Optickle 2: To Do List

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1 DC Field Calculation

1.1 convertOpticsDC

Extract the DC part of convertOptics into a separate function.
Investigate overlap with sweep functions.

1.2 getFieldMatrixDC

This is just the current getFieldMatrix, but renamed.

1.3 getPhaseMatrix

Update to deal with multiple wavelengths and polarizations.

2 AC Field Calculation

2.1 convertOpticsAC

Extract the AC part of convertOptics into a separate function. Pass $\vec{v}_{DC}$ along with other arguments to getMatrices.

2.2 getFieldMatrixAC

This is just the current getFieldMatrix, but with more arguments and a larger return matrix (upper and lower ASB). Some Optics will use these to implement non-linear effects.

The Optic base class should make this function call getFieldMatrixDC by default.

2.3 getReactMatrix, getDriveMatrix, getNoiseMatrix

Update these to the new set of arguments.

Write helper functions which can "up convert" smaller output matrixes to the required size, assuming no RF/AF dependence.

3 Tickle

Remove simulink parts, and/or make them work with Nic's stuff.

Rework to use convertOpticsDC and AC.

Include drive and probe matrices.

4 New Optics

4.1 Squeeze

Squeezer, non-linear crystal

4.2 Wavelength

Multi-wavelength optics, coated optics

4.3 Polarization

PBS, waveplates