

# Status of LAL coding

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I report on coding progress in two LAL packages:

I Package `inject` ..... done

II Package `pulsar`: template placement ..... active

# I Package `inject`

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- Routines in `GeneratePPNInspiral.h` generate (Taylor) parametrized post-Newtonian waveforms for binary inspiral.
- Routines in `SimulateCoherentGW.h` simulate a detector's response to any (quasiperiodic) waveform.
- Routines in `Inject.h` inject a detector response into simulated or actual LIGO noise.
- Routines in `SkyCoordinates.h` transform among various celestial and terrestrial coordinate systems.

## II Package `pulsar`: template placement

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- Routines in `FlatMesh.h` produce optimal template placement in  $N$  dimensions with constant parameter metric (i.e. spindown).
- Routines in `TwoDMesh.h` produce near-optimal template placement in 2 dimensions with arbitrarily-varying parameter metric (i.e. sky position).
- Work is underway at AEI to incorporate pulsar parameter metric code into the tiling algorithm, to produce hierarchical semicoherent template placements.