In [2]:
```
import pandas as pd
import numpy as np
```

In [ ]:
```

```

In [3]:
```
d_q_cen = [58057.3,58549.1,59511.4,59645.6,59666.1,59683.7,59711.7,60161,60433.8
df_describe = pd.DataFrame(d_q_cen)
df_describe.describe()
```

Out[3]:

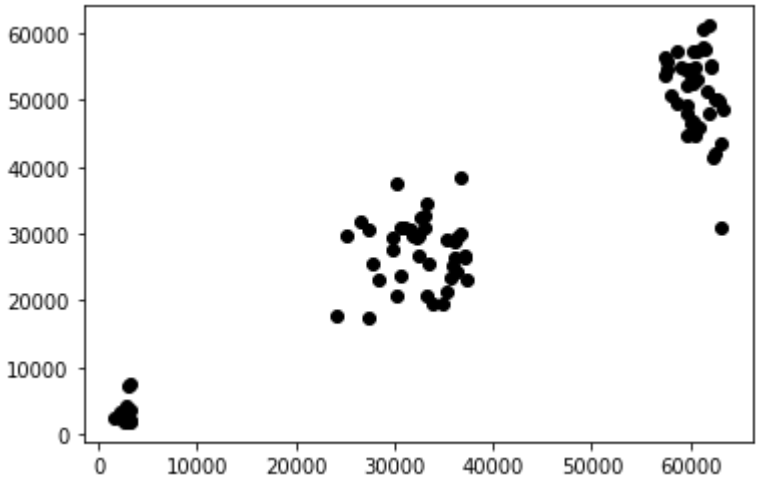
	0
count	100.000000
mean	37772.178400
std	21766.082507
min	1579.860000
25%	27669.875000
50%	35792.150000
75%	60011.225000
max	63324.100000

In [4]:
```
radius = [50760.2,49569.5,54795.8,52191.9,49124.2,48134.9,44623.4,46742,54902.1,
df_describe = pd.DataFrame(radius)
df_describe.describe()
```

Out[4]:

	0
count	100.000000
mean	32061.155900
std	18831.297433
min	1844.390000
25%	20738.950000
50%	30569.950000
75%	49970.850000
max	61178.000000

In [5]:
```
import matplotlib.pyplot as plt
plt.plot(d_q_cen, radius, 'o', color='black');
```



In [ ]:

In [6]:
```
d_q_cen = [58057.3,58549.1,59511.4,59645.6,59666.1,59683.7,59711.7,60161,60433.8

df_describe = pd.DataFrame(d_q_cen)
df_describe.describe()
```

Out[6]:

	0
count	10000.000000
mean	39155.844767
std	16638.281984
min	729.763000
25%	27452.250000
50%	39734.950000
75%	50742.275000
max	85351.700000

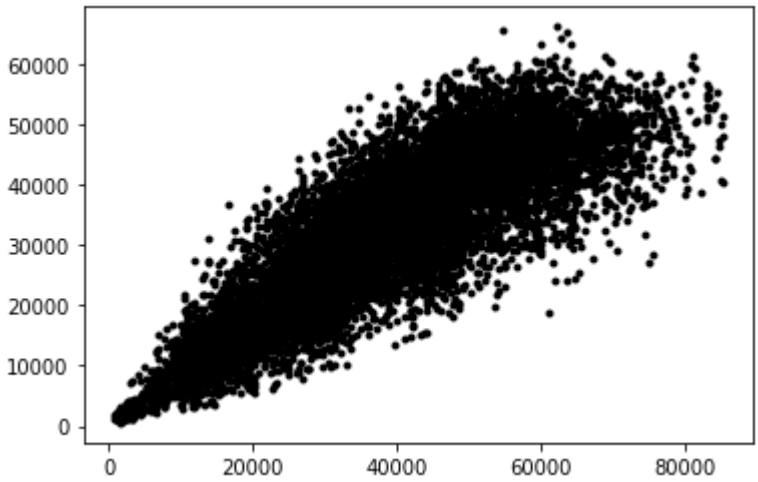
In [7]:
```
radius = [50760.2,49569.5,54795.8,52191.9,49124.2,48134.9,44623.4,46742,54902.1,

df_describe = pd.DataFrame(radius)
df_describe.describe()
```

Out[7]:

	0
count	10000.000000
mean	32615.196196
std	13319.449742
min	543.901000
25%	23026.475000
50%	34121.950000
75%	43177.400000

	0
max	66223.300000

In [10]:

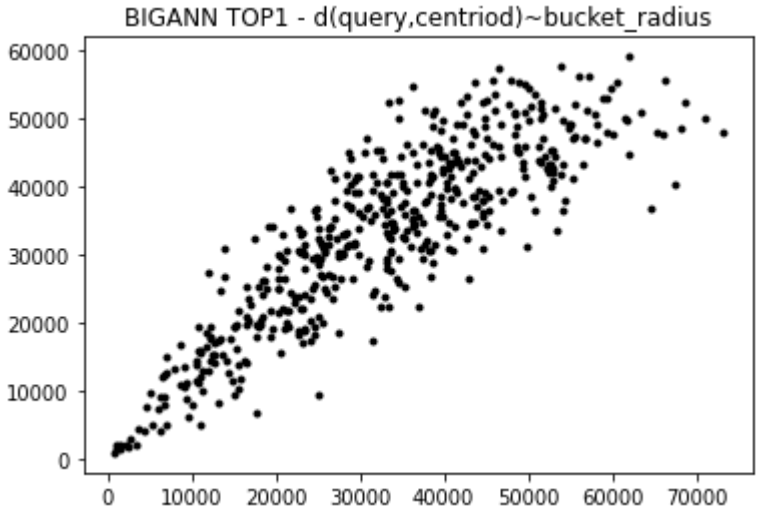


In [27]:

```
d_q_cen_top1 = []
for i, val in enumerate(d_q_cen):
    if (i % 20 == 0):
#         print (i, ",",val)
        d_q_cen_top1.append(val)

# print(d_q_cen_top1)

radius_top1 = []
for i, val in enumerate(radius):
    if (i % 20 == 0):
#         print (i, ",",val)
        radius_top1.append(val)

plt.plot(d_q_cen_top1, radius_top1, '.', color='black');
plt.title("BIGANN TOP1 - d(query,centriod)~bucket_radius")
```

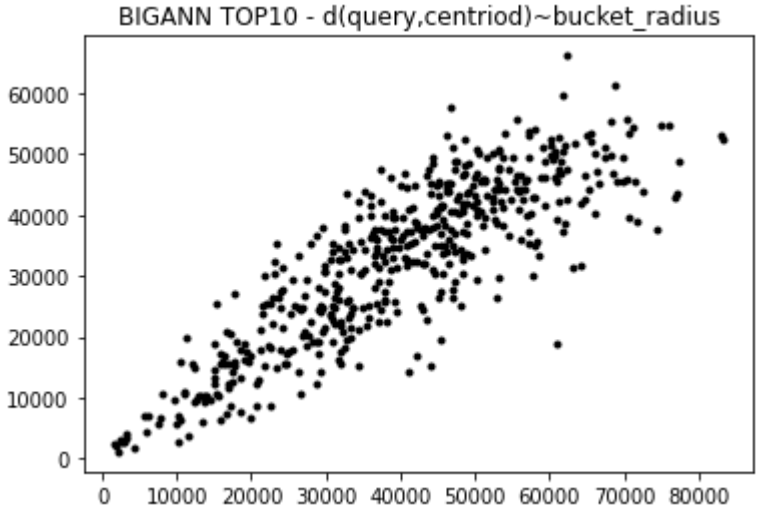
Out[27]:

```
Text(0.5, 1.0, 'BIGANN TOP1 - d(query,centriod)~bucket_radius')
```



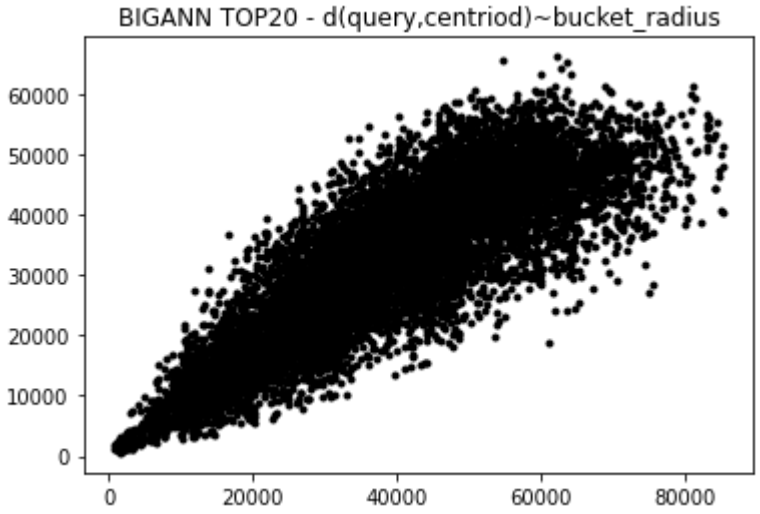
In [25]:
```
d_q_cen_top10 = []
for i, val in enumerate(d_q_cen):
    if (i % 20 == 10):
#         print (i, ",",val)
        d_q_cen_top10.append(val)

# print(d_q_cen_top10)

radius_top10 = []
for i, val in enumerate(radius):
    if (i % 20 == 10):
#         print (i, ",",val)
        radius_top10.append(val)

plt.plot(d_q_cen_top10, radius_top10, '.', color='black');
plt.title("BIGANN TOP10 - d(query,centriod)~bucket_radius")
```

Out[25]:
```
Text(0.5, 1.0, 'BIGANN TOP10 - d(query,centriod)~bucket_radius')
```



In [26]:
```
plt.plot(d_q_cen, radius, '.', color='black');
plt.title("BIGANN TOP20 - d(query,centriod)~bucket_radius")
```

Out[26]:
```
Text(0.5, 1.0, 'BIGANN TOP20 - d(query,centriod)~bucket_radius')
```



In [ ]: