Good morning Donghee,

thanks for reporting the crash. It occured in the code that finds the charge for a certain pdg code. I will have to look into the problem as this code was definitely working when I last tested the event filter code.

The first issue you reported is a misconception of what the following code does.
Quote:
    FairEvtFilterOnSingleParticleCounts* fil= new FairEvtFilterOnSingleParticleCounts("fil");
    fil->AndMinMaxPdgCodes(1,1,211,-211);
    primGen->AndFilter(fil);

Please have a look at the tutorial (section "Pdg Codes") or the comments inside the source code.


```
//////////////////
71      // User interfaces -- Pdg Code Min and Max
72      //////////////////
73      // Use this for grouping up to 8 pdgCodes into 1 groupId
74      // all particles belonging to the groupId are regarded as being indistinguishable
75      // min defines how many particles you want in your events AT LEAST
76      // max defines how many particles you want in your events AT MOST
77      // the min and max numbers are used for all particles with one of the above pdgCodes
78      // returns kTRUE if the filter was added, otherwise returns kFALSE
79      Bool_t AndMinMaxPdgCodes( Int_t min, Int_t max, Int_t pdgCode1, Int_t
pdgCode2=kInvalidPdgCode, Int_t pdgCode3=kInvalidPdgCode, Int_t
pdgCode4=kInvalidPdgCode, Int_t pdgCode5=kInvalidPdgCode, Int_t
pdgCode6=kInvalidPdgCode, Int_t pdgCode7=kInvalidPdgCode, Int_t
pdgCode8=kInvalidPdgCode );
80
```

In short your code is asking that exactly one (pi- OR pi+) is present in the events. Nothing else.

The second suggestion is a bit more correct as you also ask for exactly 2 particles to be present in the events, but it is still not what you want. Here is the code that should do what you ask for:

```
FairEvtFilterOnSingleParticleCounts* fil= new FairEvtFilterOnSingleParticleCounts("fil");
fil->AndMinMaxPdgCodes(1,1,211); // exactly one pi+ in primary particles
fil->AndMinMaxPdgCodes(1,1,-211); // exactly one pi- in primary particles
fil->AndMinMaxAllParticles(2,2); // exactly 2 primary particles in event
primGen->AndFilter(fil);
```

I assume that will also lead to a crash as long as I have not fixed the issue in FairEvtFilter::GetCharge.

Kind regards,
Martin