SIOG239-20 Worksheet

Date of class: 11/24

Group number and members:

Title of paper: Surface deformation associated with fractures near the 2019 Ridgecrest earthquake sequence

Before getting started on this paper – What did you know about the difference between monitoring earthquake ruptures using seismometers as compared to InSAR and/or GPS? Also, compared to other earthquakes, what was so special about the 4/5 July 2019 Ridgecrest earthquakes?

Abstract (1 – 4 bullet points or sentences) In a nutshell, and not mentioning which earthquake this is, what is the paper about?

Intro, sort of:
What are the basic 'triage' numbers of the Ridgecrest earthquake?

Which two physically distinct deformation processes are discussed?

What is the difference between prograde and retrograde fracture displacement?

What are possible explanations for retrograde fracture displacement?

What is a compliant fault zone?

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Data processing:
What were the major steps involved?

What did the initial slip model reveal (observations AND implications)?

What were the initial results of the stress tensor modeling?

How does the damage zone get into play? What about the shear moduli and/or their ratio?

What are the main results for the deformation width? What are some of the main points of discussion?

What are the basic/most important points in their conceptual model for shallow displacement?

What are the basic/most important points inferred for the Coulomb stress changes in this particular setting?

How does the Ridgecrest earthquake sequence compare to other events in the greater area?

Any further comments?