

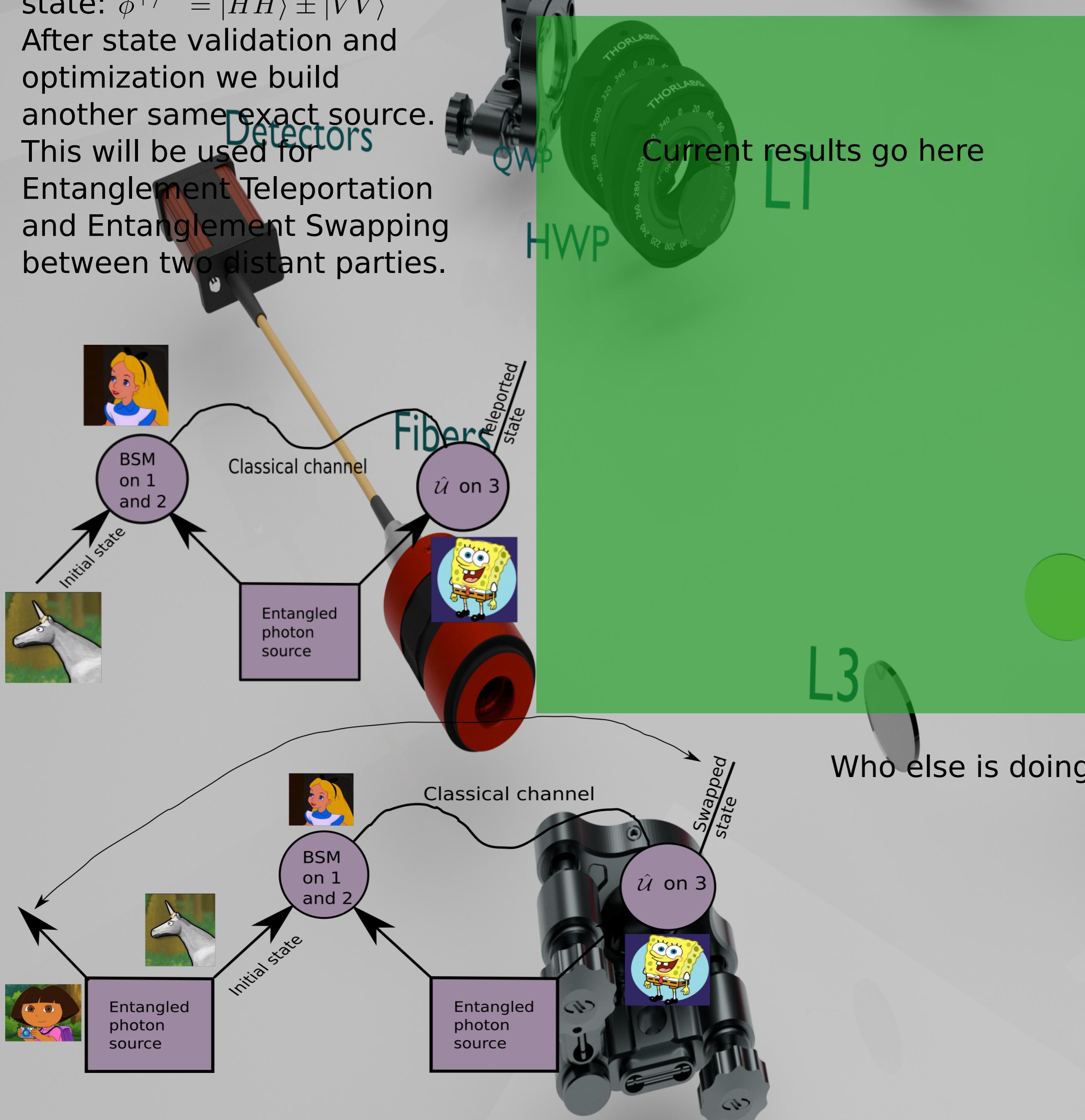
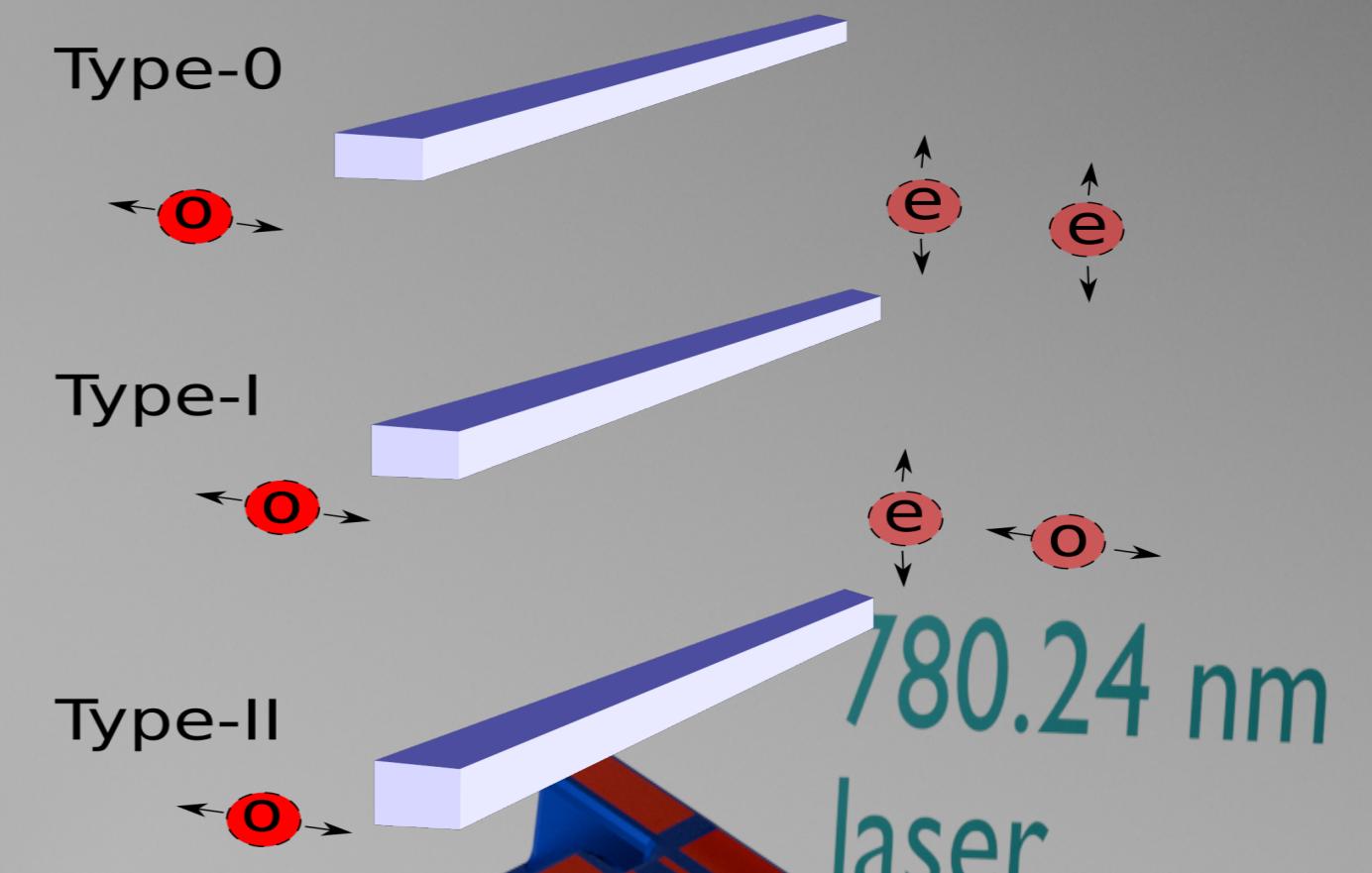
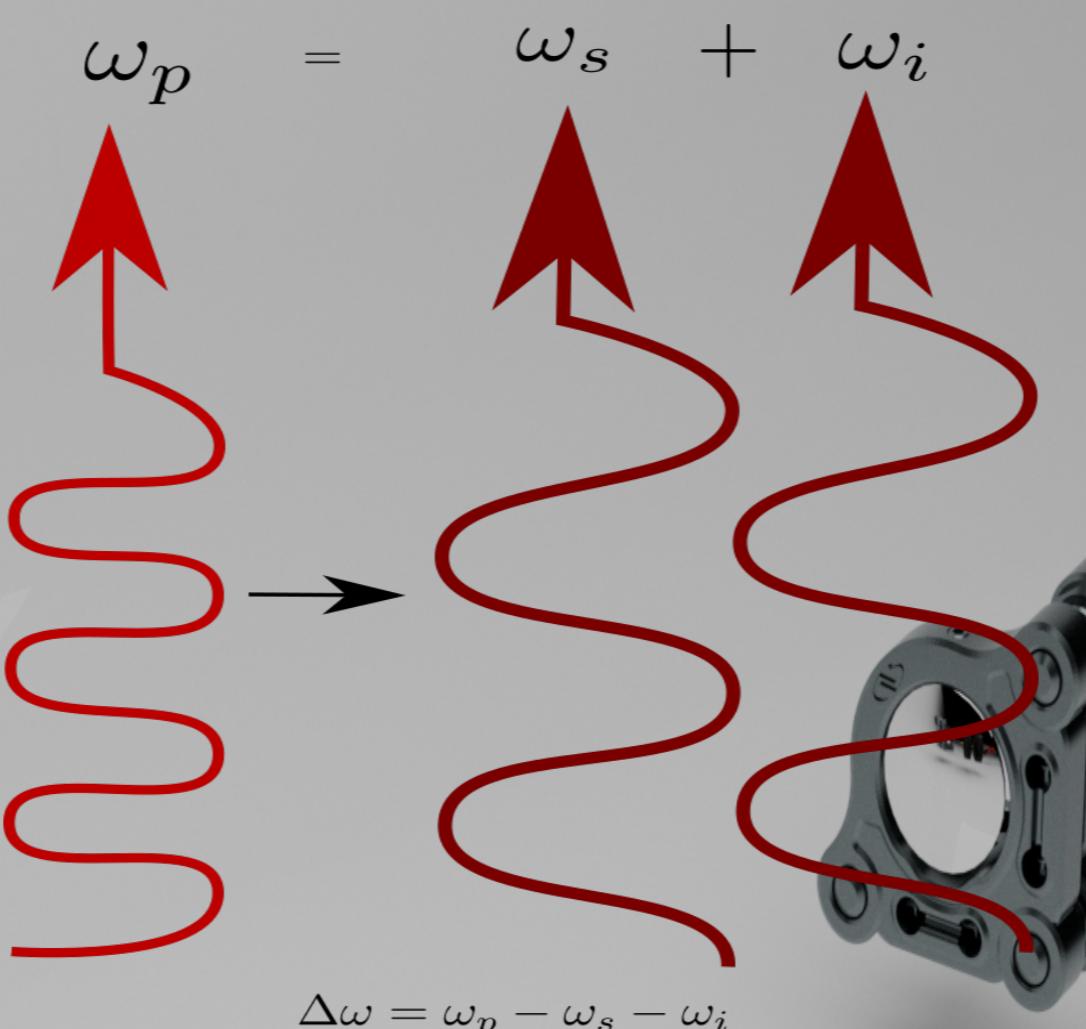
Generating and Teleporting Entanglement for Quantum Networks and the Quantum Internet



What am I doing?

Using a Sagnac interferometer in a minimal configuration with a 50 mm Type-0 PPLN crystal. By pumping the crystal bidirectionally we generate the $\phi^{+/-}$ maximally entangled state: $\phi^{+/-} = |HH\rangle \pm |VV\rangle$. After state validation and optimization we build another same exact source. This will be used for Entanglement Teleportation and Entanglement Swapping between two distant parties.

Detectors



Plans for the future
Entanglement Teleportation, Entanglement Swapping, QKD...

Why am I doing this?

Entanglement Swapping is useful if you can do it quickly and efficiently for various reasons, one of which is the mitigation of fiber loss.

