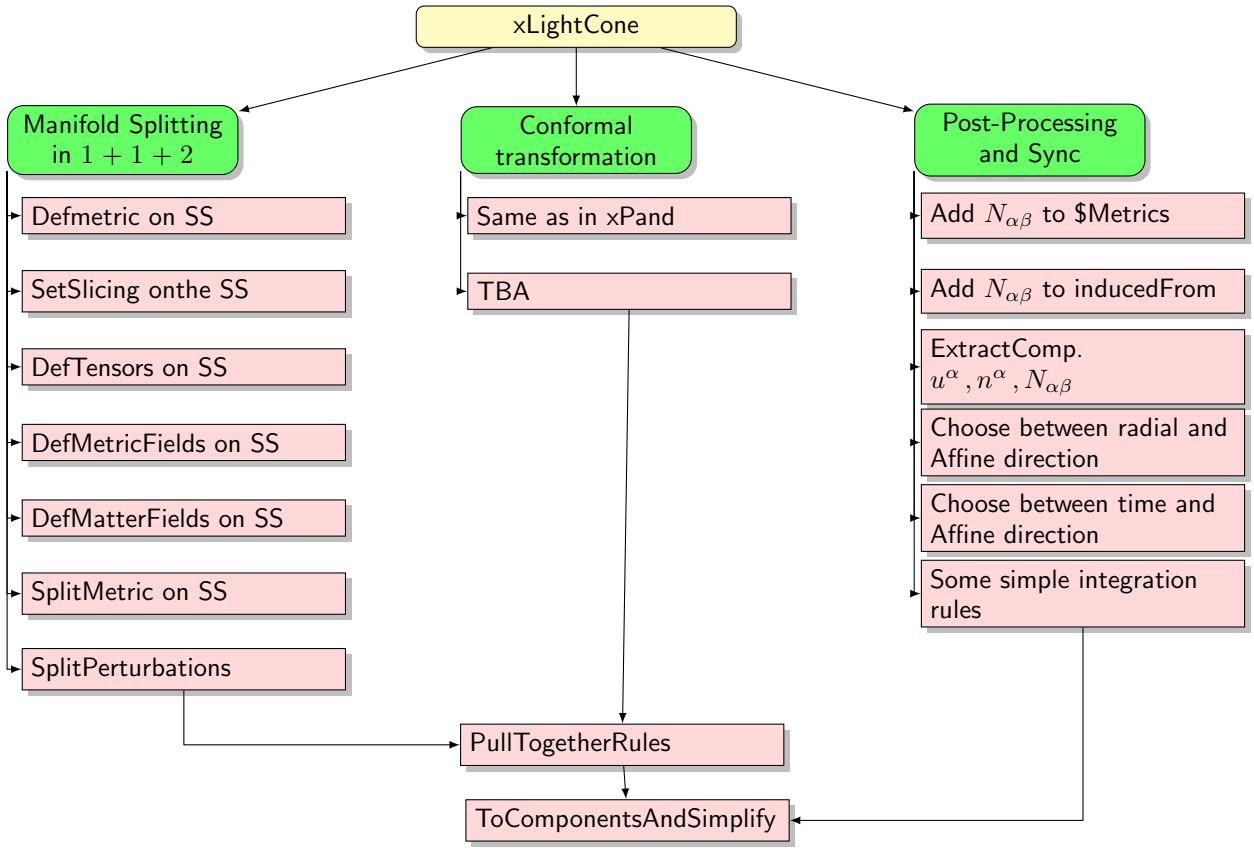
I. PACKAGE ARCHITECTURE

This is a preliminary architecture of the package "xLghtcone". The package is expected to build on xPand by adding additional functionalities that would enable further splitting of spacetime into radial and angular part in a very clean geometric way.



where SS stand for Screen Space.

A. Description:This is only for the Friedmann Cosmology

We now expatiate on the functionalities of various sections of the package.

- Manifold Decomposition
  - `DefScreenSpaceMetric`
    - AssignProperties:The following properties should be assign to the metric on the screen space.
  - `SetScreenSpaceSlicing`
  - `DefScreenSpaceProjectedTensors`
    - Label Indices: Every tensor will have atleast three label indices for:time, radial, and order of perturbation.
    - AssignProperties: Such as trace-free in both indices for rank two. How label indices should move when acted up.
  - `DefScreenSpaceProjectedMetricFields`
  - `DefScreenSpaceProjectedMatterfFields`
  - `Splitmetric`
  - `RemoveinducedDerivative`
  - `ToMetric`
  - `SplitPerturbations`
- Conformal Transformation
  - Borrow transformation rule from xPand
- Post-Processing
  - `Extract Components`
- Together
  - `ToLightConeFromRules`