

## **Concept Ranking**



- TRW conclusions:
  - Direct Imagers show greatest promise of performing TPF mission
  - Interferometers have very high technical complexity, lowest scientific utility
  - An occulter has the least likelyhood of performing the full TPF mission
    - However, occulter used in conjunction with a space telescope (e.g. NGST)
      will produce good TPF precursor science at relatively low cost
- Within direct imagers, coronagraphic systems offer the best performance at lowest cost
  - Large aperture coronagraph uses NGST technology to develop a single spacecraft system
  - Fresnel lens swaps the NGST telescope for a fresnel lens, but requires formation flying
    - Fresnel lens may be significantly cheaper to build than NGST-style telescope
  - Sparse telescopes offer the highest utility, but are more complex
- Therefore, our ordered rankings, with softness within each group, is:
  - High ranking: 1) Large aperture coronagraph, 2) Fresnel lens coronagraph
  - Medium ranking: 3) Sparse aperture
  - Low ranking: 4) Interferometers, 5) occulters