Earthquake Report: 2018.07.24
M 5.6 Gorda (& USGS Seismicity 1918-2018 M ≥ 5.0)

Total Intensity Anomaly (nT)
-200 -150 -100 -50 0 50 100 150 200

CIRES

Jason R. Patton
earthjay.com © 2018

USGS Google Earth

Depth to Slab (km)
0 50 100 150 200 250 300 350 400 450 500 550 600 650 700

Plate Boundaries
Divergent
Transform
Convergent
Other
Plate Motion
*Plate motion vectors relative to Pacific plate, NUVEL-1A pole, no-net-rotation

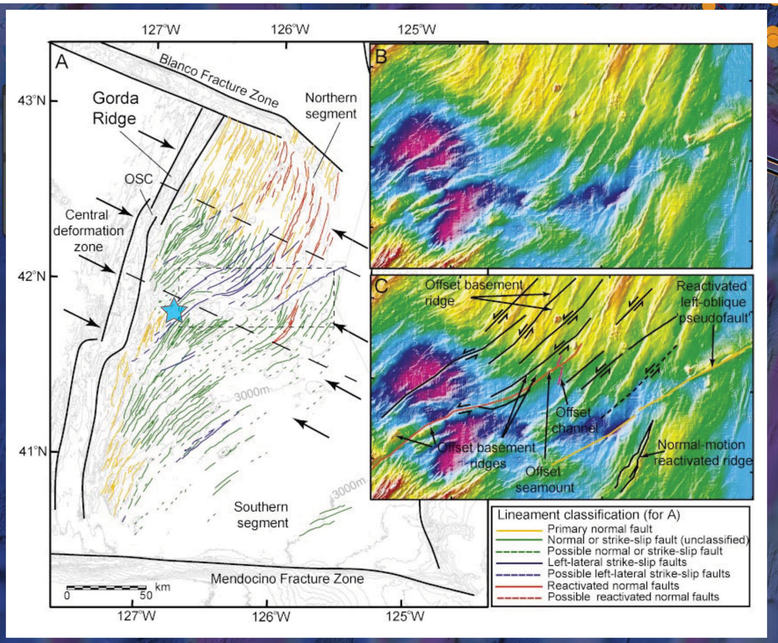
Normal Fault | Thrust Fault | Strike-Slip Fault
Top View
Side View
Side View

INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+
Shaking	Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
Damage	None	None	None	Very slight	Light	Moderate	Moderate/ heavy	Heavy	Very heavy
Peak Acc	<0.17	0.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
Peak Vel	<0.1	0.1- 1.1	1.1- 3.4	3.4- 8.1	8.1- 16	16 - 31	31 - 60	60-116	>116

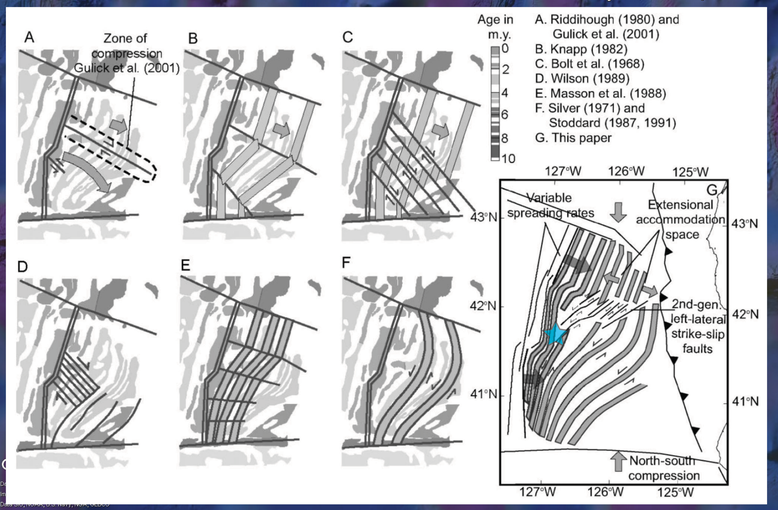
Peak Acc = Peak ground acceleration (g), Peak Vel = Peak ground velocity (cm/s)

Magnitude
8 7 6 5 4 3 2 1

Depth (km)
- 0 - 33
- 33 - 70
- 70 - 150
- 150 - 300
- 300 - 500
- 500 - 800



Chaytor et al., 2004



Chaytor et al., 2004

Juan de Fuca plate

JF-PA

Blanco fracture zone

Cascadia subduction zone

Pacific plate

Gorda Rise

North America plate

2018.07.24
M 5.6

2018.07.24
M 5.2

2018.07.24
M 4.3

Gorda plate

Mendocino fault

Pacific plate

Arcata

Eureka

Fortuna

San Andreas fault

100 km

N

USGS Quaternary Fault and Fold Database
- Historic
- Holocene / Latest Pleistocene
- Late Quaternary
- Mid-Late Quaternary
- Quaternary

USGS

Rollins and Stein, 2010

Cascadia subduction zone

Chaytor et al. (2004)
Nelson et al. (2004)

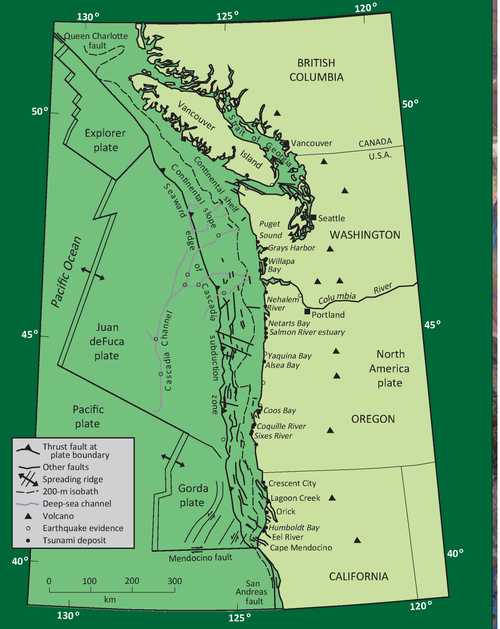


Plate configuration for the Cascadia subduction zone (CSZ). The Juan de Fuca and Gorda plates are subducting northeastwardly oblique beneath the North America plate at ~36 mm/yr in the Humboldt Bay region. Paleoseismic core sites (marine and terrestrial) are plotted as circles.

