grand

- **libs**
  - *gull.py*
  - *turtle.py*
- **tools**
  - *geomagnet.py*
  - *topography.py*
  - *coordinates.py*
  - data
    - *egm96.png*
- **store**
  - *protocol.py*
- **simulation**
  - antenna
    - *generic.py*
    - *tabulated.py*
  - shower
    - *coreas.py*
    - *generic.py*
    - *zhaires.py*
  - *pdg.py*
- *io.py*
  logging.py

grandlib

Coordinates ⟶ coordinates.py

Geomagnet ⟶ gull.py
geomagnet.py

Topography ⟶ turtle.py
topography.py

Antenna ⟶ antenna.py

Shower ⟶ generic.py
signal.py

GRANDRoot ⟶ GRANDRoot.py
ZHAireSToROOT.py
CoREASToROOT.py
....

Trigger ⟶ trigger.py or trigger.cpp

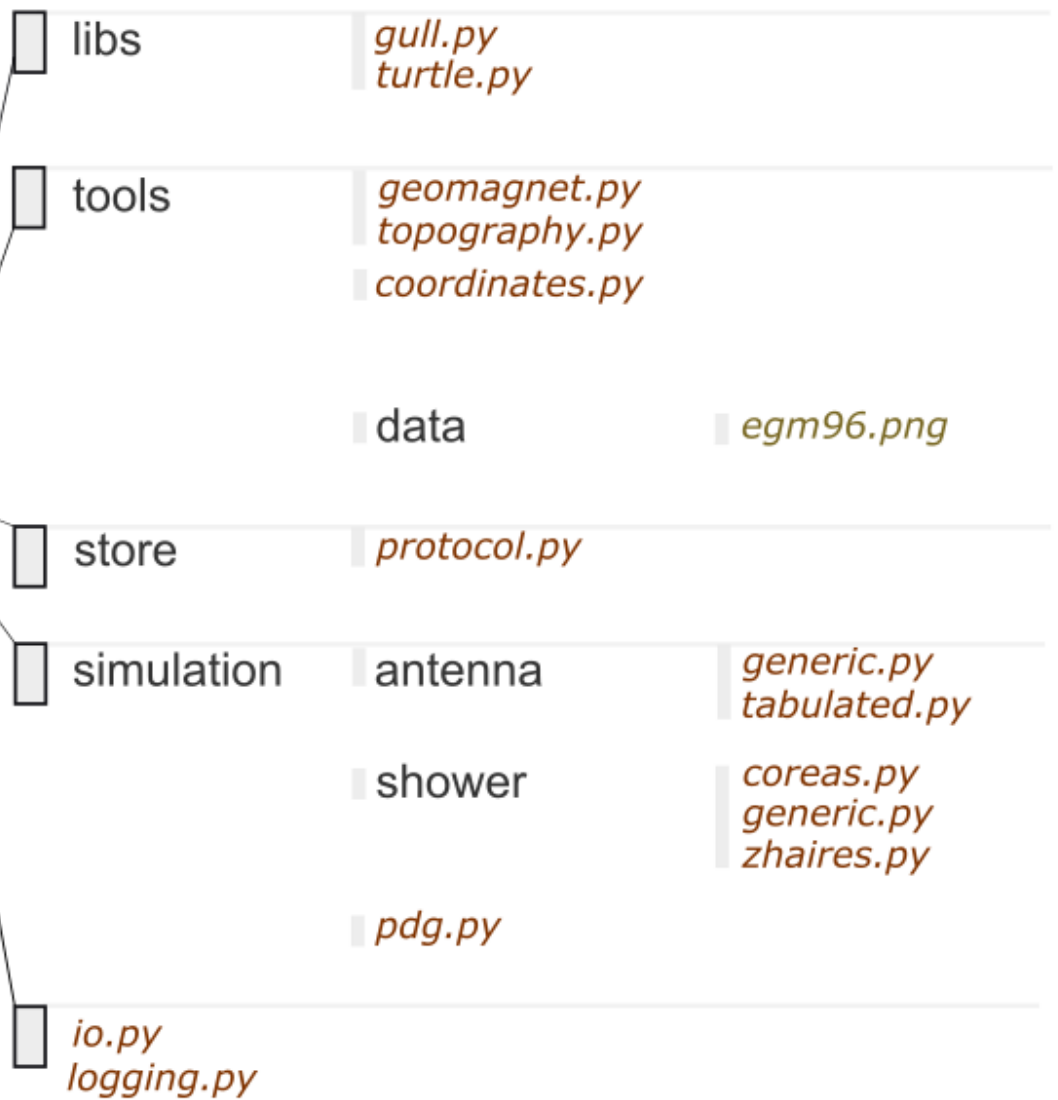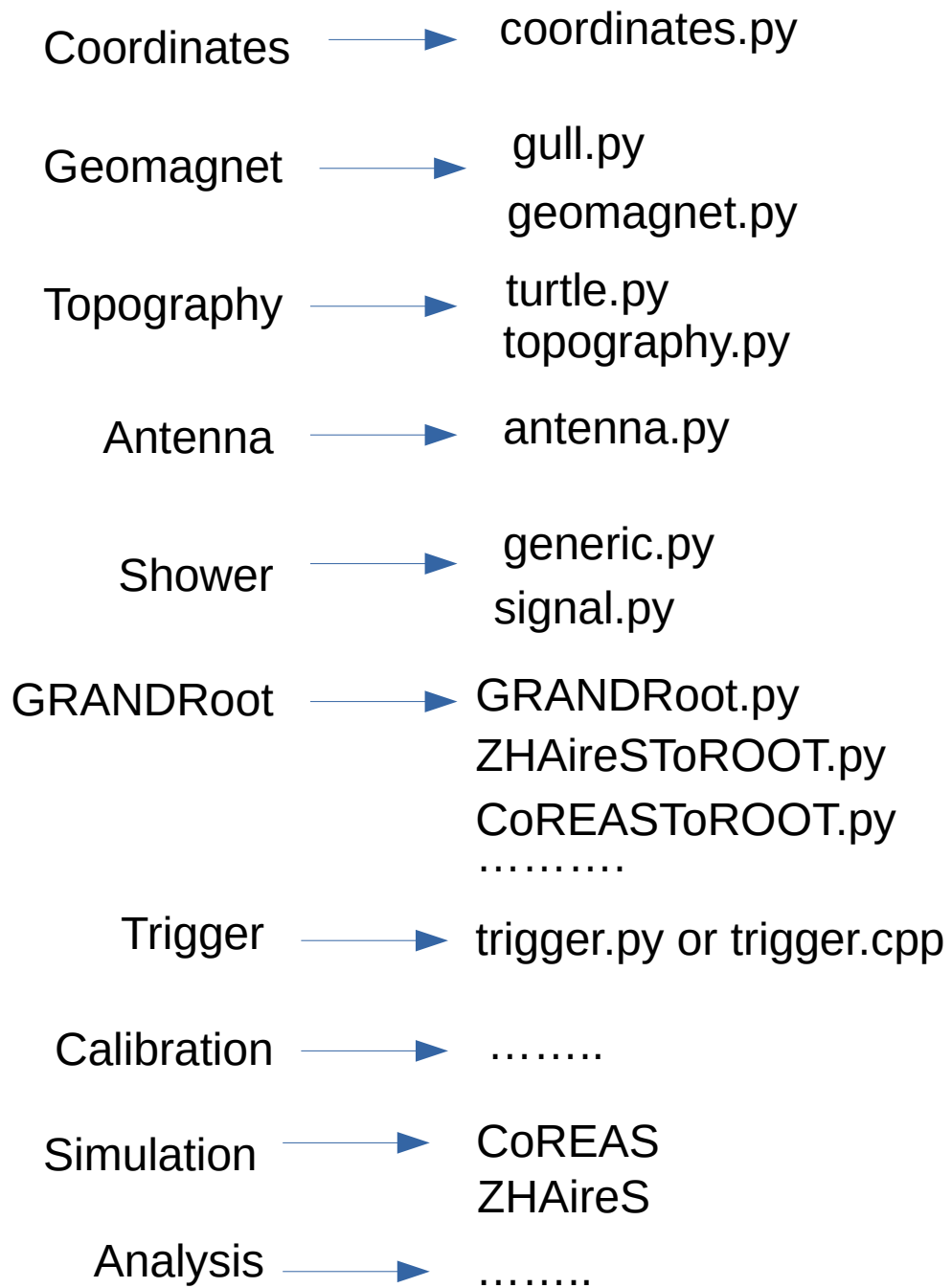Calibration ⟶ ……...

Simulation ⟶ CoREAS
ZHAireS

Analysis ⟶ ……...

EventViewer

GRANDLive

antenna.py

- AntennaModel
- Antenna
- effective_length

Shower/
    generic.py

- ShowerEvent
- Voltage
- Efield
- convolve (E to V)
- deconvolve (V to E)
- test_EAS
- project_to_shower_plane
- project_to_angular_plane
- compute_grammage ?
- early_late_correction ?

    signal.py

- filter
- generate_gaussian
- digitize
- hilbert
- fft
- inversefft
- find_peak
- find_peak_area
- find_baseline
- find_noise
- remove_noise
- find_signal_over_noise