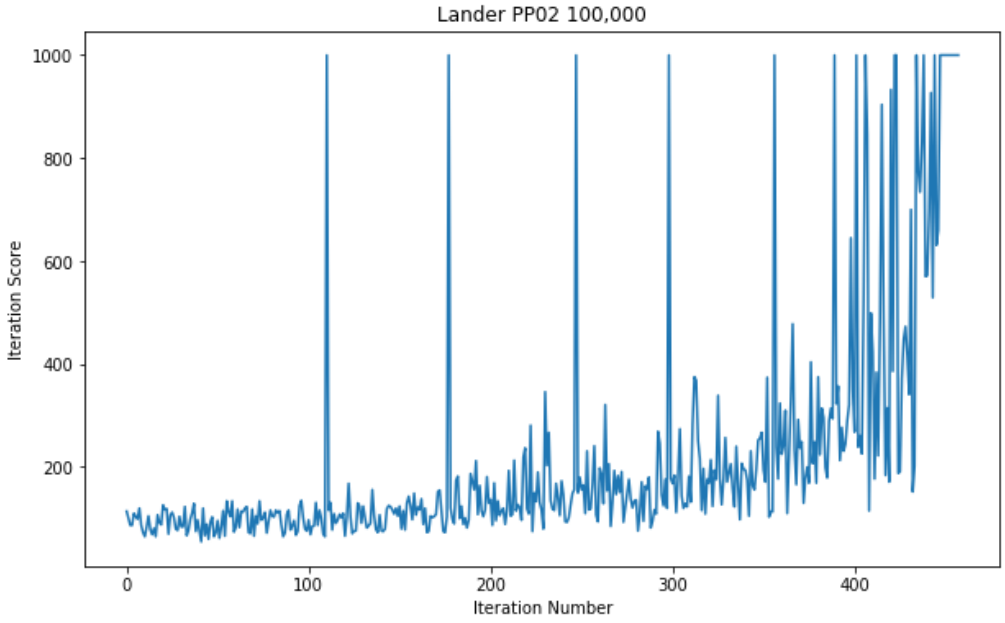
In [30]:
```
import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
```

In [31]:
```
# LANDER PP02 100,000
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_ppo2_100000.csv")
lander_pp02_100000_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_da
ta.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x_h = pd.to_numeric(lander_pp02_100000_df.index.values)
pp02_hy = pd.to_numeric(lander_pp02_100000_df.l.values)
ax.set_title("Lander PP02 100,000")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x_h , pp02_hy);
```

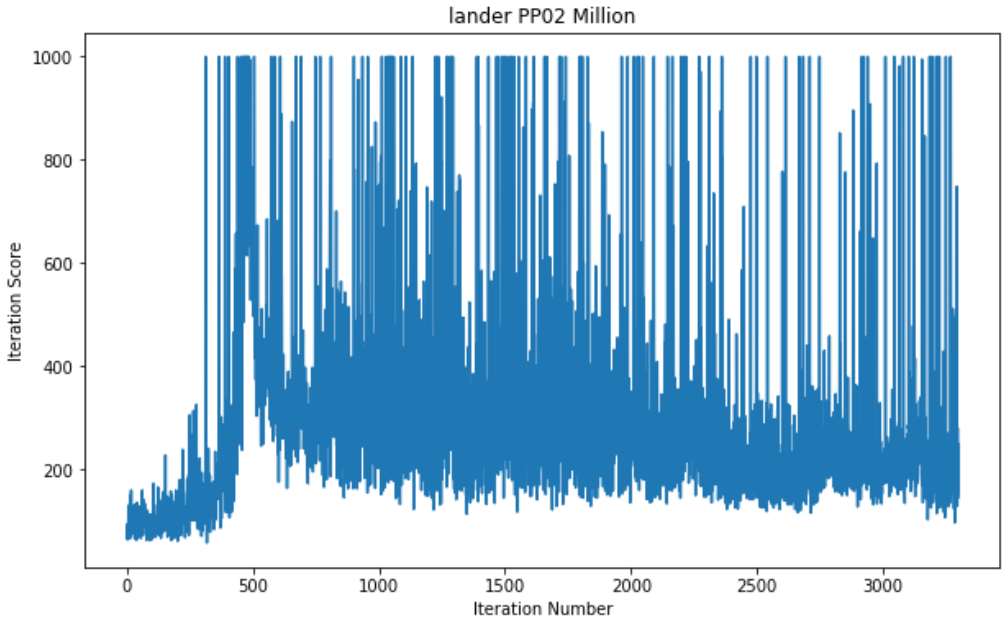
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [32]:
```
# lander PP02 MILLION
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_ppo2_million.csv")
lander_pp02_million_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_d
ata.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x_m = pd.to_numeric(lander_pp02_million_df.index.values)
pp02_my = pd.to_numeric(lander_pp02_million_df.l.values)
ax.set_title("lander PP02 Million")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x_m , pp02_my);
```

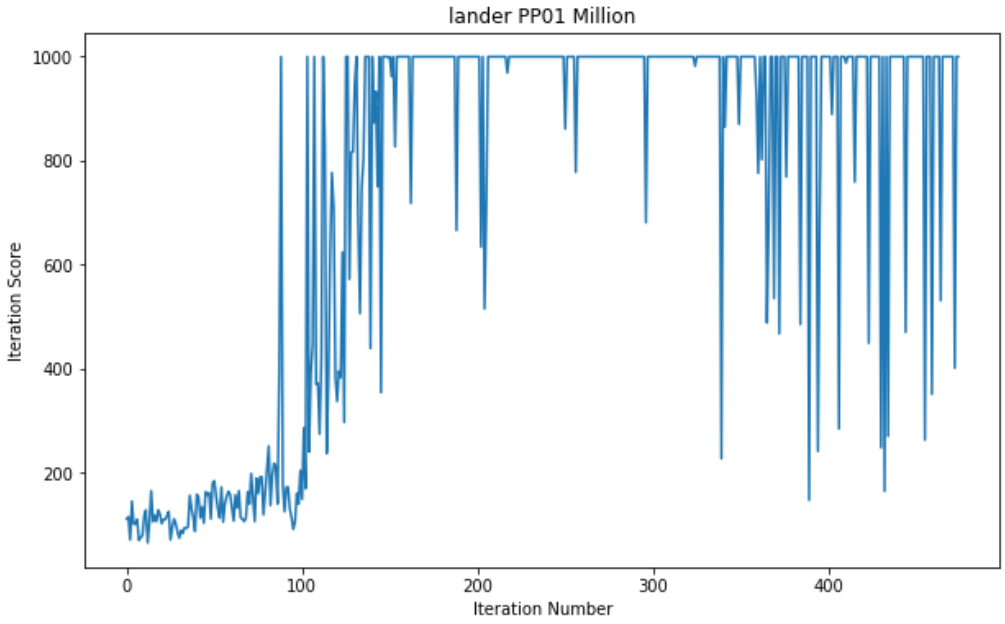
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [33]:
```
# lander PP01 MILLION
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_ppo1_million.csv")
lander_pp01_million_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_d
ata.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_pp01_million_df.index.values)
pp01_my = pd.to_numeric(lander_pp01_million_df.l.values)
ax.set_title("lander PP01 Million")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x , pp01_my);
```

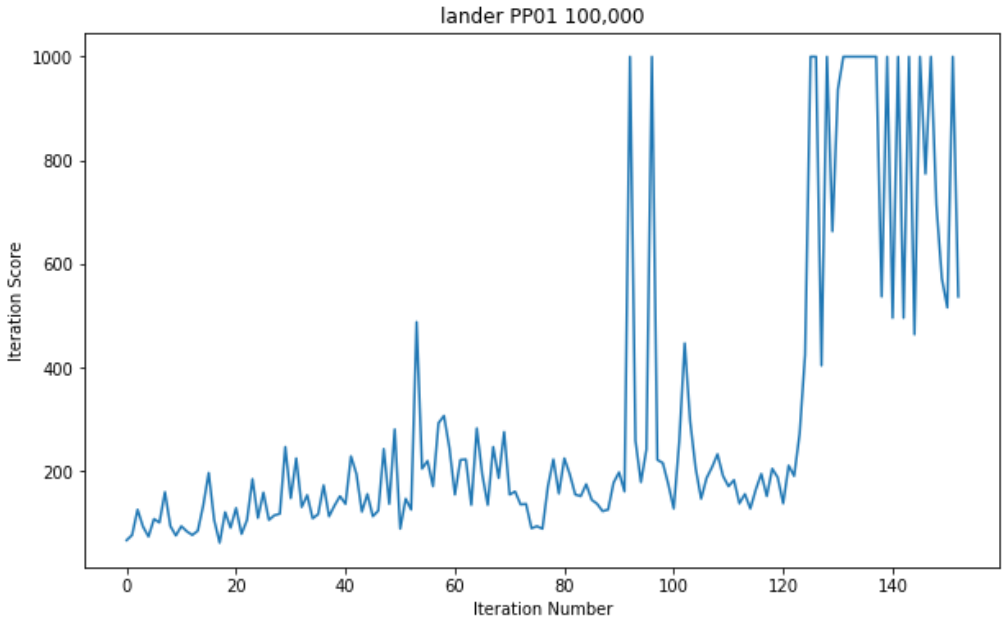
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [34]:
```
# lander PP01 100,000
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_ppo1_100000.csv")
lander_pp01_100000_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_da
ta.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_pp01_100000_df.index.values)
pp01_hy = pd.to_numeric(lander_pp01_100000_df.l.values)
ax.set_title("lander PP01 100,000")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x , pp01_hy);
```

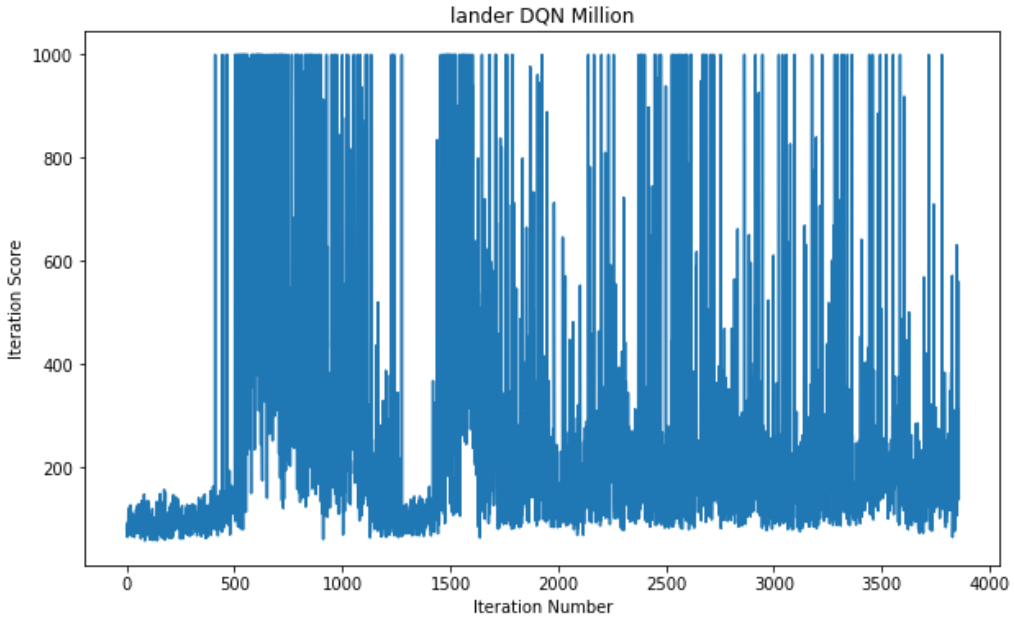
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [35]:
```
# lander DQN Million
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_dqn_million.csv")
lander_dqn_million_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_da
ta.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_dqn_million_df.index.values)
dqn_my = pd.to_numeric(lander_dqn_million_df.l.values)
ax.set_title("lander DQN Million")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x , dqn_my);
```

```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [36]:
```
# lander DDPG Million
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_ddpg_million.csv")
lander_ddpg_million_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_d
ata.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_ddpg_million_df.index.values)
y = pd.to_numeric(lander_ddpg_million_df.l.values)
ax.set_title("lander DDPG Million")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x, y);

# Moving average dangerous, maybe like k-nearest neigbors type of thing
```

```
---------------------------------------------------------------------------
FileNotFoundError                         Traceback (most recent call last)
<ipython-input-36-38b38ce083dc> in <module>
      1 # lander DDPG Million
      2 # Read in File as pandas dataframe
----> 3 file_data = pd.read_csv("lander/lander_ddpg_million.csv")
      4 lander_ddpg_million_df = pd.DataFrame(columns= file_data.iloc[0,:], dat
a=file_data.iloc[1:,].as_matrix())
      5

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in parser_f(filepath_or_buffer, sep, delimiter, header, names, index_co
l, usecols, squeeze, prefix, mangle_dupe_cols, dtype, engine, converters, true_
values, false_values, skipinitialspace, skiprows, nrows, na_values, keep_defaul
t_na, na_filter, verbose, skip_blank_lines, parse_dates, infer_datetime_format,
keep_date_col, date_parser, dayfirst, iterator, chunksize, compression, thousan
ds, decimal, lineterminator, quotechar, quoting, escapechar, comment, encoding,
dialect, tupleize_cols, error_bad_lines, warn_bad_lines, skipfooter, doublequot
e, delim_whitespace, low_memory, memory_map, float_precision)
    676                     skip_blank_lines=skip_blank_lines)
    677
--> 678         return _read(filepath_or_buffer, kwds)
    679
    680     parser_f.__name__ = name

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in _read(filepath_or_buffer, kwds)
    438
    439     # Create the parser.
--> 440     parser = TextFileReader(filepath_or_buffer, **kwds)
    441
    442     if chunksize or iterator:

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in __init__(self, f, engine, **kwds)
    785             self.options['has_index_names'] = kwds['has_index_names']
    786
--> 787         self._make_engine(self.engine)
    788
    789     def close(self):

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in _make_engine(self, engine)
   1012     def _make_engine(self, engine='c'):
   1013         if engine == 'c':
-> 1014             self._engine = CParserWrapper(self.f, **self.options)
   1015         else:
   1016             if engine == 'python':

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in __init__(self, src, **kwds)
   1706         kwds['usecols'] = self.usecols
   1707
-> 1708         self._reader = parsers.TextReader(src, **kwds)
   1709
   1710         passed_names = self.names is None

pandas/_libs/parsers.pyx in pandas._libs.parsers.TextReader.__cinit__()

pandas/_libs/parsers.pyx in pandas._libs.parsers.TextReader._setup_parser_sourc
e()

FileNotFoundError: File b'lander/lander_ddpg_million.csv' does not exist
```

In [37]:
```
# lander DDPG 100000
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_ddpg_100000.csv")
lander_ddpg_100000_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_da
ta.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_ddpg_100000_df.index.values)
y = pd.to_numeric(lander_ddpg_100000_df.l.values)
ax.set_title("lander DDPG 100000")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x, y);
```

```
---------------------------------------------------------------------------
FileNotFoundError                         Traceback (most recent call last)
<ipython-input-37-9a17b11f981a> in <module>
      1 # lander DDPG 100000
      2 # Read in File as pandas dataframe
----> 3 file_data = pd.read_csv("lander/lander_ddpg_100000.csv")
      4 lander_ddpg_100000_df = pd.DataFrame(columns= file_data.iloc[0,:], data
=file_data.iloc[1:,].as_matrix())
      5

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in parser_f(filepath_or_buffer, sep, delimiter, header, names, index_co
l, usecols, squeeze, prefix, mangle_dupe_cols, dtype, engine, converters, true_
values, false_values, skipinitialspace, skiprows, nrows, na_values, keep_defaul
t_na, na_filter, verbose, skip_blank_lines, parse_dates, infer_datetime_format,
keep_date_col, date_parser, dayfirst, iterator, chunksize, compression, thousan
ds, decimal, lineterminator, quotechar, quoting, escapechar, comment, encoding,
dialect, tupleize_cols, error_bad_lines, warn_bad_lines, skipfooter, doublequot
e, delim_whitespace, low_memory, memory_map, float_precision)
    676                     skip_blank_lines=skip_blank_lines)
    677
--> 678         return _read(filepath_or_buffer, kwds)
    679
    680     parser_f.__name__ = name

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in _read(filepath_or_buffer, kwds)
    438
    439     # Create the parser.
--> 440     parser = TextFileReader(filepath_or_buffer, **kwds)
    441
    442     if chunksize or iterator:

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in __init__(self, f, engine, **kwds)
    785             self.options['has_index_names'] = kwds['has_index_names']
    786
--> 787         self._make_engine(self.engine)
    788
    789     def close(self):

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in _make_engine(self, engine)
   1012     def _make_engine(self, engine='c'):
   1013         if engine == 'c':
-> 1014             self._engine = CParserWrapper(self.f, **self.options)
   1015         else:
   1016             if engine == 'python':

~/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/pandas/io/par
sers.py in __init__(self, src, **kwds)
   1706         kwds['usecols'] = self.usecols
   1707
-> 1708         self._reader = parsers.TextReader(src, **kwds)
   1709
   1710         passed_names = self.names is None

pandas/_libs/parsers.pyx in pandas._libs.parsers.TextReader.__cinit__()

pandas/_libs/parsers.pyx in pandas._libs.parsers.TextReader._setup_parser_sourc
e()

FileNotFoundError: File b'lander/lander_ddpg_100000.csv' does not exist
```

In [38]:
```
k = 100
y2 = []
for i in range(len(y) - k):
    num = 0
    for j in range(k):
        num += y[i+j]
    y2.append(num/k)

# lander DDPG 100000
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_ddpg_100000.csv")
lander_ddpg_100000_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_da
ta.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x2 = pd.to_numeric(lander_ddpg_100000_df.iloc[:-k].index.values)
#y = pd.to_numeric(lander_ddpg_100000_df.l.values)
ax.set_title("lander DDPG 100000")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x2, y2);
```

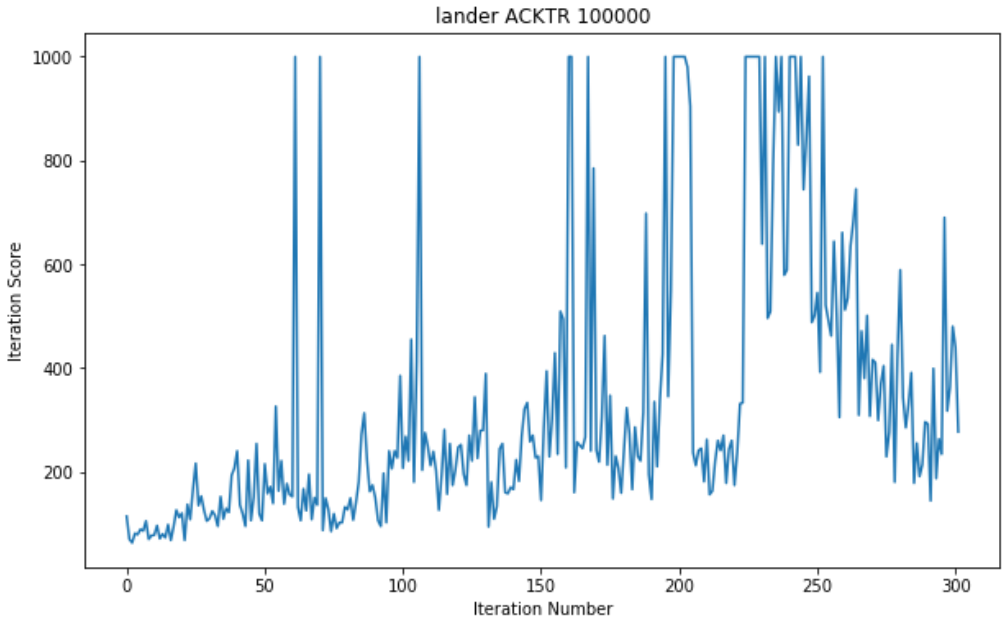
```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-38-60e474a6550e> in <module>
      2 k = 100
      3 y2 = []
----> 4 for i in range(len(y) - k):
      5     num = 0
      6     for j in range(k):

NameError: name 'y' is not defined
```

In [39]:
```
# lander ACKTR 100,000
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_acktr_100000.csv")
lander_acktr_100000_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_d
ata.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_acktr_100000_df.index.values)
y = pd.to_numeric(lander_acktr_100000_df.l.values)
ax.set_title("lander ACKTR 100000")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x, y);
```

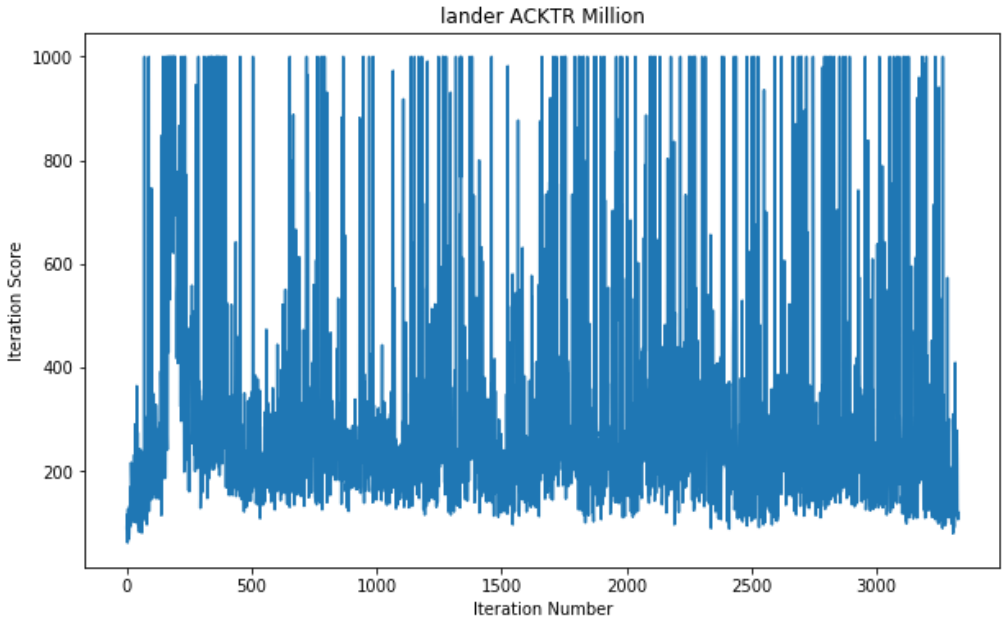
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [40]:
```
# lander ACKTR MILLION
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_acktr_million.csv")
lander_acktr_million_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_
data.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_acktr_million_df.index.values)
y = pd.to_numeric(lander_acktr_million_df.l.values)
ax.set_title("lander ACKTR Million")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x, y);
```

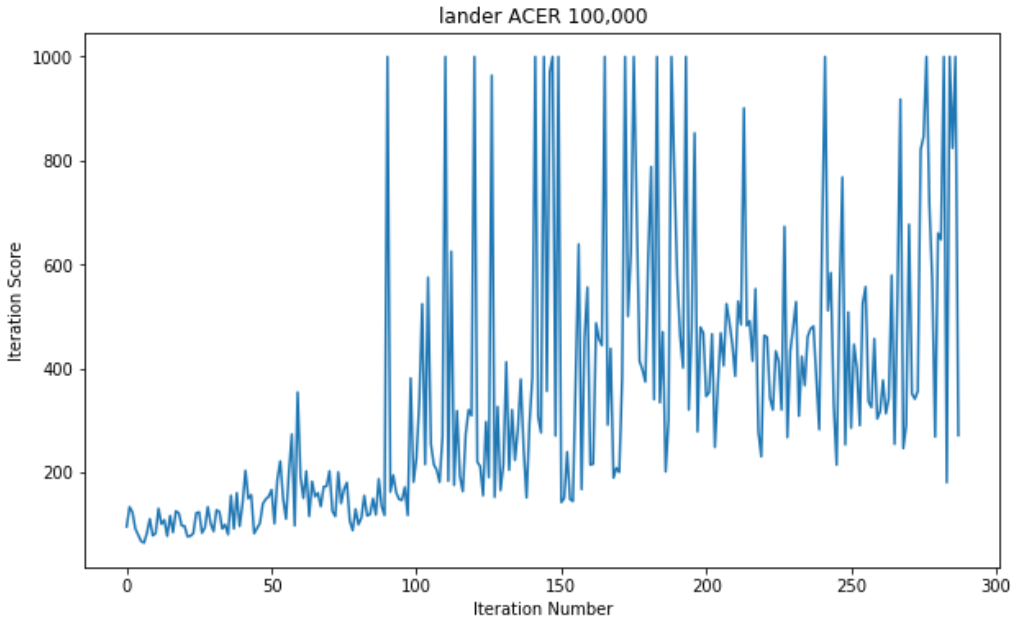
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [41]:
```
# lander ACER 100000
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_acer_100000.csv")
lander_acer_100000_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_da
ta.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_acer_100000_df.index.values)
y = pd.to_numeric(lander_acer_100000_df.l.values)
ax.set_title("lander ACER 100,000")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x, y);
```

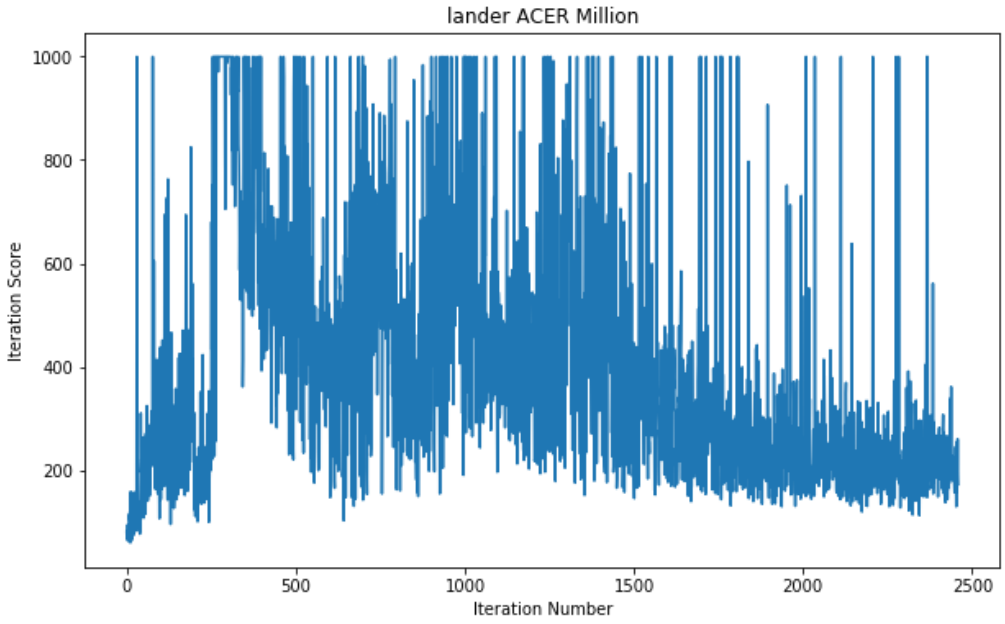
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [42]:
```
# lander ACER MILLION
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_acer_million.csv")
lander_acer_million_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_d
ata.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_acer_million_df.index.values)
y = pd.to_numeric(lander_acer_million_df.l.values)
ax.set_title("lander ACER Million")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x, y);
```

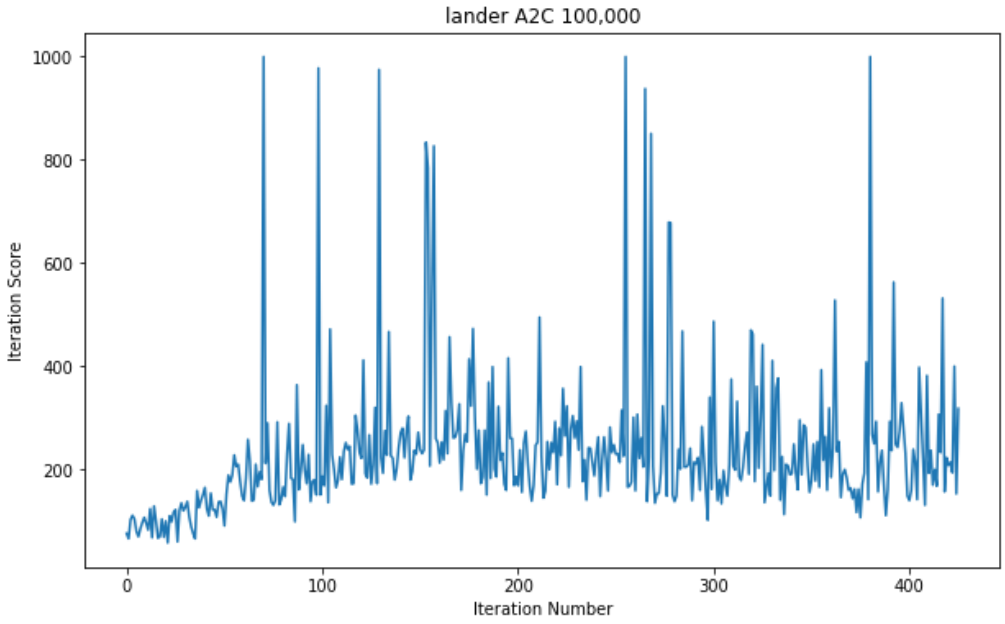
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [43]:
```
# lander A2C 100,000
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_a2c_100000.csv")
lander_a2c_100000_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_dat
a.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_a2c_100000_df.index.values)
y = pd.to_numeric(lander_a2c_100000_df.l.values)
ax.set_title("lander A2C 100,000")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x, y);
```

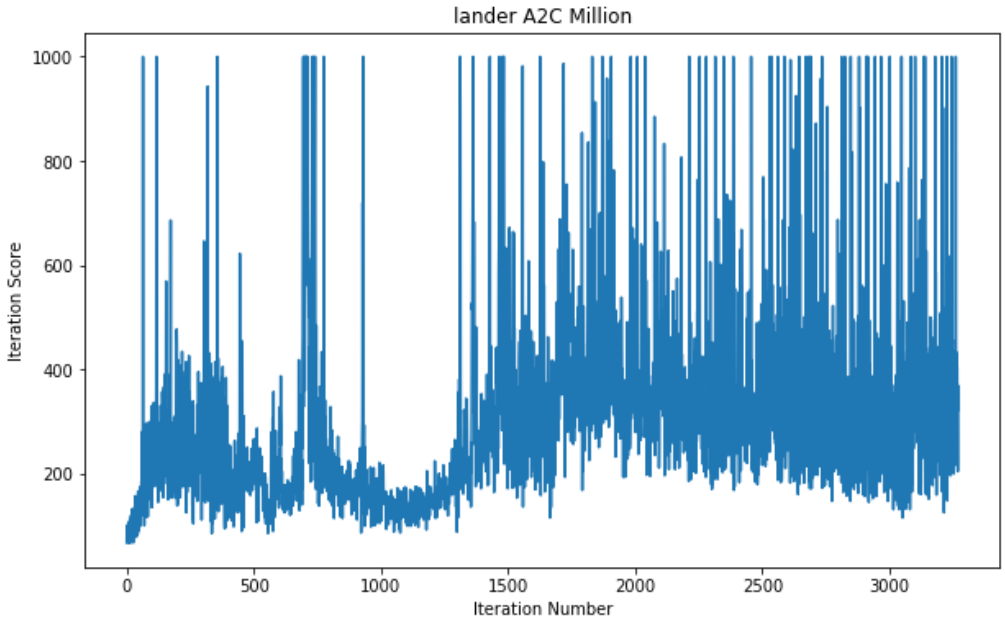
```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [44]:
```
# lander A2C MILLION
# Read in File as pandas dataframe
file_data = pd.read_csv("lander/lander_a2c_million.csv")
lander_a2c_million_df = pd.DataFrame(columns= file_data.iloc[0,:], data=file_da
ta.iloc[1:,].as_matrix())

#PLOTTING
fig, ax = plt.subplots(1,1, figsize=(10,6))
x = pd.to_numeric(lander_a2c_million_df.index.values)
y = pd.to_numeric(lander_a2c_million_df.l.values)
ax.set_title("lander A2C Million")
ax.set_xlabel("Iteration Number")
ax.set_ylabel("Iteration Score")
ax.plot(x, y);
```

```
/home/mkolor/jupyter_nb_directory/jupyter_nb_env/lib/python3.6/site-packages/ip
ykernel_launcher.py:4: FutureWarning: Method .as_matrix will be removed in a fu
ture version. Use .values instead.
  after removing the cwd from sys.path.
```



In [ ]:

In [ ]: