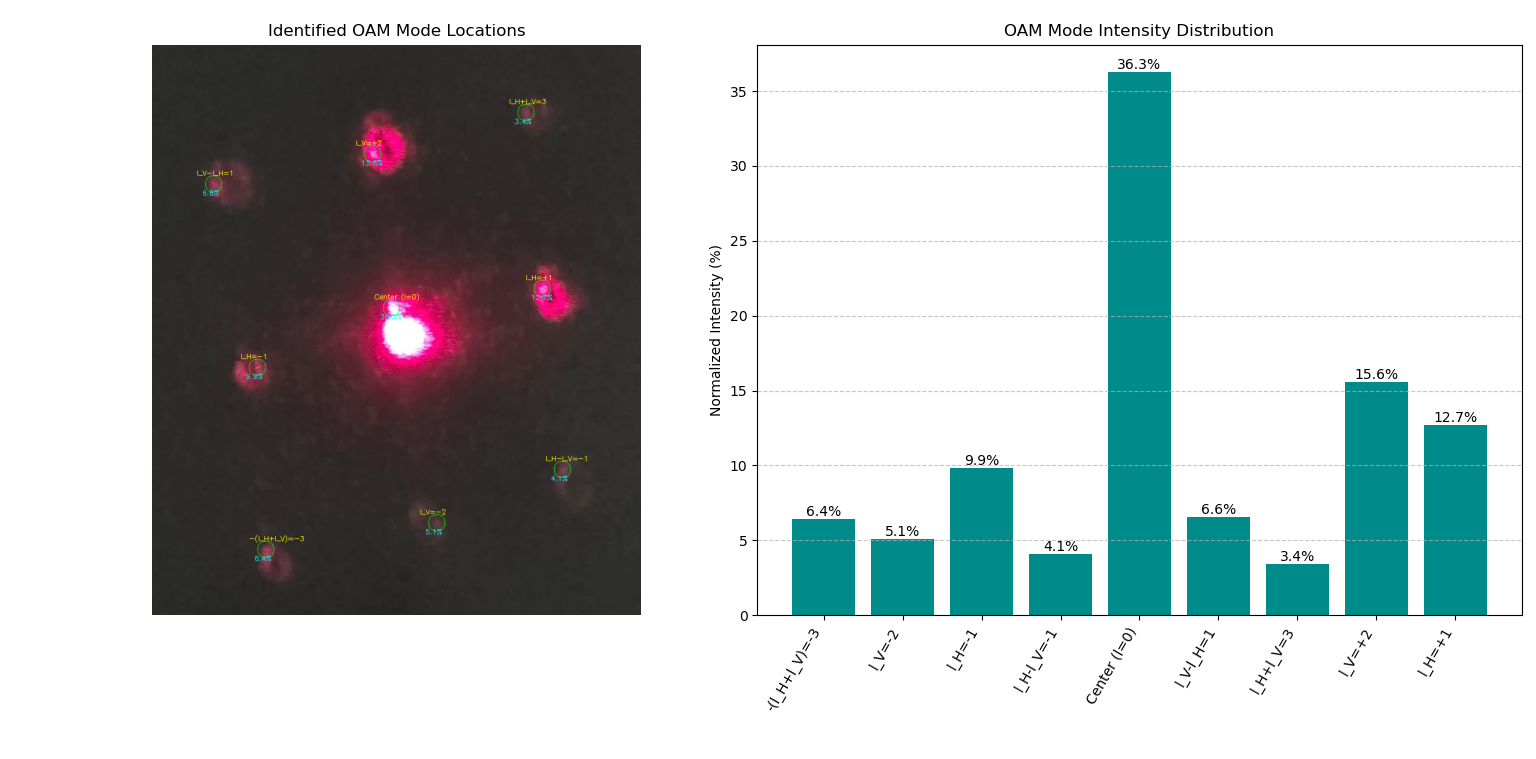
Raw Images of Capstone Project

100um superimposed 900 gratingA bright pink light in the dark

AI-generated content may be incorrect. – paper imprint  


50um superimposed gratings – paper imprint

Red lights in the dark

AI-generated content may be incorrect.

camera

A group of lights in the dark

AI-generated content may be incorrect.

Passed through annular of 80um on camera

S=2

A blurry image of a person's face

AI-generated content may be incorrect.

S=1

A blurry image of a light

AI-generated content may be incorrect.

S = -1

A blurry image of a person's face

AI-generated content may be incorrect.

S = -2

A blurry image of a person's face

AI-generated content may be incorrect.

Annular grating while tuning the right radius for l =3 – paper

A close-up of a pink object

AI-generated content may be incorrect.  
  
annular grating output after tuning for l = 2

A red circle in the dark

AI-generated content may be incorrect.

Using 100um superimposed fork as grating 1 and 50um superimposed fork as grating 2 only 1 650nm laser ON despiraling the beam  
l = +1 passed through grating 2

A group of round objects in a row

AI-generated content may be incorrect.

l=-1 passed through grating 2

A row of lights in a dark room

AI-generated content may be incorrect.  
  
160um grating 1 l = +2 passed through grating 2

A close-up of a cloud

AI-generated content may be incorrect.

Multiplexing after 50um superimposed fork gratings

**S = -1**

A light in the dark

AI-generated content may be incorrect.

**S = 0**

A light in the dark

AI-generated content may be incorrect.

**S = +1 & -1**

A light in the dark

AI-generated content may be incorrect.

**S = 0, 2**

A light in the dark

AI-generated content may be incorrect.

**S = +1**

A blurry image of a white circle

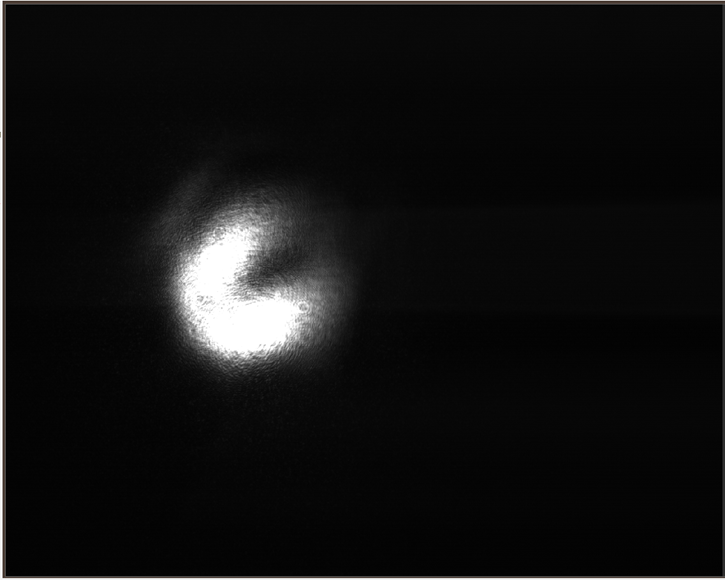
AI-generated content may be incorrect.

**S = +2**

A blurry image of a circle

AI-generated content may be incorrect.

**S = +1, -1**



**s = +1, -1**

S = +1, -1 with petals

A white circle with a light in the middle

AI-generated content may be incorrect.

Demultiplexing

S = +1 , -1 can’t confirm because 0th order looks too bright can be gaussian the grating 1 was 50um, not sure about grating 2 must be 50um  
A group of lights in the dark

AI-generated content may be incorrect.

Demultiplexing using 160um gratings – l =+2-1 Grating1 and Grating2 = 160um used 4 Neutral density filters 1/32 1/16 1/8 1/4  
A blurry image of a person's face

AI-generated content may be incorrect.