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**Strasbourg**

Wish List of requirements

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# List of Requirements for Charged-particle Experiments

1. Low electronic noise in detector environment. At present, it is large at 150 keV with alpha source.
2. Stable beam with intensity fluctuations no greater than 20% and preferably less.
3. Good beam transmission over a range of energy ( V(terminal) 8 MV to max)
4. Energy reproducibility - to about 1 part in 10,000.
5. Good energy stability - as above.
6. User support:
   - Local contact.
   - List of personnel in charge of various services - e.g. targets, electronics, workshop, computing, radiation safety etc.
7. Basic technical maintenance of equipment and operational assistance.
8. Beam chopping - microsecond to a fraction of a second,
9. Beam pulsing - 1 to 2 nanoseconds.
10. Ability to vary the beam intensity by 2 or more orders of magnitude quickly and at will.
11. Ability to make energy changes for excitation function work quickly and routinely.
12. Availability of standard beams (C, O ...) and certain less common ones: Li, Be, Mg, Ca, ...
13. Ability to change beam species, especially to a standard one, at relatively short notice.

14. Enough pre run set up time before taking beam. Ideally, one may need several days to install, debug and calibrate a complex detector system.
15. Availability of technical expertise during the initial running period with beam. At present, it is not available after 4pm on Friday.
16. Availability of basic electronics, sufficient for a relatively simple, few-detector experiment.
17. Availability of a few-channel, data acquisition system for the above.
18. Target making, given that any isotopic material would be provided.
19. Access to calibration sources: standard gamma sources and alpha sources.
20. Group computer account.