Test loi de Cauchy

Prisme numéro 12

Mesures avec le goniomètre à base bleue, Mickaël.

Entrée[16]:

```
import numpy as np              # pour la gestion des tableaux
import matplotlib.pyplot as plt # pour la gestion des graphiques

L = np.array([404,436,491.6,546,578,623.4])
theta1 = np.array([256+40/60,254,251+10/60,249+11/60,248.5,247+35/60])
theta0 = 179+43/60
Dm = theta1-theta0
print("Dm = ",Dm)
A = 60
n = np.sin((Dm+A)*np.pi/180/2) / np.sin(A*np.pi/180/2)
print("n = ",n)

x = 1/L**2
y = n
a,b = np.polyfit(x,y,1)
print("a=",a,"b=",b)

plt.figure()
plt.plot(L,n,'o', label="indice optique, prisme 12")
plt.xlabel("lambda")
plt.ylabel("n")
plt.legend()
plt.grid()
plt.show()

plt.figure()
plt.plot(x,y,'o', label="indice optique, prisme 12")
plt.plot(x,a*x+b,label="régression linéaire")
plt.xlabel("1 / lambda^2")
plt.ylabel("n")
plt.legend()
plt.grid()
plt.show()
```

```
Dm =  [76.95       74.28333333 71.45       69.46666667 68.78333333 67.8666
6667]
n =  [1.86051513 1.84293628 1.82316549 1.80866205 1.80353935 1.79656674]
a= 17952.022334930585 b= 1.749421558055476
```

Figure 19

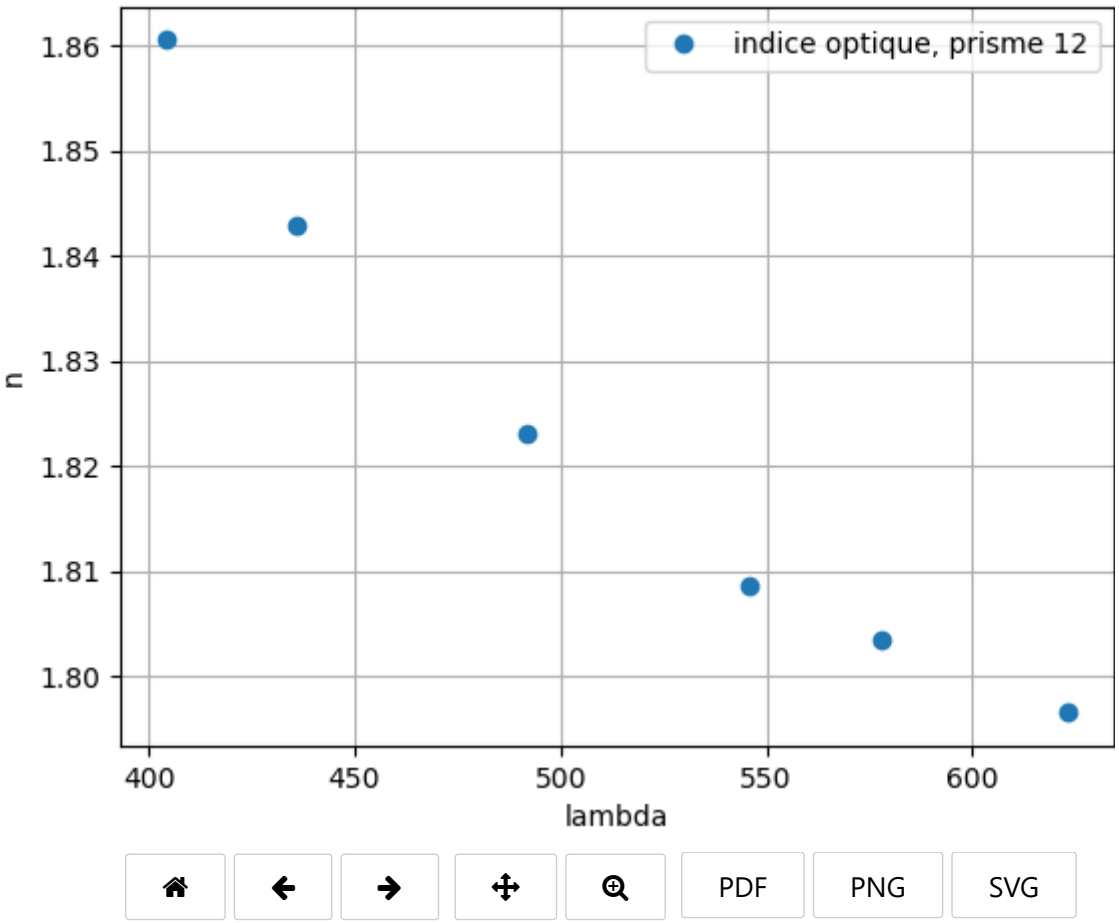
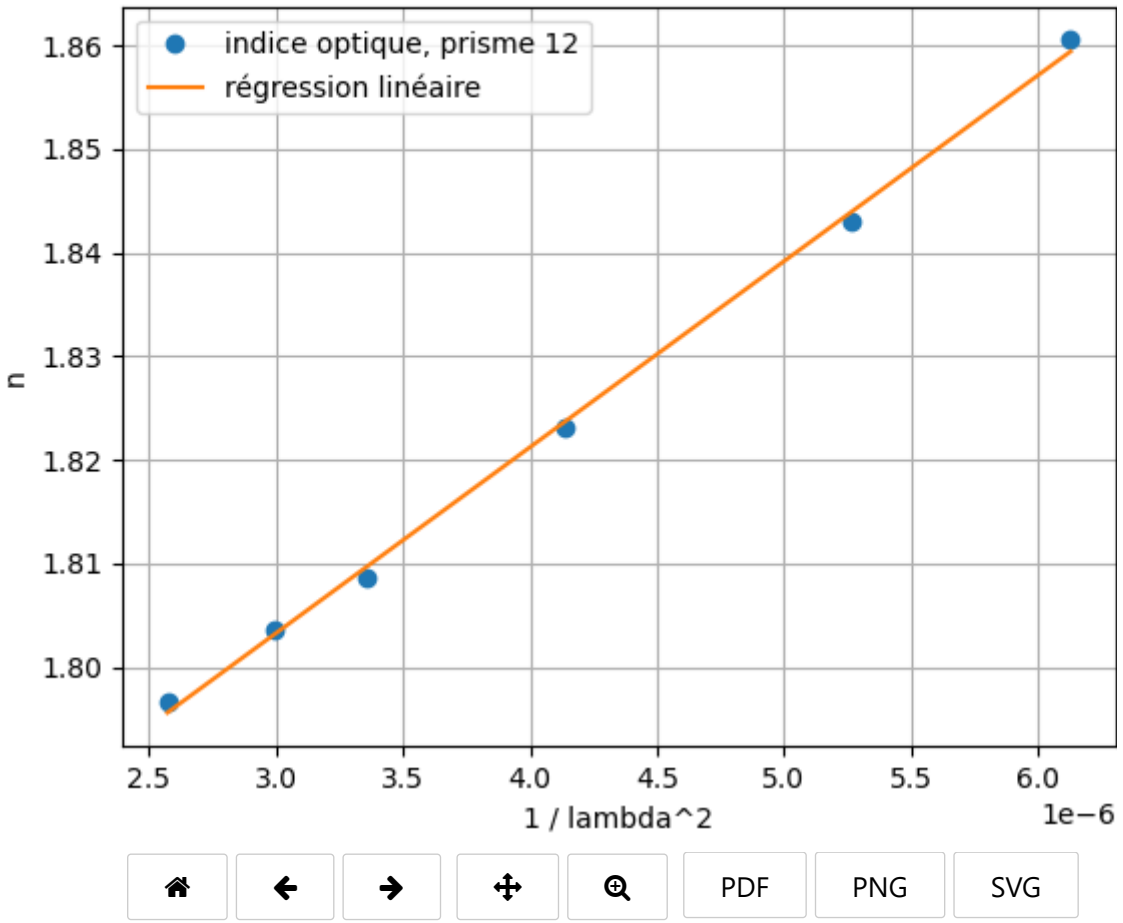

indice optique, prisme 12
1.86
1.85
1.84
1.83
1.82
1.81
1.80
n
400
450
500
550
600
lambda
PDF
PNG
SVG

Figure 20



Entrée[ ]: