

Scintillation Crystal - Objective Mount

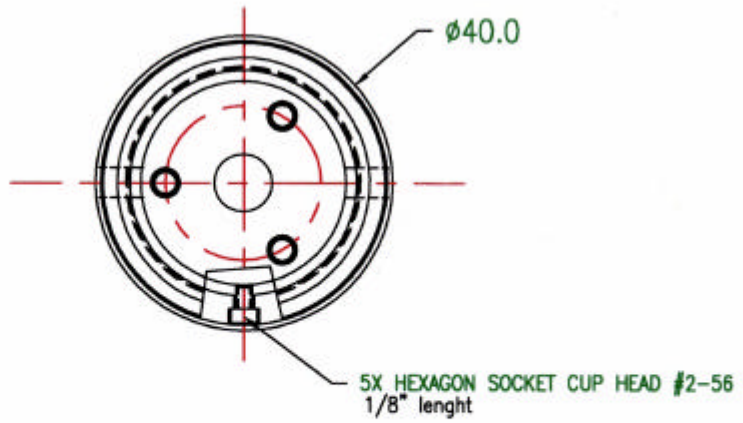
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Francesco De Carlo, David Paterson

A **microscope objective** and a **scintillation crystal** have been combined into a single optical unit for better efficiency and convenience of X-ray micro-imaging experiments. Mounts with different crystal/objectives can easily be interchanged.

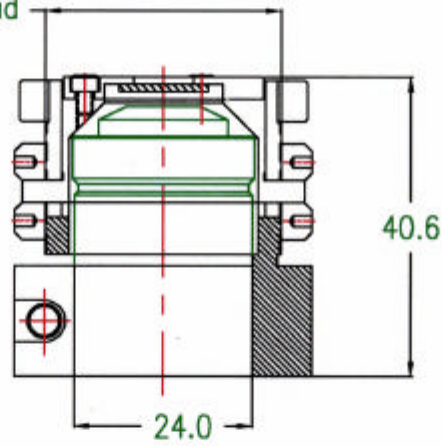
Requirements:

- 2.5x, 5x, 10x, 20x(?) objectives
- Placing the scintillation crystal as close as possible to the sample
- Easy alignment
- Stability of alignment
- Robust design
- Compatible with different brands of objectives (not easy to implement - design is limited to 24mm diameter objectives)
- Reasonable cost (under \$700)

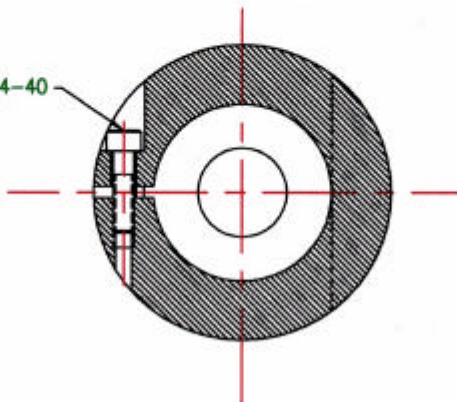
Catalog No.	Description	NA	WD [mm]	DoF [μm]	Diffraction limited Objective Resolution [μm]	FoV (CCD 1024 x 1024 6.7 μm pixel) [mm]	CCD Pixel size at the image plane for array 1024 x 1024 [μm]
440300	1.25x neo-fluar	0.035	3.5	450	8.7	5.2 x 5.2	5.1
440310	2.5x neo-fluar	0.075	9.3	100	4.1	2.6 x 2.6	2.5
440320	5x neo-fluar	0.15	13.6	24	2.0	1.36 x 1.36	1.3
440330	10x neo-fluar	0.3	5.6	6.1	1.0	0.68 x 0.68	0.7
1004-072	20x neo-fluar	0.5	1.6	2.20	0.6	0.34 x 0.34	0.3
1022-818	40x neo-fluar	1.3	0.17	0.32	0.2		
440760	63x neo-fluar	1.4	0.09	0.28	0.2		



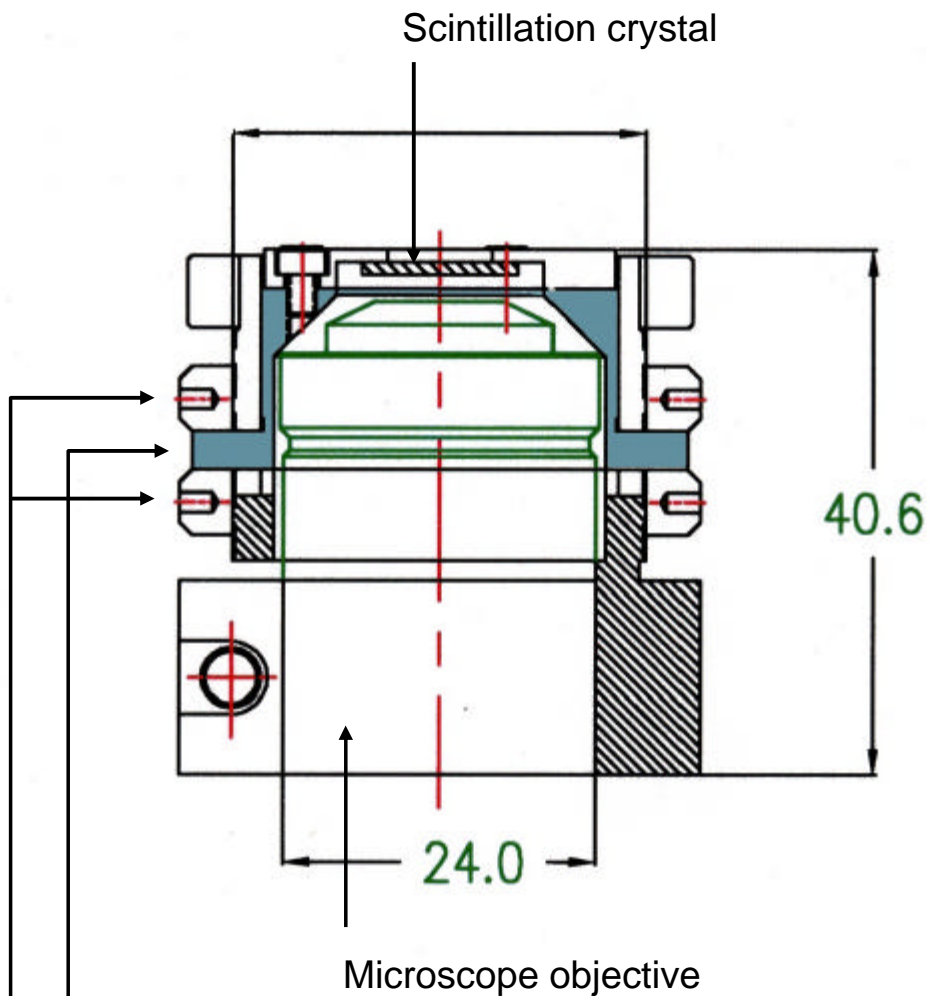
31.75-80 special tread



HEXAGON SOCKET CUP HEAD #4-40 7/16" length

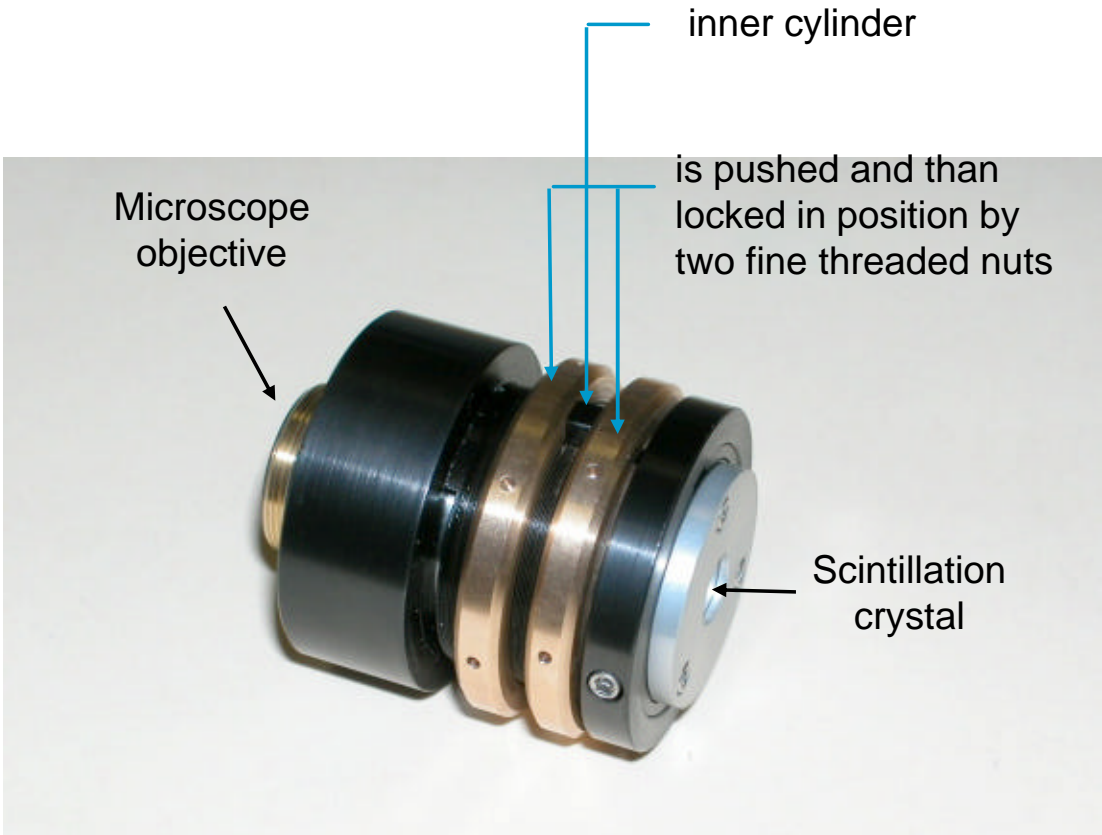


EMIL TRAKHTENBERG
05/20/02



inner cylinder with exchangeable
scintillation crystal

is pushed and then locked in
position by two fine threaded nuts



Diffraction Imaging Setup
Yong Chu, XFD

