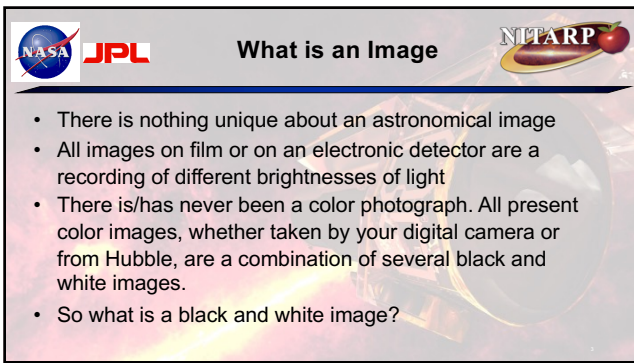




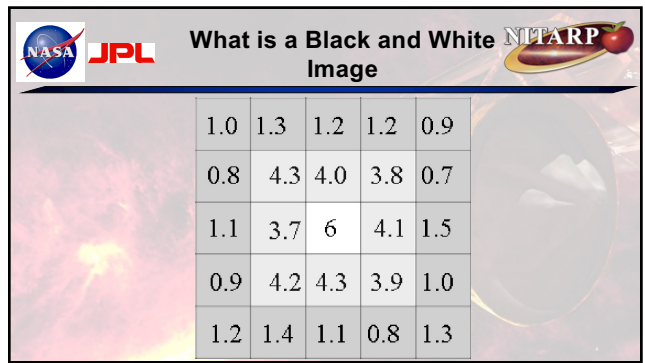
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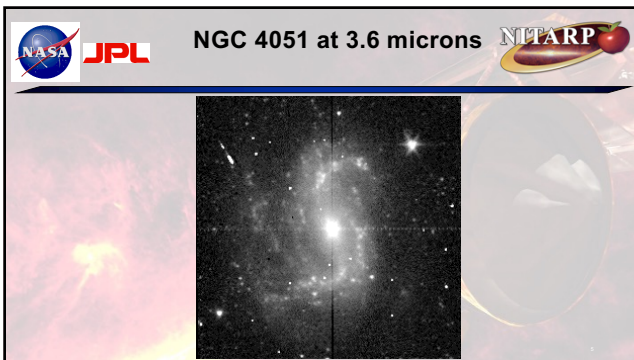
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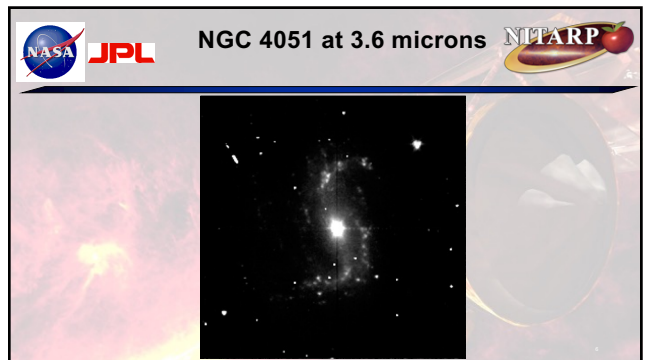
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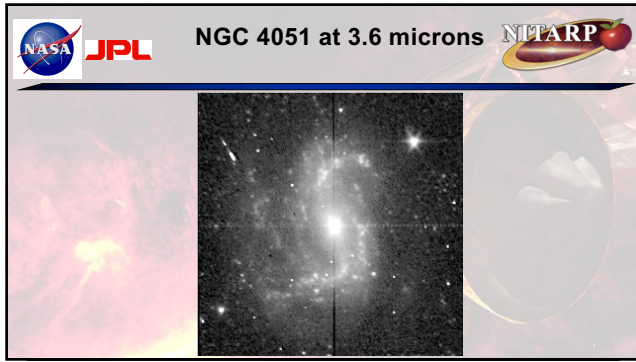
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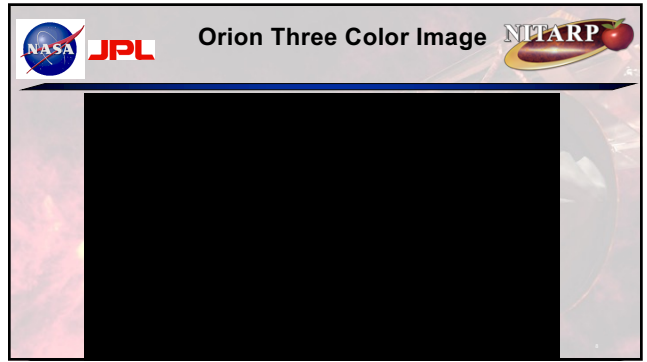
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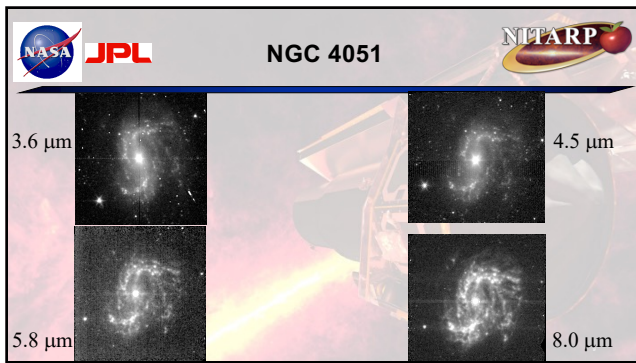
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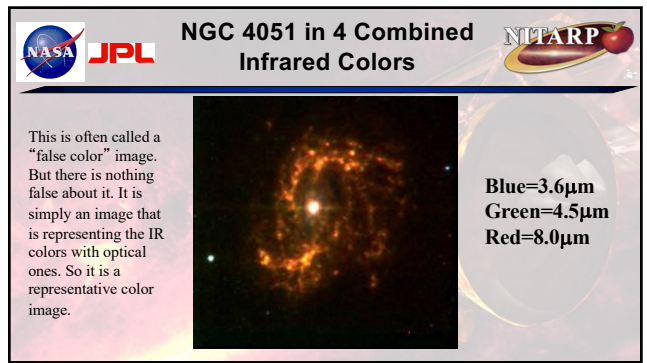
7



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1.0	1.3	1.2	1.2	0.9
0.8	4.3	4.0	3.8	0.7
1.1	3.7	6	4.1	1.5
0.9	4.2	4.3	3.9	1.0
1.2	1.4	1.1	0.8	1.3

So what is the brightness of the central pixel in this image?

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1.0	1.3	1.2	1.2	0.9
0.8	4.3	4.0	3.8	0.7
1.1	3.7	6	4.1	1.5
0.9	4.2	4.3	3.9	1.0
1.2	1.4	1.1	0.8	1.3

Well the amount of light recorded made for 6 units. But is that an actual physical measurement?

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Photometry

1.0	1.3	1.2	1.2	0.9
0.8	4.3	4.0	3.8	0.7
1.1	3.7	6	4.1	1.5
0.9	4.2	4.3	3.9	1.0
1.2	1.4	1.1	0.8	1.3

Well the amount of light recorded made for 6 units. But is that an actual physical measurement? NO!

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Point Spread Function

- Any optical system has a finite limit to how small an image it can generate. That is how the optics and the atmosphere spread out the light from a point hence the name Point Spread Function or PSF.

Spitzer PSF Typical Ground Based PSF

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Point Spread Function Inverse Display

- Any optical system has a finite limit to how small an image it can generate. That is how the optics and the atmosphere spread out the light from a point hence the name Point Spread Function or PSF.

Spitzer PSF Typical Ground Based PSF

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Background Noise

- Also any image is the sum of the light from what you are imaging combined with noise from your detectors as well as light which is not from your object: sky, telescope, etc.

Spitzer PSF Typical Ground Based PSF

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Making Measurements

- Also any image is the sum of the light from what you are imaging combined with noise from your detectors as well as light which is not from your object: sky, telescope, etc.

Spitzer PSF Typical Ground Based PSF

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Making Measurements

The radial profile then tells us how far the PSF extends before we reach the background level of the sky.

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Making Measurements

The radial profile then tells us how far the PSF extends before we reach the background level of the sky.

1.0	1.3	1.2	1.2	0.9
0.8	4.3	4.0	3.8	0.7
1.1	3.7	6	4.1	1.5
0.9	4.2	4.3	3.9	1.0
1.2	1.4	1.1	0.8	1.3

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What you will See

- Many posters and talks will have astronomical images
- Some will be in color and some will be in black and white
- Most black and white images will be inverted for better clarity
- Now you have a sense of what astronomical images are in posters and in talks that you will see during the conference and what it means to measure an object's brightness

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