Rapid Purification protocols for Optical Homodyning ARAVIND CHIRUVELLI, Louisiana State University, KURT JACOBS TEAM — Recently Jacobs (PRA 67 030301 (2003)) and Wiseman and Ralph (New J. Phys 8, 90(2006)) have discovered rapid purification protocols for a qubit using quantum feedback. We present these protocols in optical setting. These could also be very useful in quantum state preparation for various uses in metrology and control.