

In order to draw contour lines representing 90% confidence regions for single EDW events one has to do the following steps:

1. Load the kqpa library.

```
gSystem->Load("$KDATA_ROOT/lib/libkqpa.so");
```

2. Make a KQContourPointList object.

```
KQContourPointList aList;
```

3. Fill the list with points (Q , E_{recoil} , $\sigma_{E_{ion}}$, $\sigma_{E_{heat}}$)

- (a) Read an ASCII file in the current working directory with lines of the form $\langle Q \rangle \langle E_{recoil} \rangle \langle \sigma_{E_{ion}} \rangle \langle \sigma_{E_{heat}} \rangle$

```
aList.ReadASCIIFile(aFileName);
```

- (b) Add events manually

```
aList.AddPoint(aQvalue, anEnergyRecoil, aSigmaIon, aSigmaHeat);
```

4. Draw the events in an empty frame

```
aList.Draw(anOption = "");
```

The default values of the empty frame ($E_{recoil} = 0..1000keV$, $Q = 0..2$) can be changed with set methods

```
aList.SetQvalueMax(aNewQvalueMax);
aList.SetQvalueMin(aNewQvalueMin);
aList.SetEnergyRecoilMax(aNewEnergyRecoilMax);
aList.SetEnergyRecoilMin(aNewEnergyRecoilMin);
```

The list of points can be cleared by

```
aList.ClearPoints();
```

and single events can be removed by

```
aList.RemovePoint(anIndex);
```

In order to find valid indices the size of the list can be retrieved by

```
UInt_t aSize = aList.GetEntries();
```

Also single events can be created and drawn:

```
KQContourPoint anEvent(aQvalue,
    anEnergyRecoil,
    aSigmaIon,
    aSigmaHeat,
    aSigmaIonHeat,
    aConfidenceLevel,
    aVoltageBias,
    anEpsilon);
anEvent.Draw(anOption="");
```

In case that there might be changes necessary on the empty frame or the contour function, they can directly be retrieved by

```
TF2* aFunction = aList.GetEmptyFrame();
TF2* aFunction = anEvent.GetFunction();
```