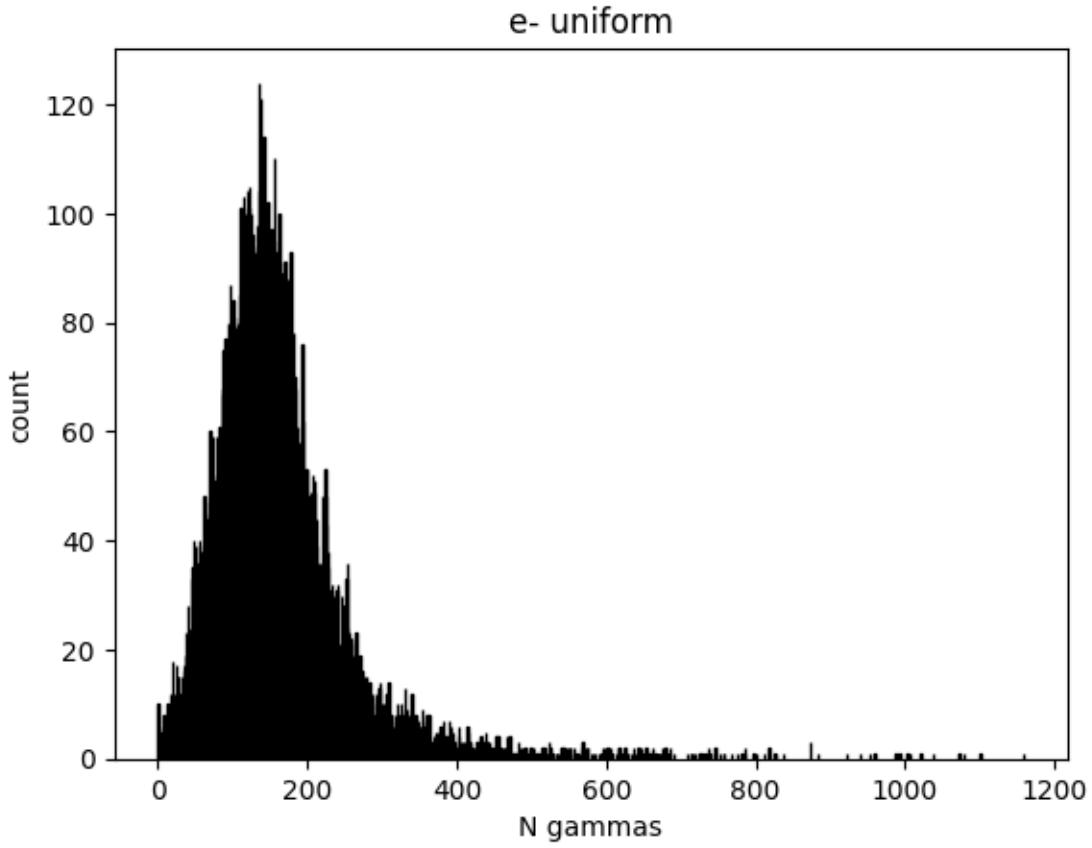
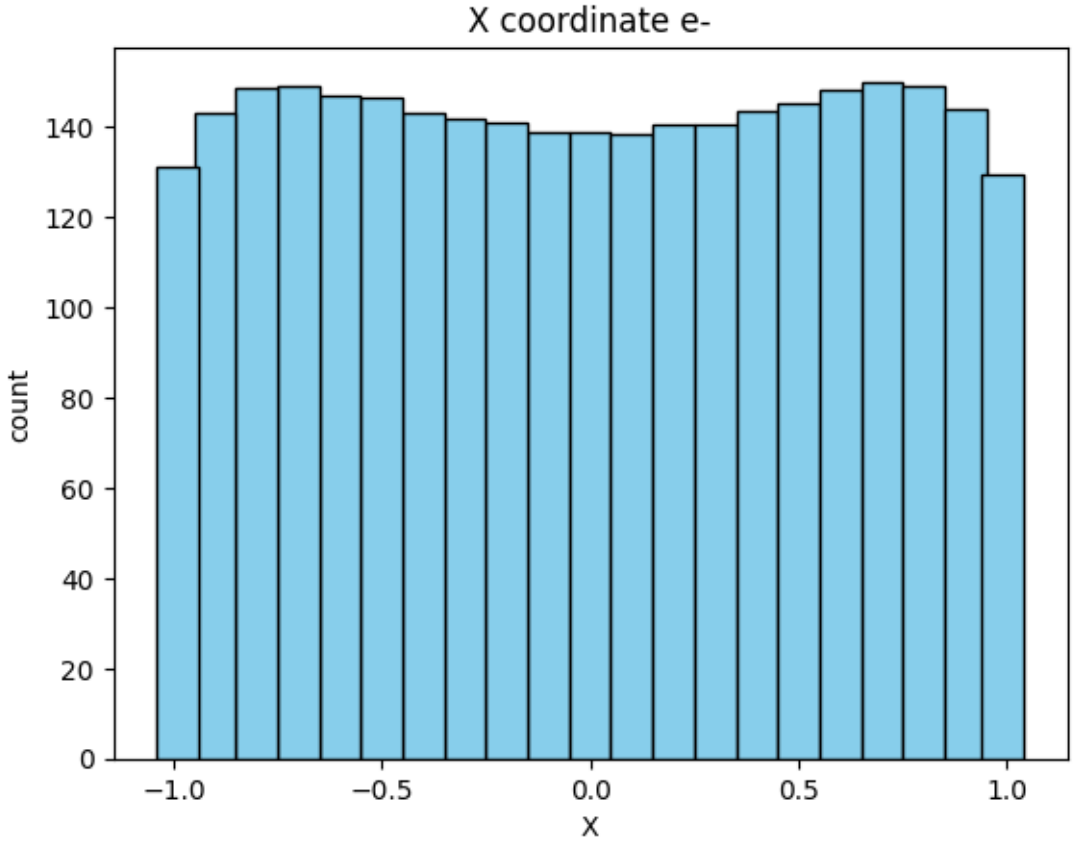
[1]:
```
import pandas as pd
import matplotlib.pyplot as plt
import os
```

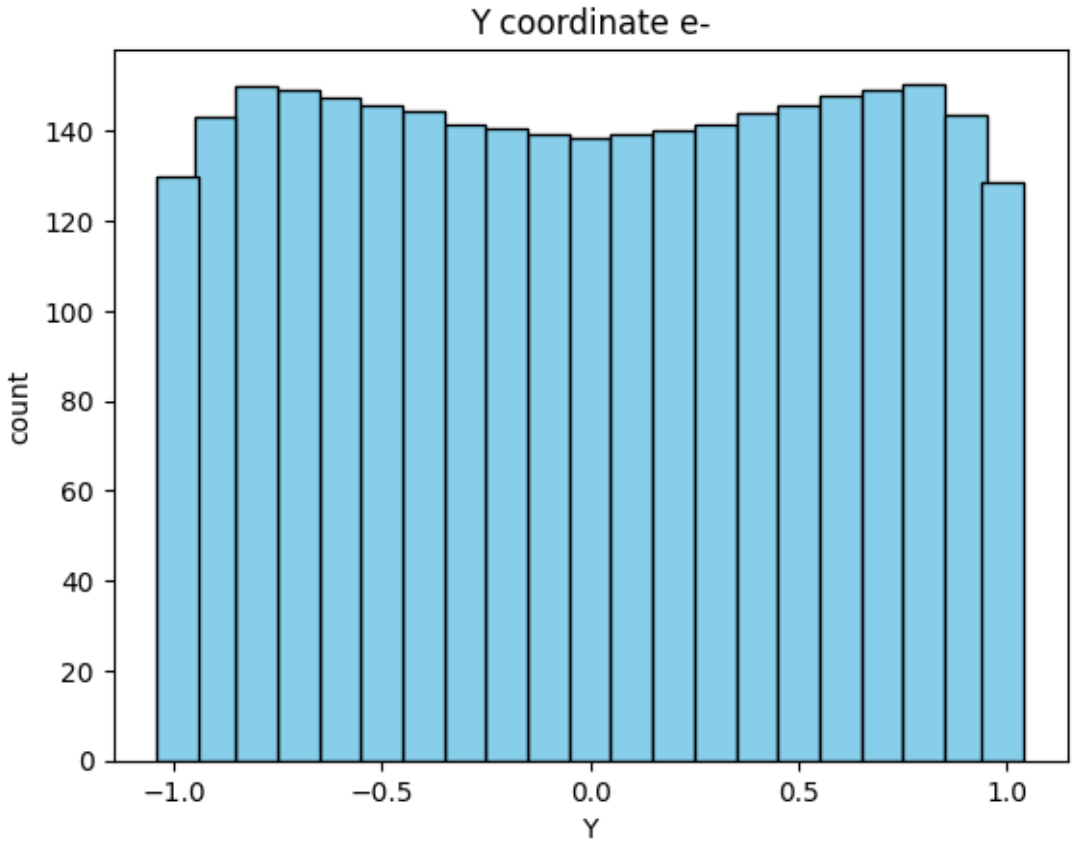
[3]:
```
electron_uniform = pd.read_csv("./electron/dodecahedron/uniform/uniform.csv",␣
 ↪header=None)
electron_uniform.columns = ["counts_gamma"]
electron_uniform = electron_uniform['counts_gamma'].value_counts().reset_index()
plt.bar(electron_uniform['counts_gamma'],electron_uniform['count'],␣
 ↪color='skyblue', edgecolor='black')
plt.xlabel('N gammas')
plt.ylabel('count')
plt.title('e- uniform')

plt.show()
```



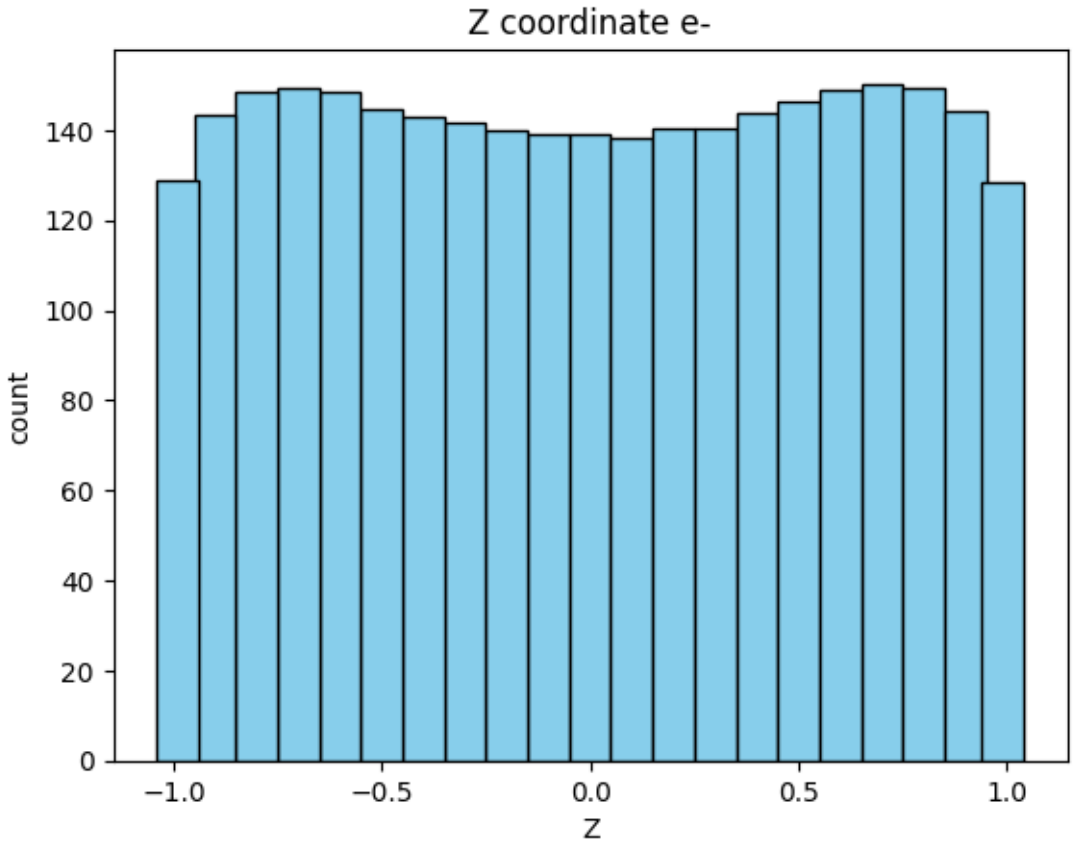
[8]:
```
X_list = os.listdir("./electron/dodecahedron/X")
X = [-0.1, -0.2, -0.3, -0.4, -0.5, -0.6, -0.7, -0.8, -0.9, -0.99, 0, 0.1, 0.2, 0.
↪3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 0.99]
mean_gamma = []
for file in X_list:
    electron_x = pd.read_csv("./electron/dodecahedron/X/" + file, header=None)
    electron_x.columns = ["counts_gamma"]
    electron_x =  pd.Series(electron_x['counts_gamma'])
    mean_gamma.append(electron_x.mean())

plt.bar(X, mean_gamma, color='skyblue', edgecolor='black',  width=0.1)
plt.xlabel('X')
plt.ylabel('count')
plt.title('X coordinate e-')

plt.show()
```



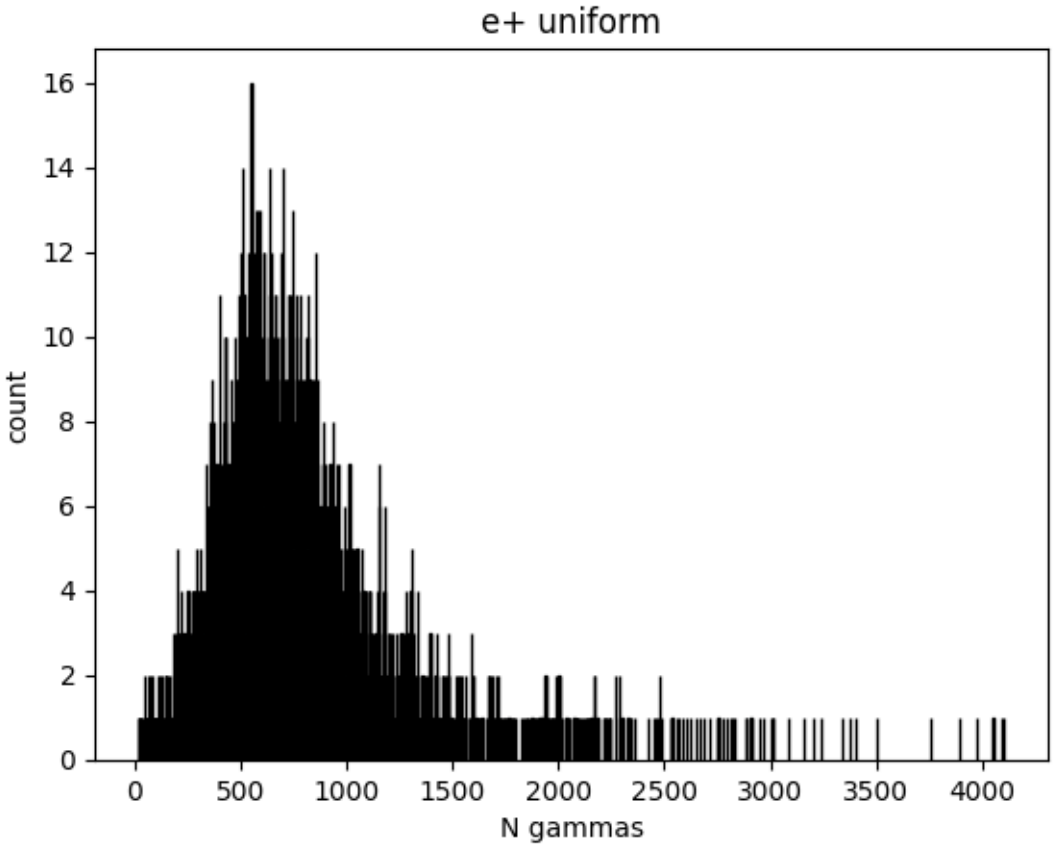
[10]:
```
Y_list = os.listdir("./electron/dodecahedron/Y")
Y = [-0.1, -0.2, -0.3, -0.4, -0.5, -0.6, -0.7, -0.8, -0.9, -0.99, 0, 0.1, 0.2, 0.
↪3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 0.99]
mean_gamma = []
for file in Y_list:
    electron_y = pd.read_csv("./electron/dodecahedron/Y/" + file, header=None)
    electron_y.columns = ["counts_gamma"]
    electron_y =  pd.Series(electron_y['counts_gamma'])
    mean_gamma.append(electron_y.mean())

plt.bar(Y, mean_gamma, color='skyblue', edgecolor='black',  width=0.1)
plt.xlabel('Y')
plt.ylabel('count')
plt.title('Y coordinate e-')

plt.show()
```



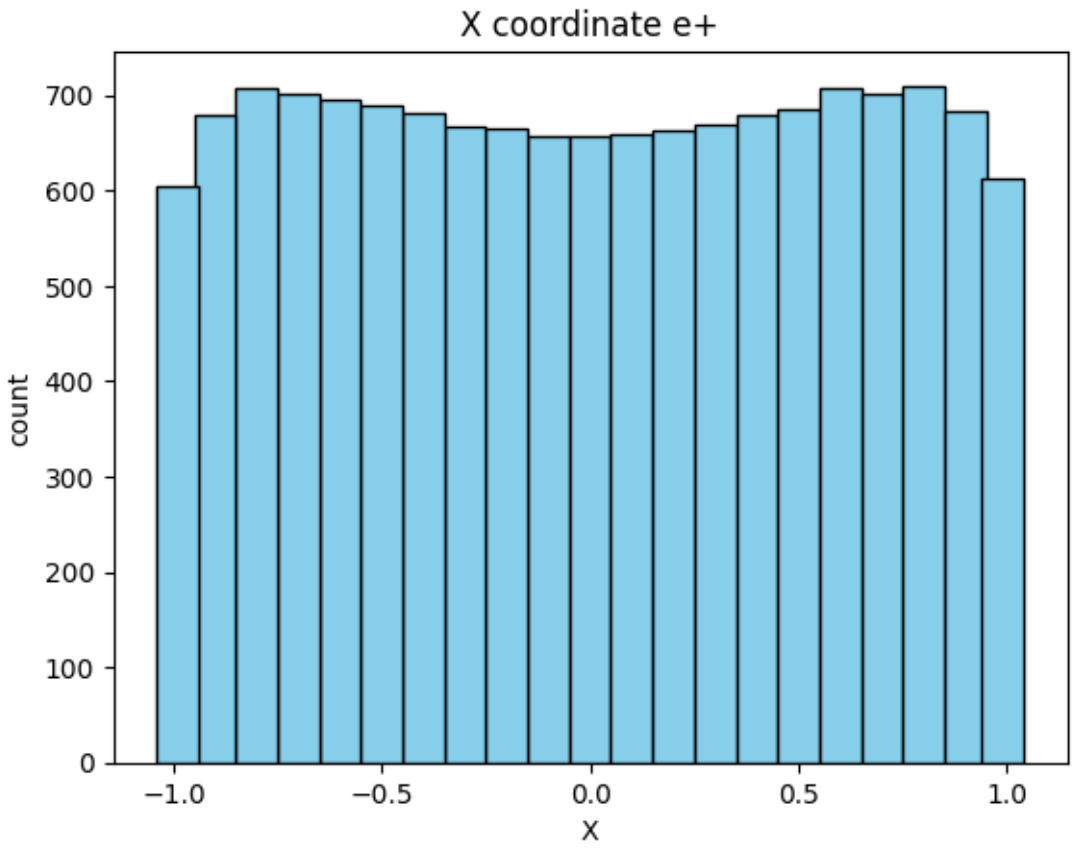
[12]:
```
Z_list = os.listdir("./electron/dodecahedron/Z")
Z = [-0.1, -0.2, -0.3, -0.4, -0.5, -0.6, -0.7, -0.8, -0.9, -0.99, 0, 0.1, 0.2, 0.
↪3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 0.99]
mean_gamma = []
for file in Z_list:
    electron_z = pd.read_csv("./electron/dodecahedron/Z/" + file, header=None)
    electron_z.columns = ["counts_gamma"]
    electron_z =  pd.Series(electron_z['counts_gamma'])
    mean_gamma.append(electron_z.mean())

plt.bar(Z, mean_gamma, color='skyblue', edgecolor='black',  width=0.1)
plt.xlabel('Z')
plt.ylabel('count')
plt.title('Z coordinate e-')

plt.show()
```



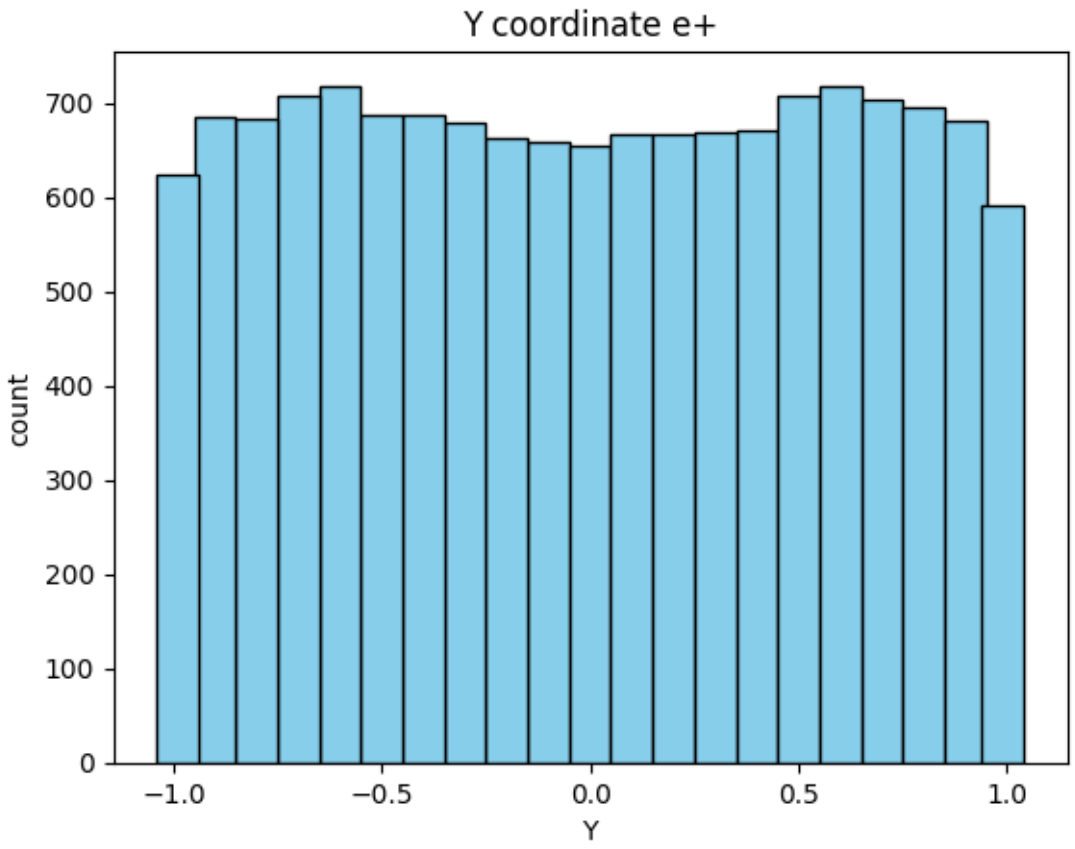
[2]:
```
positron_uniform = pd.read_csv("./positron/dodecahedron/uniform/uniform_nt_count.
 ↪csv", header=None)
positron_uniform.columns = ["counts_gamma"]
positron_uniform = positron_uniform['counts_gamma'].value_counts().reset_index()
plt.bar(positron_uniform['counts_gamma'],positron_uniform['count'],␣
 ↪color='skyblue', edgecolor='black')
plt.xlabel('N gammas')
plt.ylabel('count')
plt.title('e+ uniform')

plt.show()
```



[18]:
```
X_list = os.listdir("./positron/dodecahedron/X")
X = [-0.1, -0.2, -0.3, -0.4, -0.5, -0.6, -0.7, -0.8, -0.9, -0.99, 0, 0.1, 0.2, 0.
↪3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 0.99]
mean_gamma = []
for file in X_list:
    positron_x = pd.read_csv("./positron/dodecahedron/X/" + file, header=None)
    positron_x.columns = ["counts_gamma"]
    positron_x =  pd.Series(positron_x['counts_gamma'])
    mean_gamma.append(positron_x.mean())

plt.bar(X, mean_gamma, color='skyblue', edgecolor='black',  width=0.1)
plt.xlabel('X')
plt.ylabel('count')
plt.title('X coordinate e+')

plt.show()
```



[3]:
```
Y_list = os.listdir("./positron/dodecahedron/Y")
Y = [-0.1, -0.2, -0.3, -0.4, -0.5, -0.6, -0.7, -0.8, -0.9, -0.99, 0, 0.1, 0.2, 0.
↪3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 0.99]
mean_gamma = []
for file in Y_list:
    positron_y = pd.read_csv("./positron/dodecahedron/Y/" + file, header=None)
    positron_y.columns = ["counts_gamma"]
    positron_y =  pd.Series(positron_y['counts_gamma'])
    mean_gamma.append(positron_y.mean())

plt.bar(Y, mean_gamma, color='skyblue', edgecolor='black',  width=0.1)
plt.xlabel('Y')
plt.ylabel('count')
plt.title('Y coordinate e+')

plt.show()
```



[4]:
```
Z_list = os.listdir("./positron/dodecahedron/Z")
Z = [-0.1, -0.2, -0.3, -0.4, -0.5, -0.6, -0.7, -0.8, -0.9, -0.99, 0, 0.1, 0.2, 0.
↪3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 0.99]
mean_gamma = []
for file in Z_list:
    positron_z = pd.read_csv("./positron/dodecahedron/Z/" + file, header=None)
    positron_z.columns = ["counts_gamma"]
    positron_z =  pd.Series(positron_z['counts_gamma'])
    mean_gamma.append(positron_z.mean())

plt.bar(Z, mean_gamma, color='skyblue', edgecolor='black',  width=0.1)
plt.xlabel('Z')
plt.ylabel('count')
plt.title('Z coordinate e+')

plt.show()
```