthquake catalog for southern California (1981 - 2011), submitted to *Bull. Seism. Soc. Am.*

DOWNLOAD:

Right click or option-click [YHS_2010.hash](#) and choose "Save As.../Download Linked File As..." to download the catalog (~20Mb).

DATA FORMAT:

1981 1 1 4 13 55.710 3301565 33.25517 -115.96750 5.680 2.260 318 57 -168 37 39 18 0.17 0 0.00 C

1981	Year
1	Month
1	Day
4	Hour
13	Minute
55.710	Second
3301565	CID
33.25517	Latitude (Degree)
-115.96750	Longitude (Degree)
5.680	Depth (km)
2.260	Magnitude
318	Strike
57	Dip
-168	Rake
37	Fault Plane Uncertainty
39	Auxiliary Fault Plane Uncertainty
18	Number of P wave First Motions
0.17	Misfit of First Motions
0	Number of S/P amplitude ratios
0.00	average log ₁₀ (S/P amplitude ratio) misfit
C	Quality of focal mechanism

UPDATES:

- Removed entry (CID=3140671), which is a duplicated record for the Northridge mainshock (CID=3144585), but of the teleseismic event type (April 4, 2012)

Thanks to Men-Andrin Meier for pointing out.

Last Update: April 4, 2012