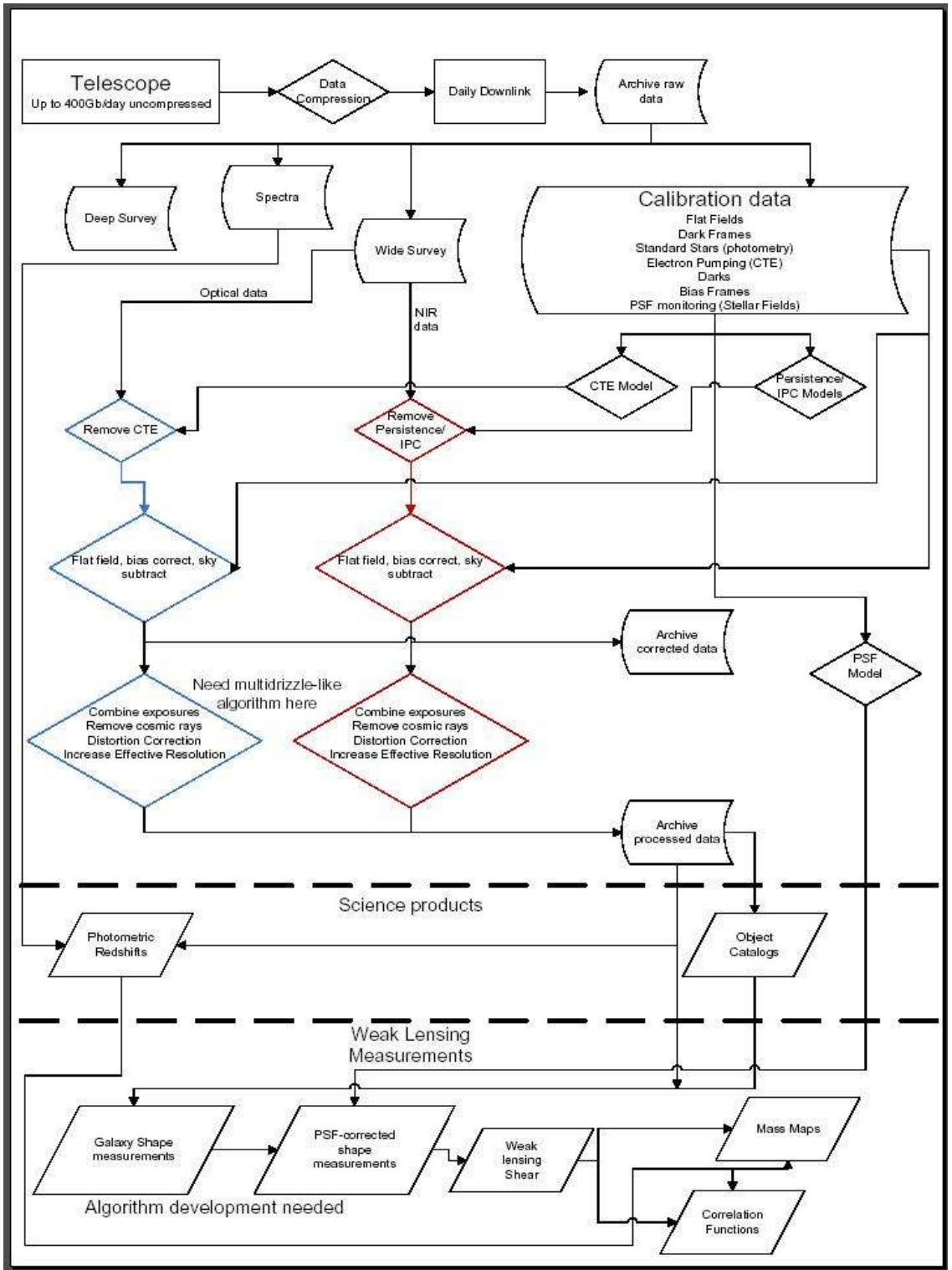
Calibration Software Requirements and Budget

Steve Kent Feb 11, 2008

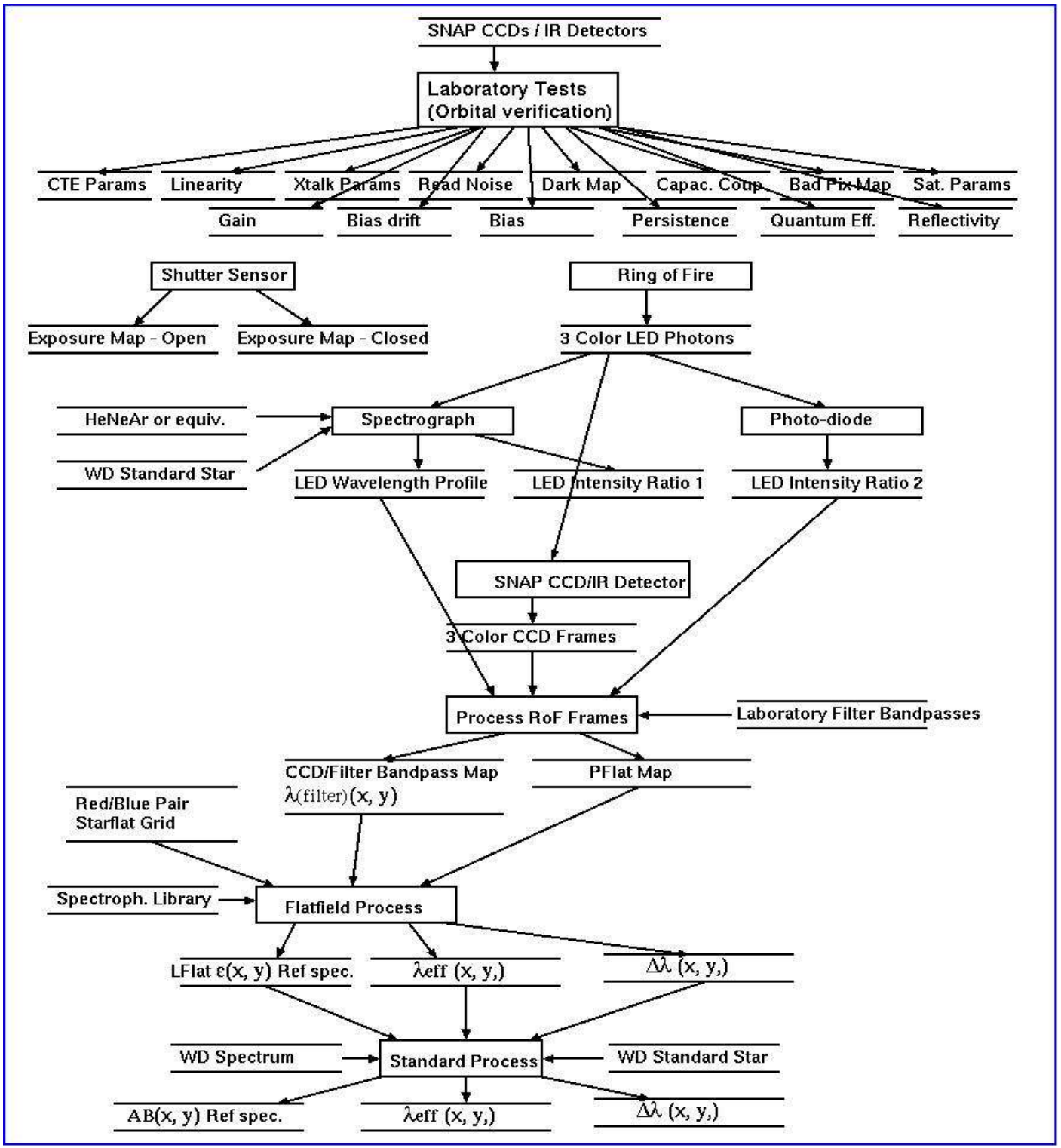
Calibration Deliverables

- **Imager**
  - Device calibs (bias, dark, etc)
  - Bandpass (x,y)
  - Relative photometry
    - SNAP-mag (x,y)
  - Absolute photometry
    - SNAP-mag to AB
  - Relative astrometry
    - Scale, skew
  - Absolute astrometry
    - ra, dec (x,y)
- **Spectrograph**
  - Device calibs (bias, etc)
  - Relative astrometry
    - Scale, curvature, distortion per slice
  - Absolute astrometry
    - ra, dec (x,y)
  - Spatial resolution (x,y)
  - Wavelength (x,y)
  - Wavelength resolution (x,y)
  - Relative photometry
  - Absolute photometry
- **Photodiodes**
  - Relative astrometry
  - ????

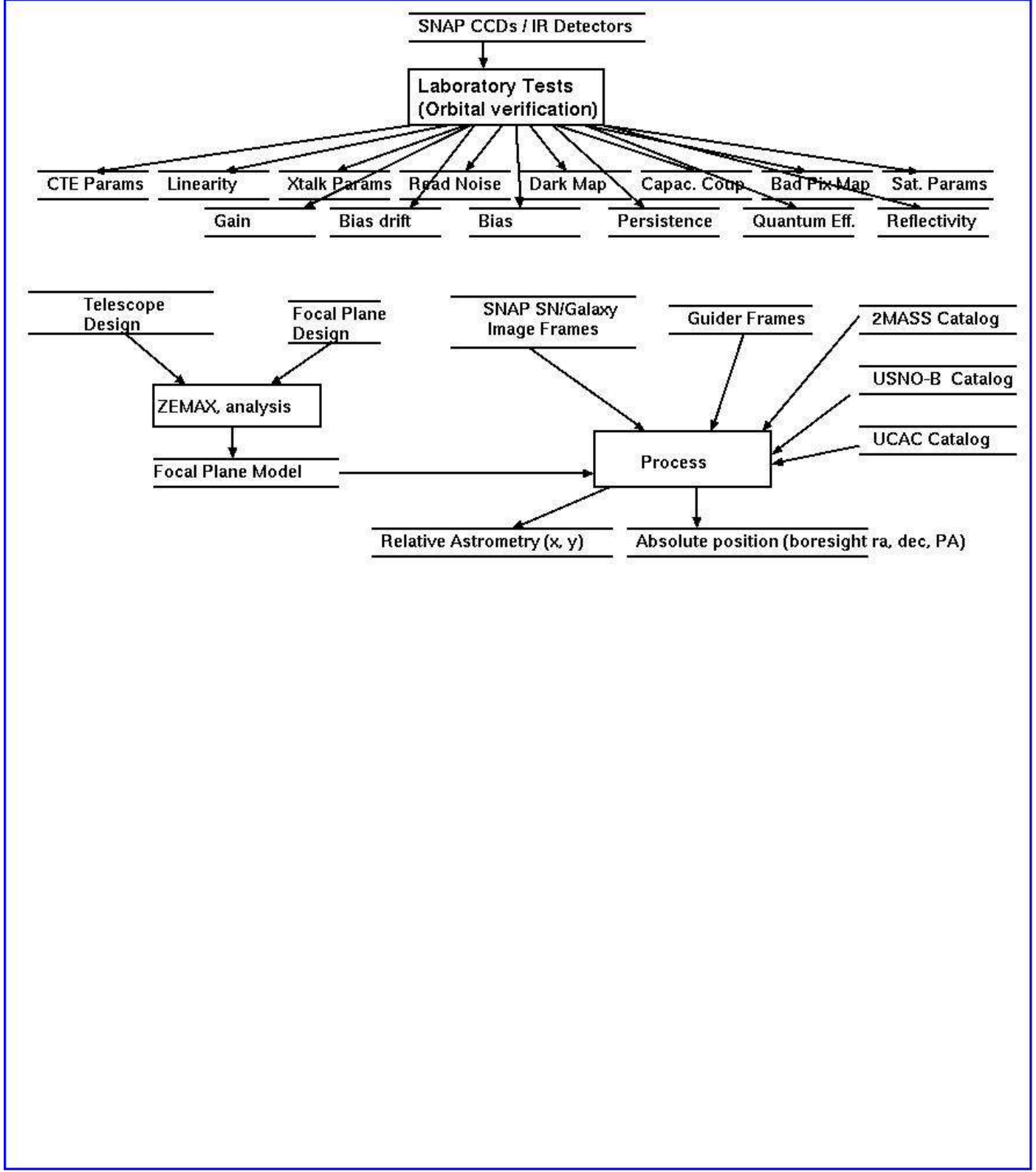
Weak Lensing Calibration



Imager Photometric Calibration

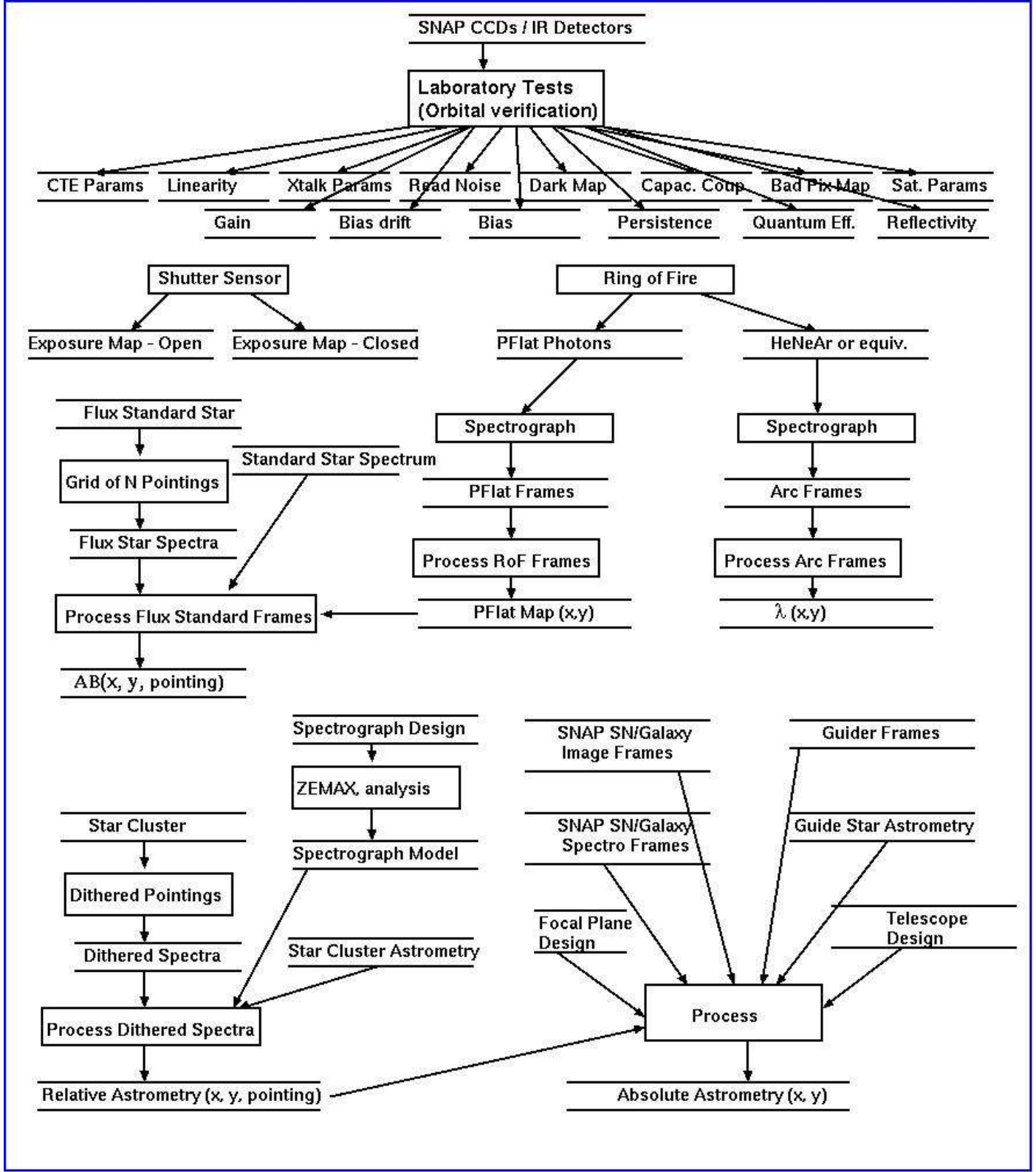


Imager Astrometric Calibration



Photodiode Calibration (TBD)

Spectrograph Calibration



Development Effort (Total WAG)

- **Imager Calibration (including guider)**
  - Photometric 3 FTE's, 4 years
  - Astrometric 2-3 FTE's 4 years
- **Spectroscopic calibration**
  - Wavelength 1 FTE, 4 years
  - Astrometric 3 FTE's, 4 years
  - Spectrophotometric 3 FTE's, 4 years
- **Detector calibration**
  - CCD's 2 FTE's 4 years
  - IR detectors 2 FTE's 4 years
  - Filters 2 FTE's 4 years
  - Photodiodes 1 FTE
  - Illumination system testing 1 FTE

Interaction Requirements

- **Do we have distinct Photometric and Spectroscopic Pipelines? (They are in Carither's req. document)**
- **Other subsystems**
  - Detectors groups (CCD, IR, photodiode)
  - Telescope group (R.O.F.)
  - Mission operations
  - Photometric and Spectroscopic Pipelines
  - Data Archive

Resources

- **Size and timing are modest**
- **Compute resources are modest**
- **Turnaround**
  - Relevant for only a subset of all calib. activities