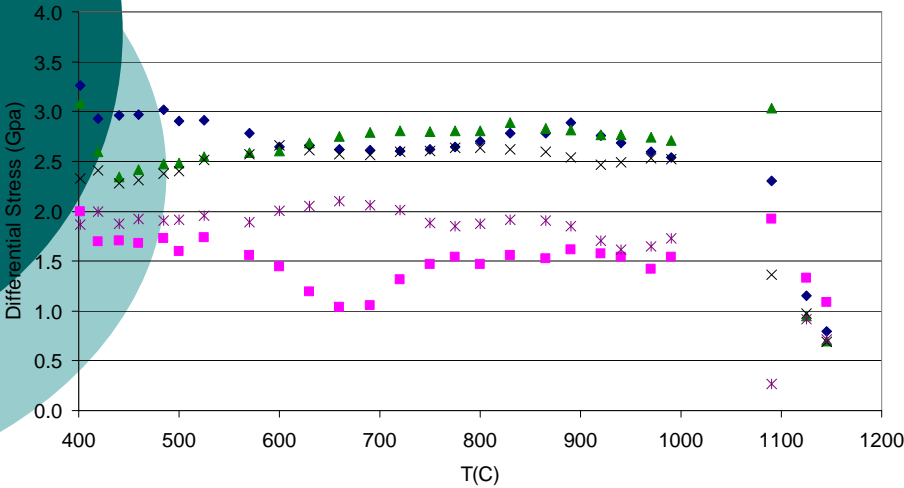


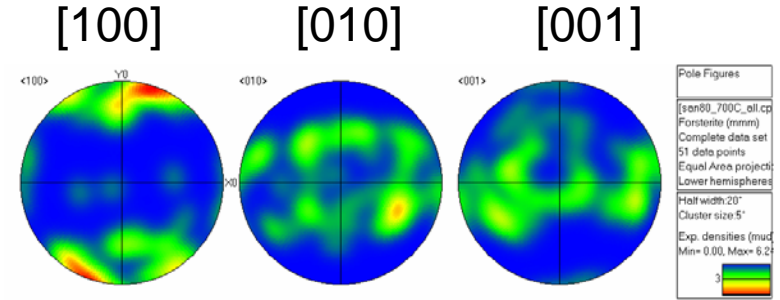
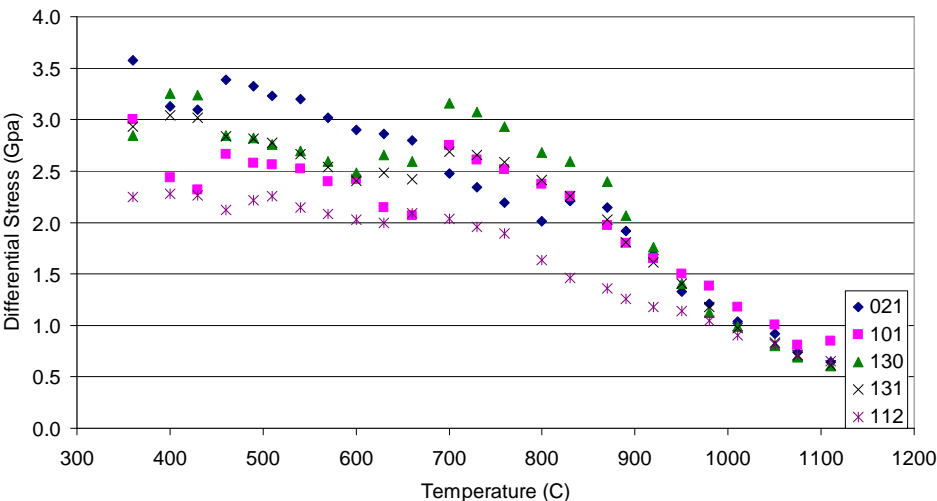
# Mechanism of deformation of olivine at subduction zone condition



Stress vs Temperature (Up Cycle), San 123



Stress vs T (Down Cycle), San123



- The dominant active slip systems:
  - { $hko$ }[001] ( $h > k$ )
  - (100)[001]
- The anisotropy of stress between individual peaks suggests a dislocation rather than a diffusion creep.
- As  $T$  increases, the deformation enters the regime of power-law creep,
  - the values of stress for individual peaks converge.
  - (101) becomes strong
  - (021), (130) and (131) become weak
  - Suggests a change in active dominant slip system: (100) to (010)