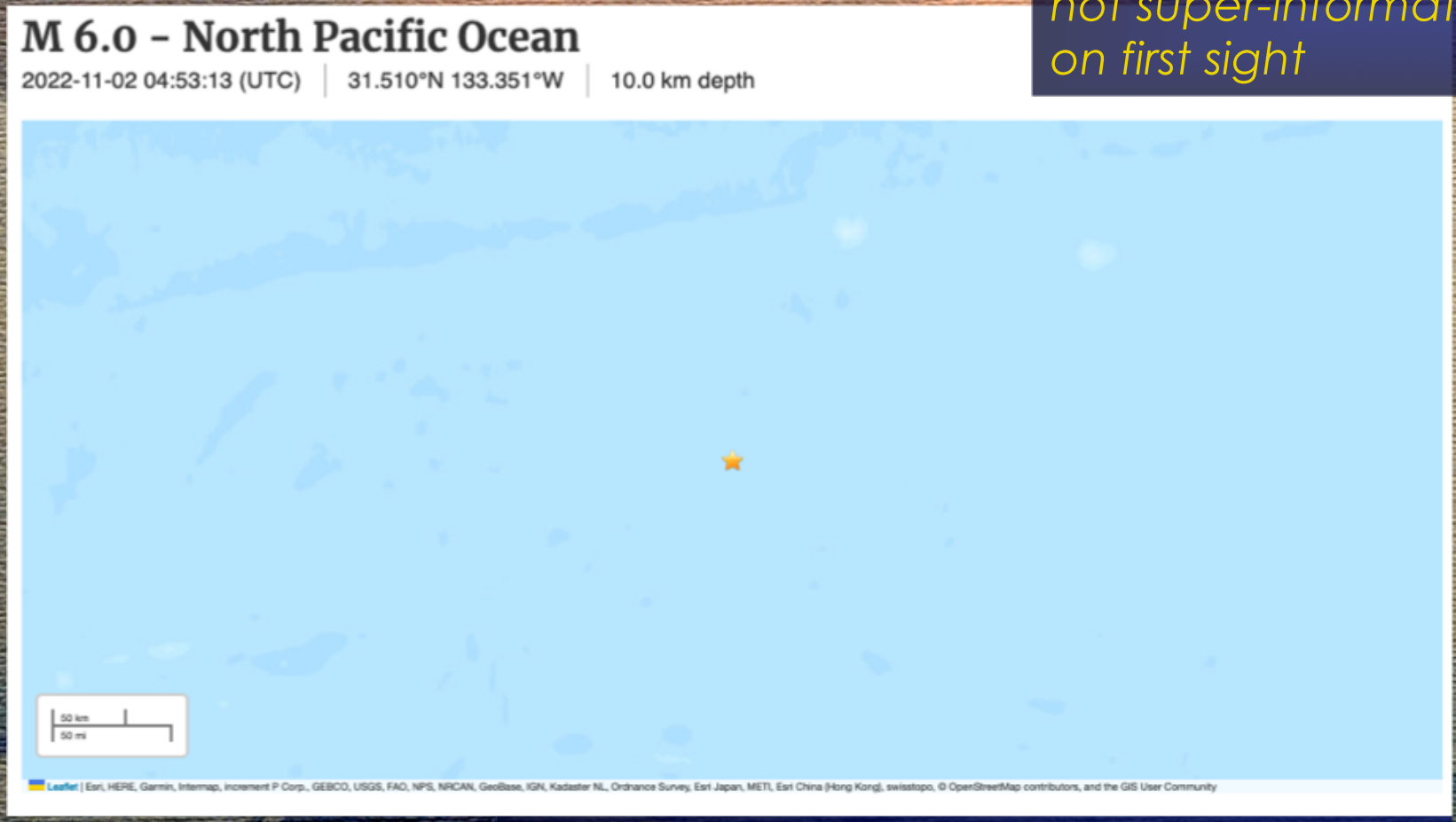
A Magnitude 6 in the Pacific

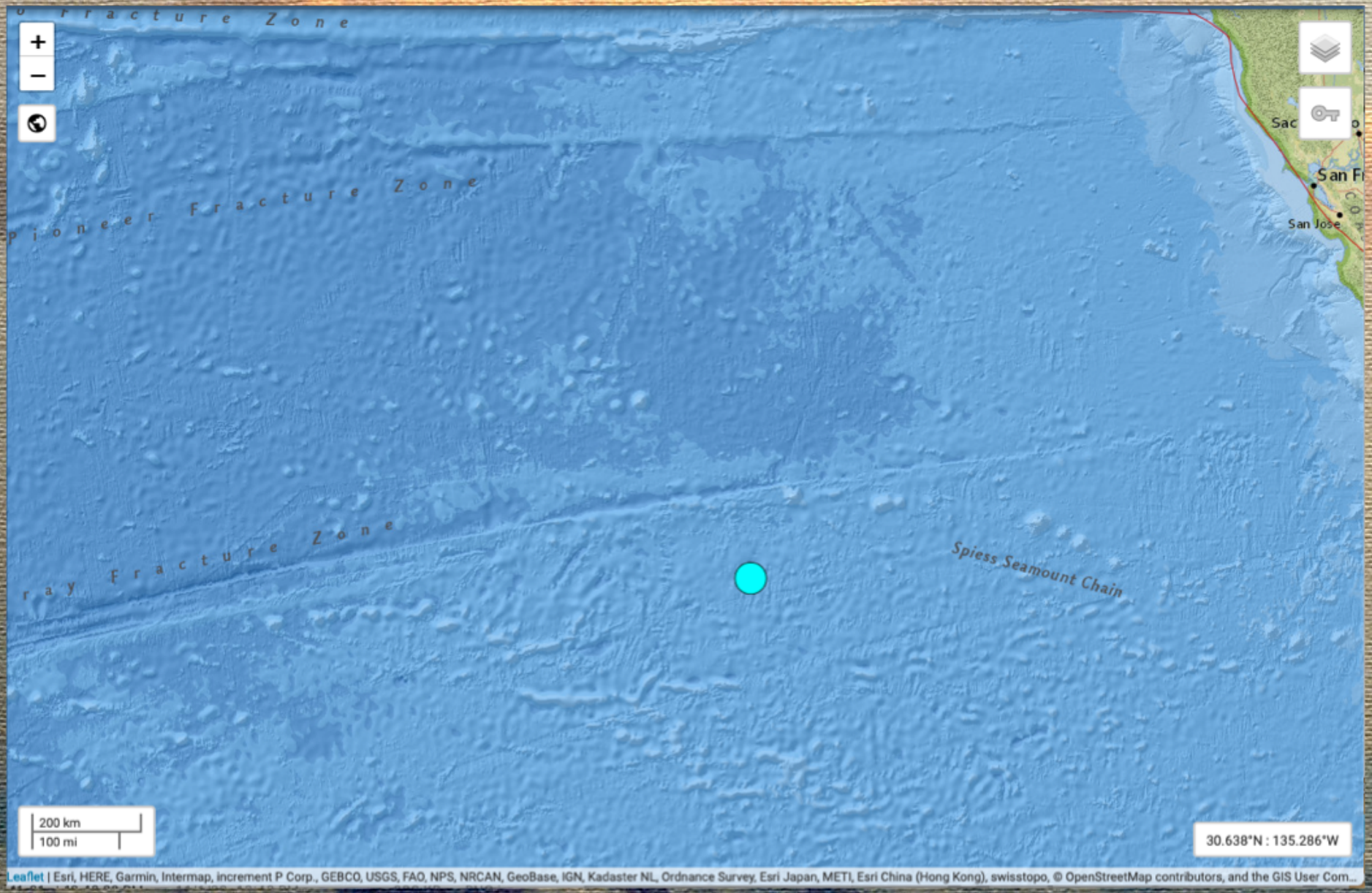
'In the Pacific, in the middle of nowhere' – or is it?

not super-informative on first sight



source: NEIC (National Earthquake Information Center), USGS

A Magnitude 6 in the Pacific



source: NEIC (National Earthquake Information Center), USGS

A Magnitude 6 in the Pacific

M 6.0 – North Pacific Ocean

2022-11-02 04:53:13 (UTC) | 31.510°N 133.351°W | 10.0 km depth

Moment Tensor

View all moment-tensor products (2 total)

Contributed by US [1] last updated 2022-11-02 22:19:17 (UTC)

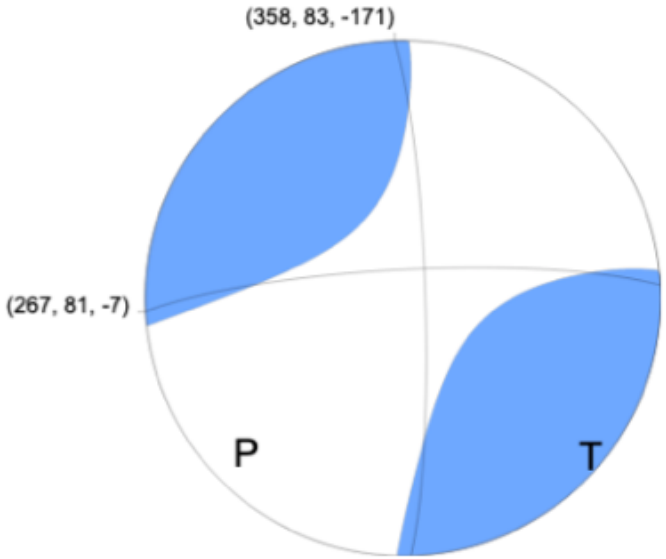
✓ The data below are the most preferred data available
✓ The data below have been reviewed by a scientist

W-phase Moment Tensor (Mww)

Moment	1.284e+18 N-m
Magnitude	6.01 Mww
Depth	13.5 km
Percent DC	59%
Half Duration	3.10 s
Catalog	US
Data Source	US [1]

Nodal Planes

Plane	Strike	Dip	Rake
NP1	267°	81°	-7°
NP2	358°	83°	-171°

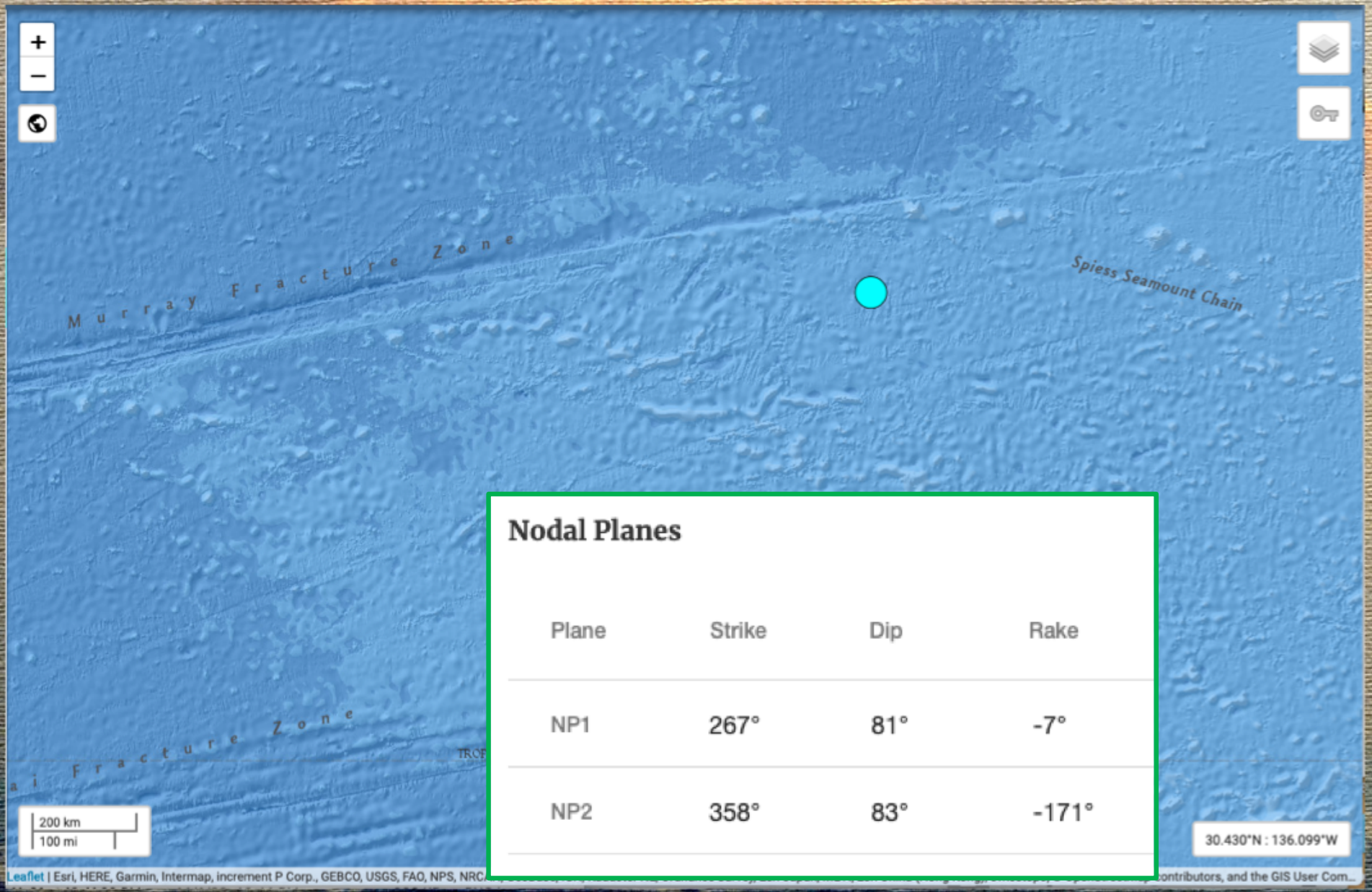


1) what type of earthquake?
2) is this aligned with any known fracture zone?
3) why could distance between epicenter and FZ be so large?

strike-slip EQ
consistent with geometry of fracture zones

source: NEIC (National Earthquake Information Center), USGS

A Magnitude 6 in the Pacific



Nodal Planes

Plane	Strike	Dip	Rake
NP1	267°	81°	-7°
NP2	358°	83°	-171°

source: NEIC (National Earthquake Information Center), USGS

From Week 6 - The SAF and its Neighbors

EQ not only on SAF

north: Hayward, Calaveras, etc

Calaveras well-know for M=≥5.5

07/01/1911 M = 6.5
08/06 1979 M = 5.8
04/24 1984 M = 6.2
10/30 2007 M = 5.6

10/25/2022 M = 5.1
same location as 1984

Recent Baja California Earthquake

M 6.1 – 80 km SSW of Bahía de Kino, Mexico

2022-11-04 10:02:46 (UTC) | 28.175°N 112.303°W | 10.0 km depth

Interactive Map

Contributed by US [1]

Regional Information

Contributed by US [1]

Felt Report - Tell Us!

0 0 0 0 6 0

Responses

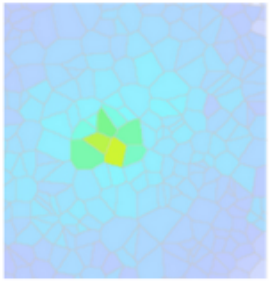
Contribute to citizen science. Please tell us about your experience.

Citizen Scientist Contributions

Did You Feel It? IV

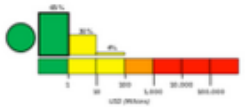
Community Internet Intensity Map

ShakeMap V

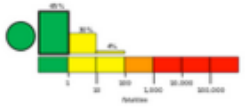


Estimated Intensity Map

PAGER GREEN



Estimated Economic Losses



Estimated Fatalities

source: NEIC (National Earthquake Information Center), USGS

Recent Baja California Earthquake

Gulf of California known for seismic activity; some EQs ~M7

source: NEIC (National Earthquake Information Center), USGS

Recent Baja California Earthquake

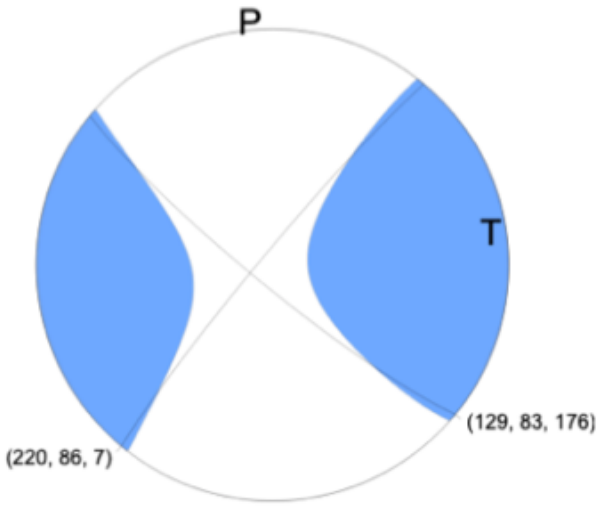
two types of plate boundary in the Gulf of California

source: NEIC (National Earthquake Information Center), USGS

Recent Baja California Earthquake

W-phase Moment Tensor (Mww)

Moment	2.040e+18 N-m
Magnitude	6.14 Mww
Depth	15.5 km
Percent DC	73%
Half Duration	2.97 s
Catalog	US
Data Source	US [1]
Contributor	US [1]



Nodal Planes

Plane	Strike	Dip	Rake
NP1	220°	86°	7°
NP2	129°	83°	176°

earthquake mechanism

1) is this aligned with any know faults
2) what type of earthquake?
3) is this consistent with the type of plate boundary?

source: NEIC (National Earthquake Information Center), USGS

Sangay Volcano - Ecuador

source:wikipedia

Sangay – Ecuador
- One of Ecuador's 50 volcanoes
- Summit: 17,160 ft
- Active since 2019
- 122 explosions in 1 day
- Destroyed 4,500 acres of crop
- Sickened > 23K cattle
- Ash on greenhouses

Sangay Volcano - Ecuador

Major volcanoes in Ecuador

Sangay – Ecuador
- One of Ecuador's 50 volcanoes
- Summit: 17,160 ft
- Active since 2019

source:wikipedia