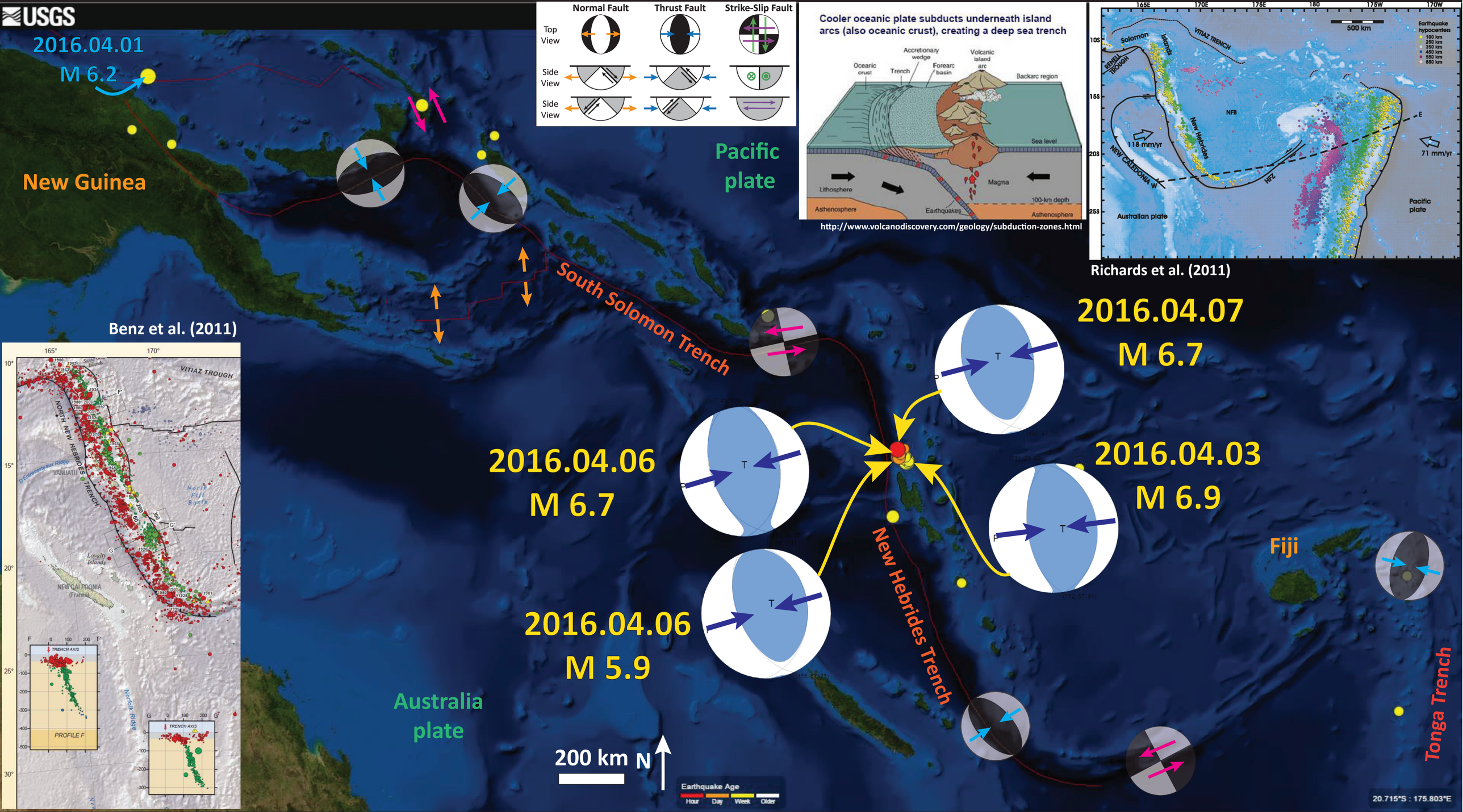
USGS
2016.04.01
M 6.2
New Guinea
Pacific plate
South Solomon Trench
Normal Fault
Thrust Fault
Strike-Slip Fault
Top View
Side View
Side View
Cooler oceanic plate subducts underneath island arcs (also oceanic crust), creating a deep sea trench
Accretionary wedge
Volcanic island arc
Oceanic crust
Trench
Forearc basin
Backarc region
Sea level
Lithosphere
Magma
Asthenosphere
Earthquakes
100-km depth
Asthenosphere
http://www.volcanodiscovery.com/geology/subduction-zones.html
Solomon Islands
VITIAZ TROUGH
VITIAZ TRENCH
500 km
Earthquake hypocenters
100 km
250 km
350 km
450 km
550 km
650 km
NFB
New Hebrides
118 mm/yr
71 mm/yr
NEW CALEDONIA
HFZ
Australian plate
Pacific plate
Richards et al. (2011)
Benz et al. (2011)
VITIAZ TROUGH
NORTH NEW HEBRIDES TRENCH
VANUATU
North Fiji Basin
Loyalty Islands
NEW CALEDONIA (France)
Norfolk Ridge
TRENCH AXIS
PROFILE F
2016.04.07
M 6.7
2016.04.06
M 6.7
2016.04.03
M 6.9
2016.04.06
M 5.9
New Hebrides Trench
Fiji
Tonga Trench
Australia plate
200 km
N
Earthquake Age
Hour
Day
Week
Older
20.715°S : 175.803°E