Full distribution functions of interference contrast in low-dimensional bose gases ADILET IMAMBEKOV, VLADIMIR GRITSEV, EU-GENE DEMLER, Harvard University, Physics Department — We consider interference experiments with two independent low dimensional bose condensates. Full distribution function of fringe visibilities is determined by higher order correlation functions within individual condensates and contains non trivial information about quantum and thermal fluctuations in the system. We develop a general method for calculating distribution functions of the interference amplitude and apply it to one and two dimensional condensates both at zero and finite temperatures.