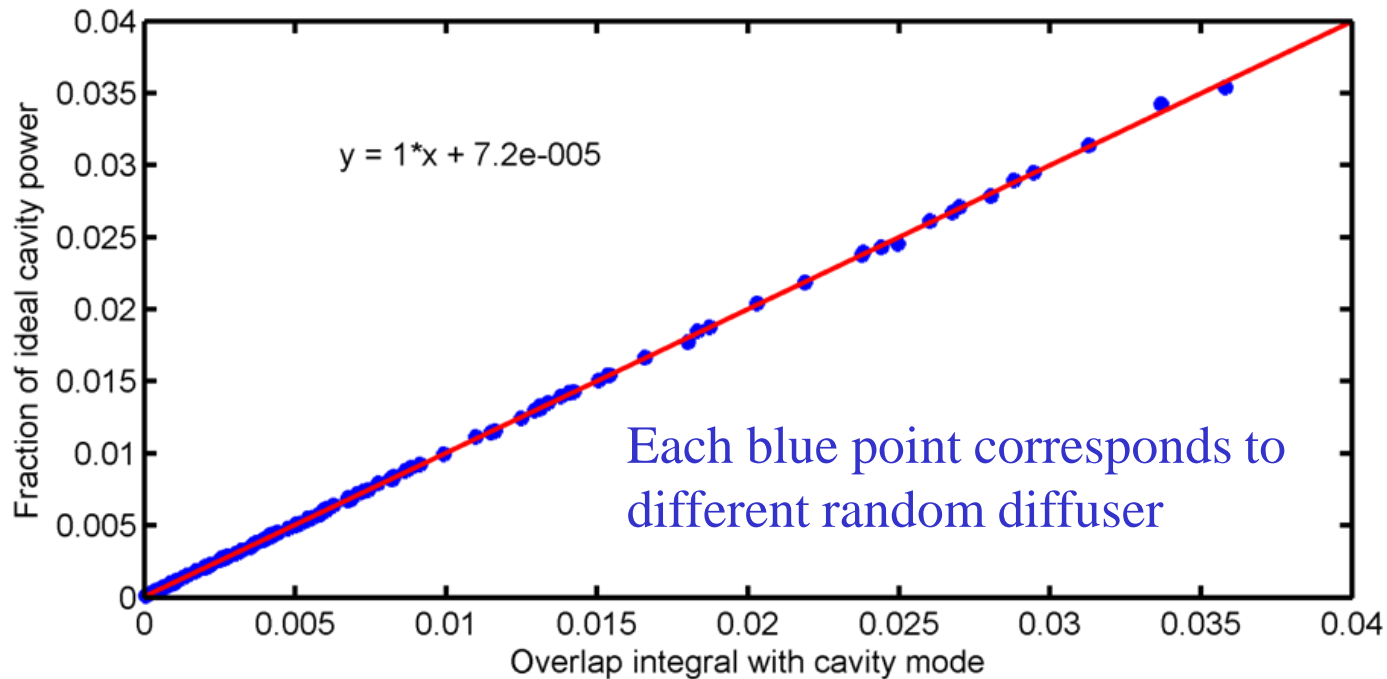


Update on Diffused light from MMT optics with FFT code

Richard Day
EGO group

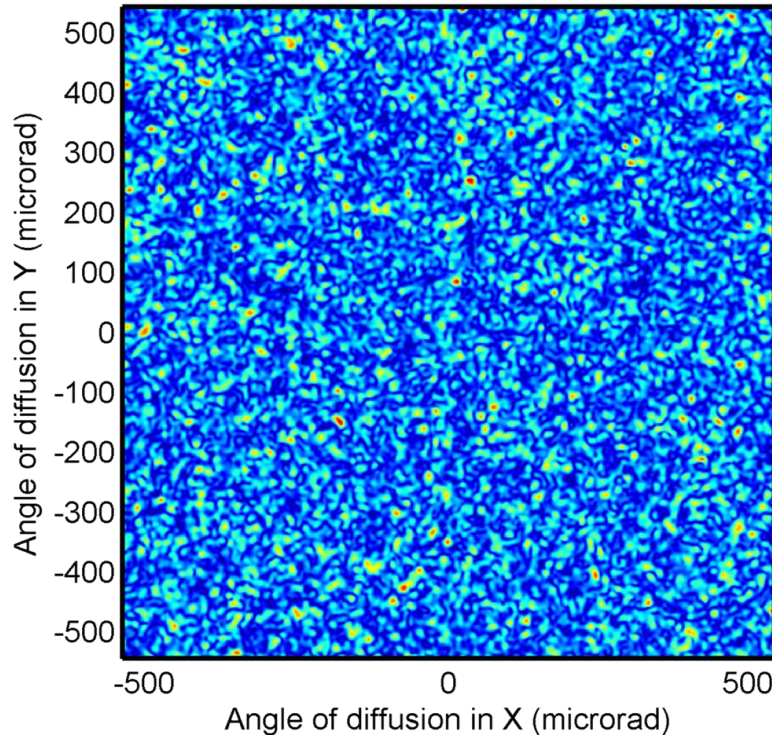
Confirm validity overlap integral for assessing diffused light coupling into arm cavities

- Lock cavity using ideal beam and measure cavity power
- Circulate diffused light and measure cavity power

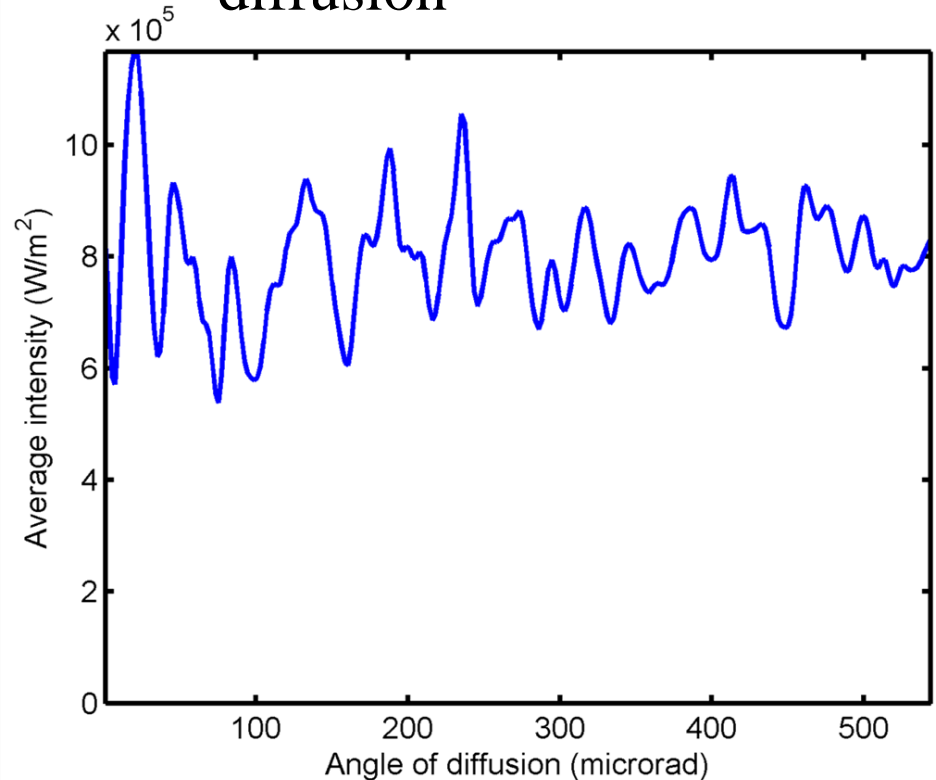


Overlap integral gives directly coupling into cavity

- Propagate beam to focal plane of lens to determine angle of diffusion

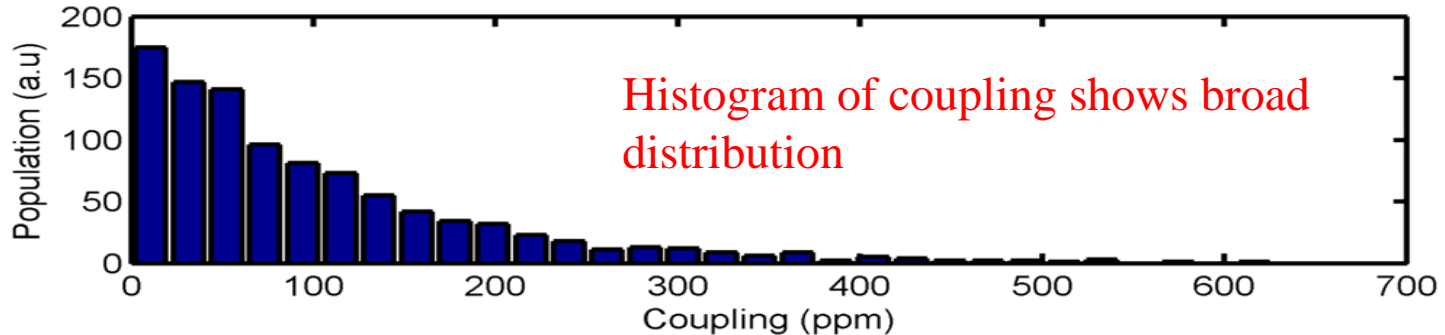


- Calculate average intensity vs. angle of diffusion



Confirmation that diffuser is “Lambertian”

This result was presented at last meeting



Seemed high compared to other models (Zemax, analytical)
 Reason is that in FFT model, angle of diffusion limited by grid resolution → All power sent in a very narrow solid angle
 Result needs to be rescaled taking this into account

