

## Radiation Monitor Minutes, 14/1/14

**Present:** Melissa, Pierrick, Chis.

### 1. Agenda:

1. Quick review of minutes from last time - Melissa
2. Review of where we are - Melissa
3. Design discussion – Norbert.
4. Document – Melissa
5. Update on using MAUS to determine beam characteristics and detector simulation - Chris
6. Timeline. - All
7. Future meetings
8. AOB

### Minutes:

1. All Okay
2. Levels of radiation that area dangerous to tracker? According to Tracker Paper 0.16 nA, as far as we know this figure stands.  
We considered using the radiation monitor to give additional information to the general/tracker analysis. Sounds feasible determine method.  
We definitely think that the monitors should also work when shield is open and control shield shutting.  
Would be great if we could monitor RF gradient, 50 micro sec rise time, e field as a func of gradient.  
Detectors???  
Analysis/Physics/Simulation tasks broken down:
  - Is beam symmetric?
    - Simulate the effect of 1 very off centre emitter with varying amplification. Do this at 0.5, 1, 1.5m away from monitor.
    - Look at effect of wedge absorber.
  - Particle rate with no absorber
  - Determine nominal beam spectrum with max RF
    - Energy spectrum
    - rates
    - spacial distribution
3. See talk by MU
4. See talk by MU
5. Work Ongoing
6. Agreed
7. 28<sup>th</sup> January 4pm./Face to face at collab meeting with email update on the 28<sup>th</sup>.
8. None.

**Action Items:**

1. Is beam symmetric? – **Chris**
  - Simulate the effect of 1 very off centre emitter with varying amplification. Do this at 0.5, 1, 1.5m away from monitor.
  - Look at effect of wedge absorber.
2. Particle rate with no absorber– **Chris**
3. Determine nominal beam spectrum with max RF– **Chris**
  - Energy spectrum
  - rates
  - spacial distribution
4. Start thinking about possible interlock triggers, radiation levels monitoring etc. Elaborate on bullet but no need for a real plan yet. – **Melissa**
5. Collate cabling info from 'backs of envelopes', Send to Melissa – **Norbert**
6. Add item 5 to doc. – **Melissa**
7. Monitoring of detector during step IV for testing purposes, how to keep it tested but ensure shutters don't end up shutting unnecessarily.