**OCN Expt -04**

Code:

clc

clear all

close all

lambda=0.85;

c=3\*(10)^8;

M1=((0.025)/(lambda\*c))\*(10)^12;

disp('M in ps (nm\*km)^(-1)');

disp(M1);

sigma\_m=(20/(c\*lambda))\*(0.025)\*(10)^9;

disp('Sigma\_m in ns km^(-1)');

disp(sigma\_m);

sigma\_m1=(0.0012/c)\*(0.025)\*(10)^12;

disp('Sigma\_m1 in ns km^(-1)');

disp(sigma\_m1);

lambda\_1=0.85:0.1:1.5;

M1=((0.025)./(lambda\_1\*c))\*(10)^12;

figure

plot(lambda\_1,M1)

xlabel('Wavelength')

ylabel('Material Dispersion')



Output:

M in ps (nm\*km)^(-1)

98.0392

Sigma\_m in ns km^(-1)

1.9608

Sigma\_m1 in ns km^(-1)

0.1000