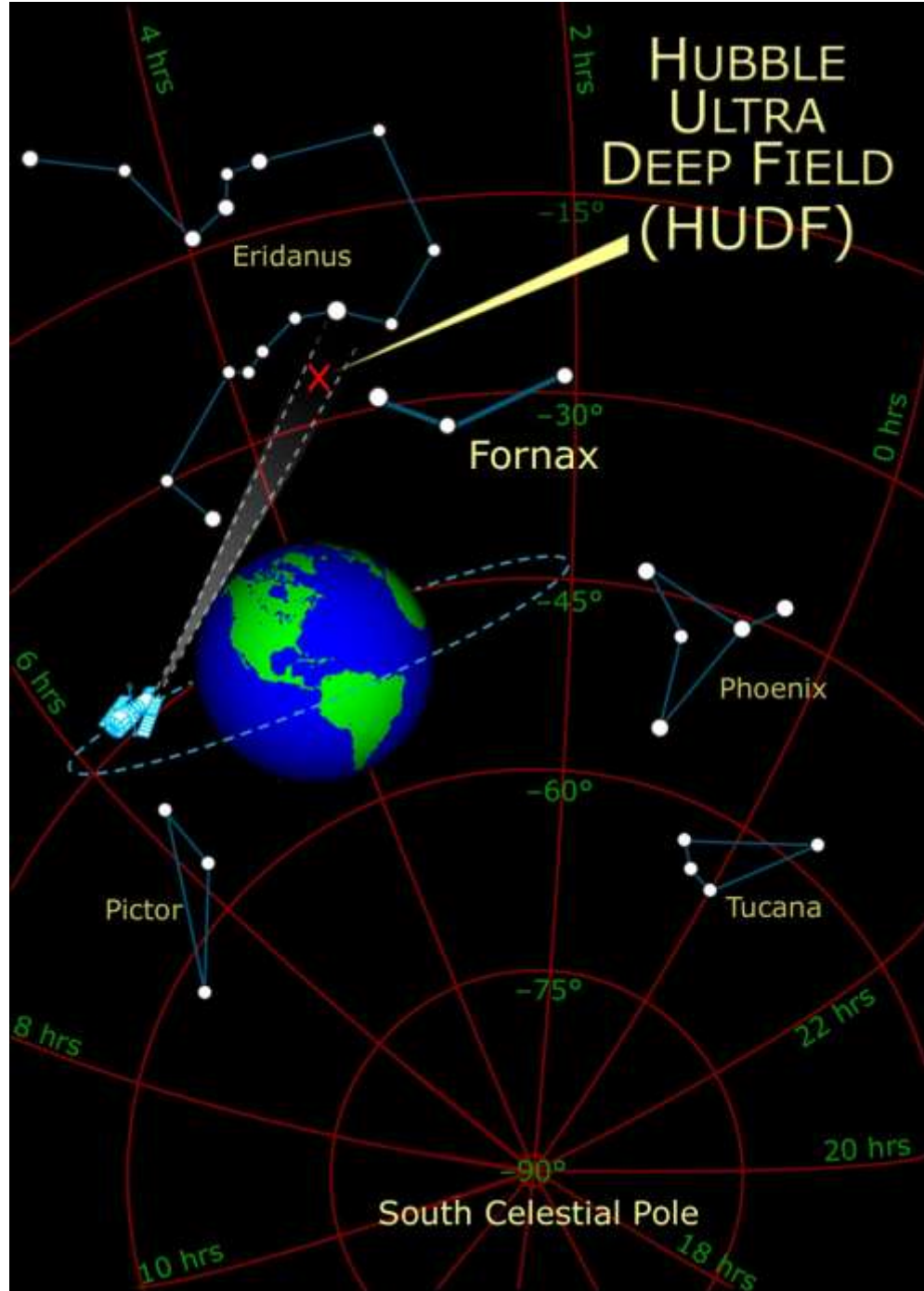


# Judging image detail

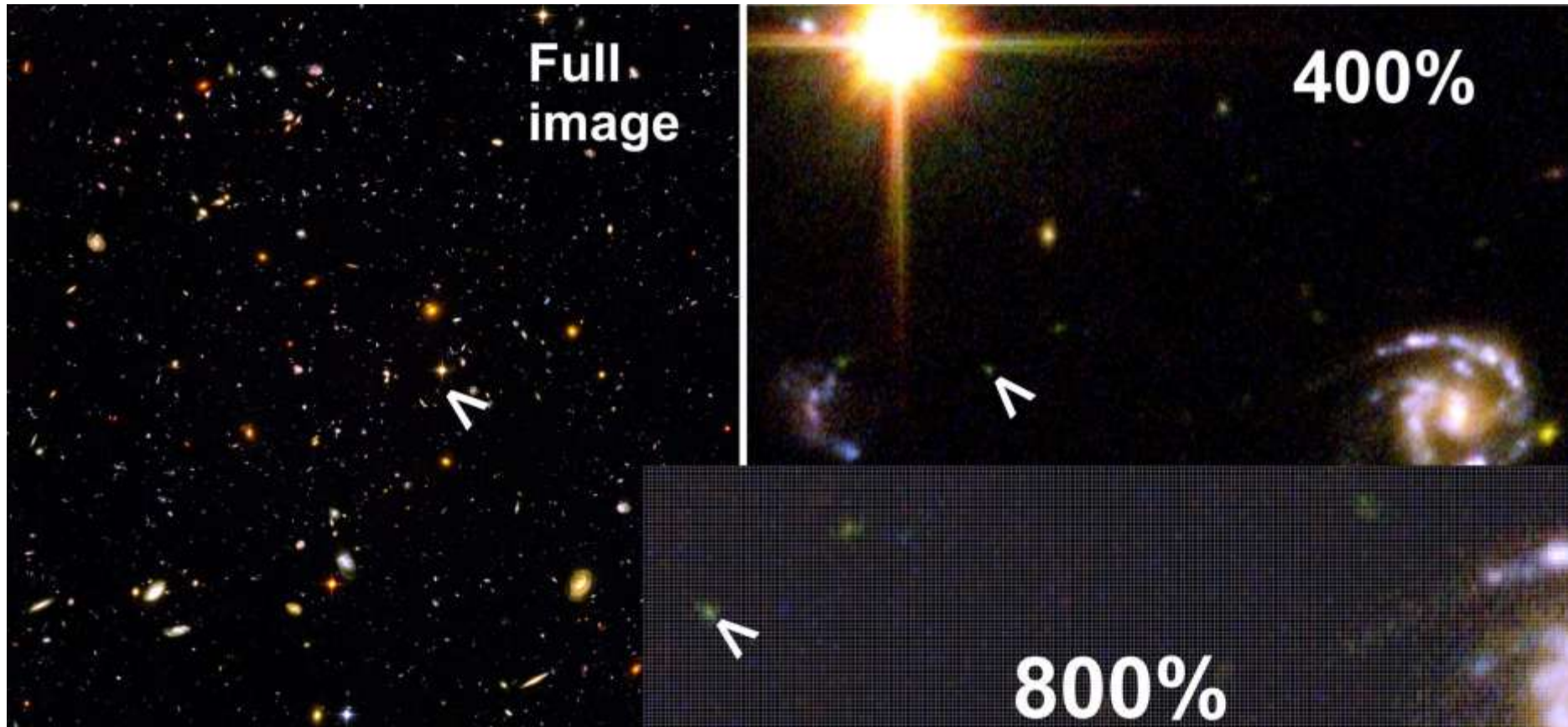
1. From digital file showing pixels, find #pixels in smallest object = **MINpix**
2. From 35mm colour slide or negative, note whether smallest objects on film are about 0.006mm.  
[which is 36mm/5616 pixels]

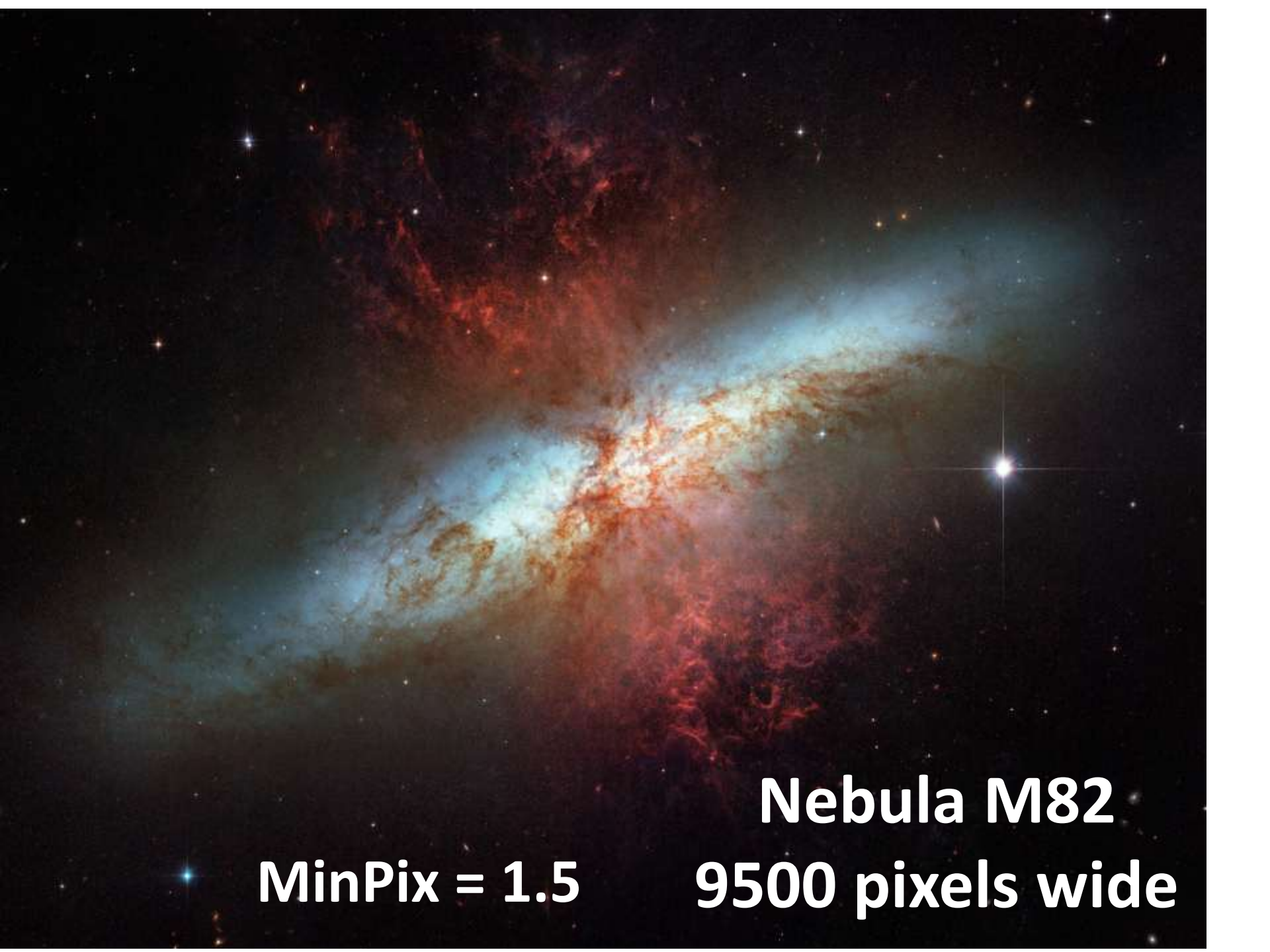


**Very high quality  
digital images:  
Hubble space  
telescope UDF**

**Sensor gives  
6200 x 6200 pixels**

# Hubble UDF MinPix = 1





**MinPix = 1.5**

**Nebula M82**  
**9500 pixels wide**



# Cougar MinPix = 1



Hand held shot of moving  
cat; 85 mm lens  
Canon 5D set on Auto,  
chose f3.2, 1/100 sec



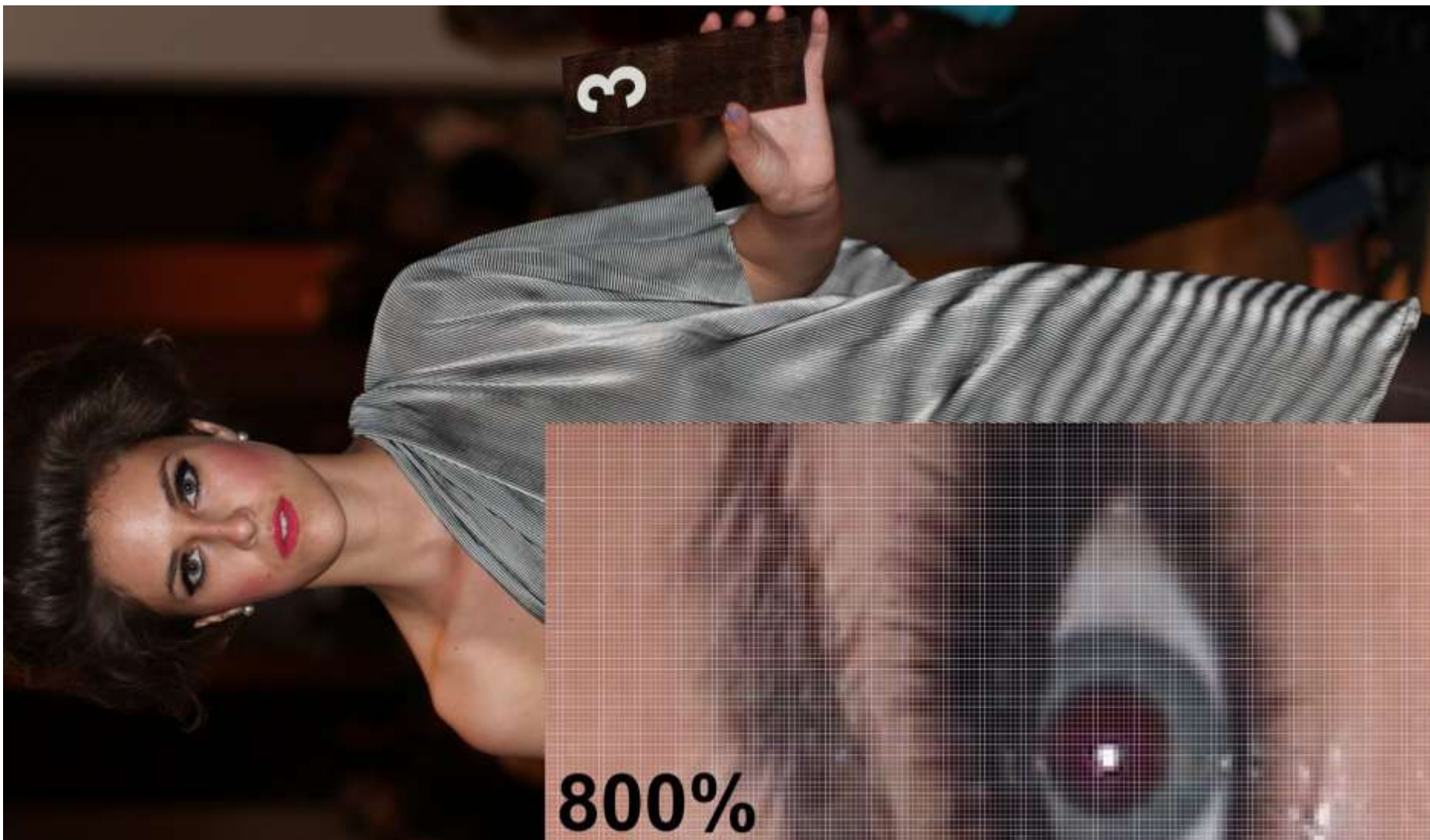
# Gerard studio MinPix = 2



**800%**



Model MinPix = 1.5



# Mouse in snow MinPix = 1.25





Effective pixels **EFFpix** = MAXpix/MINpix

Subject	Sensor width = MAXpix	MINpix	EFFpix
Hubble UDF	6200	1.0	6200
Hubble M82	9500	1.5	6333
Cougar	5616	1.0	5616
Gerard studio	5616	2.0	2808
Model 03	5616	1.5	3744
Mouse in snow	5616	1.25	4492

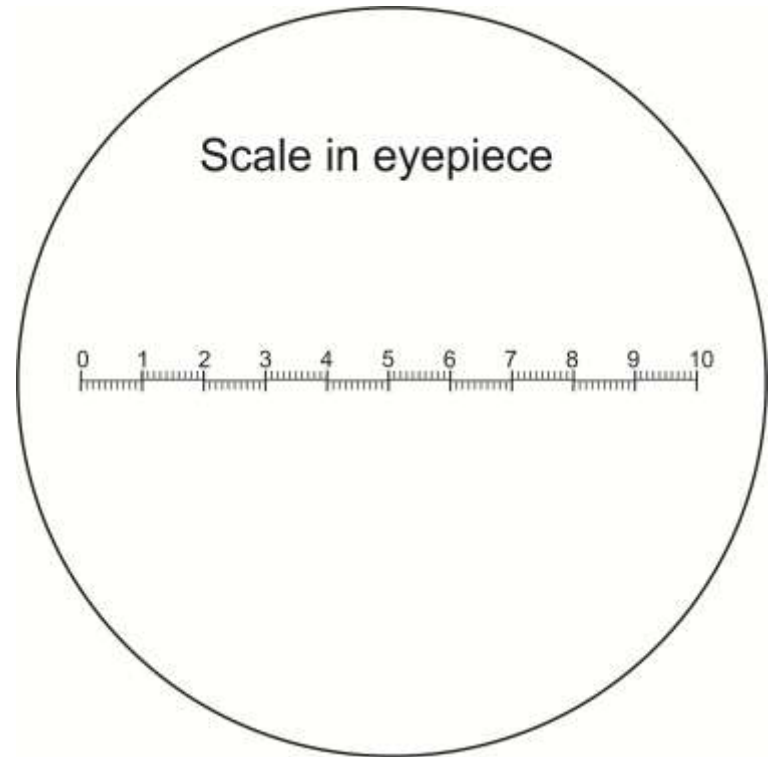
**Judging a 35 mm slide.**

**Is it worth having a high resolution scan into  
TIFF done for making a print?**

**View with a good quality microscope at 100x.**

**View image on screen from good slide projector.**

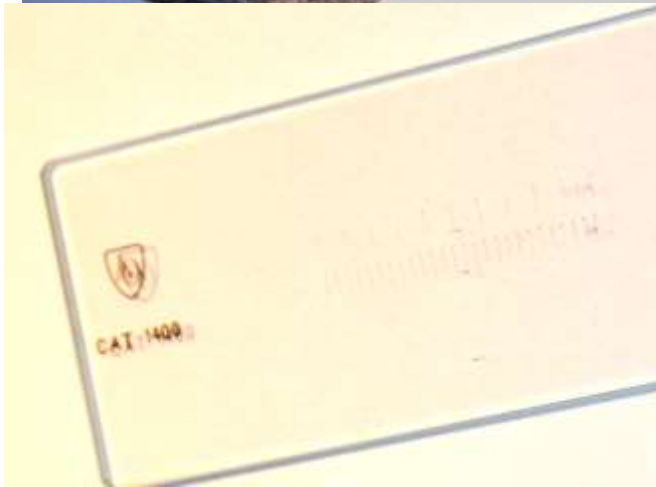
# Microscope: Calibrate ocular scale against mm scale on stage



**With 10X objective, one subdivision =  
0.08mm**

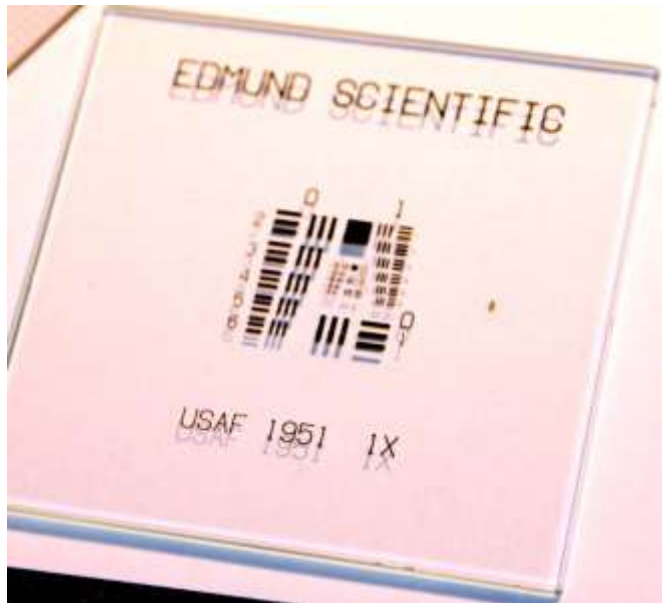
**$36\text{mm slide}/5616\text{ pix} = 0.0064\text{mm}$**

**Equivalent of 1 pix occupies about 1  
subdivision**





# Leitz slide projector with Colorplan lens and high resolution glass 2x2" slide



**Image on wall reveals group 7 - #2  
143 cycles/mm, 286 dpmm.  
10,296 dots across 36 mm slide.  
More than adequate resolution.**

**Projected image 1.5m or 1500 mm wide  
Across 5616 pixels gives 0.27 mm/pix.  
Many people can see 0.25 mm object.  
If viewer can see objects < 1 mm when  
very close to image, it is a darn good  
slide**