

QD Monte carlo module.

1. Simulate lifetimes.
2. Simulate emission intensity.
3. Simulate phase and decoherence.

Lab bench Jones algebra module.

1. Build Jones matrix for every element.
2. Build biphoton state in lab basis (beam splitters, wave plates, monochromators, detectors).
3. Calculate probabilities as a function of QD state phase.

Algorithm.

1. Create dot stats, phase, lifetime, intensity.
2. Propagate QD through system.
3. Hit each detector depending on probabilities.

Process data.

1. Correlate detectors.
2. Time-gate.