

HW #5

Disasters & their max impact

- 1) Astrol is measured w/ the Torino Scale.
max damage @ level 10 where an impact is certain
& may threaten all life on earth & society.
- 2) Earthquakes are measured w/ the Richter or mercalli scale
max damage @ Richter 7+ or mercalli XII where
affected area experiences total destruction &
the horizon is distorted.
- 3) Hurricanes are measured w/ the Saffir-Simpson scale.
max damage @ Saffir-Simpson category 5 where
all vegetation is destroyed, complete roof failure
of most buildings, and complete mobile home destruction.
- 4) Fornadoes are measured w/ the Fujita-Pearson scale.
max damages w/ an F-5 measurement where there is
massive destruction & cars, trees, & objects thrown over 100m.

Accidents

- 1) Challenger Space Shuttle accident
 - 1) O-ring sealed in cold weather unaccounted for
 - 2) Primary & Backup O-ring failures.
 - 3) Scheduling took precedence over good engineering judgement.
 - 4) Colbert says NASA over launched on
- 2) Columbia Space Shuttle Accident
 - 1) no on-orbit way to repair thermal protection system & RCC panels
 - 2) Loose foam chunk hit wing & caused a breach
 - 3) no diagnosis of breach, no remedy was a death sentence
 - 4) Reentry forcing superheated gas into the breach