



**ATF2**

**Magnets**

Design of Various ATF2 MAGNETS:  
Results of Feedback from ATF2 Project  
Meeting at KEK, June 1<sup>st</sup> 2006

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# ATF2 Magnet Styles Still to Be Designed & Fabricated

- 5 final focus sextupoles – design suggestion not acceptable
  - PS requirements not sensible
  - Will make a brand new design (one design only) that
    - will have current & voltage needs that fit in with high availability PS
    - Will fit in available space on FD special support
    - Can accommodate a ~190mm diameter S band cavity BPM
    - Will leave sufficient space for collimators near SF6
- 3 final focus bends – design suggestion not acceptable
  - Sextupole content much too large and unlikely could modify narrow poletip to reduce sextupole to 1/10<sup>th</sup> measured value
  - Will make a brand new design that
    - Has sextupole content that meets tolerance
    - Will have current and voltage needs that fit in with high availability PS



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## ATF2 Magnet Styles Still to Be Designed & Fabricated: contd

- 2 final doublet quads – “QC3” design has been chosen but
  - Not compatible with S band cavity BPM
  - Will evaluate machining the poletips to increase bore aperture
  - Others need to fix design of S band BPM so I can see what’s required in modifying QC3 bore
  - Others need to design adapters to avoid magnet coil ends as I don’t want to make new coils
- 2 final focus octupoles – need to understand if any will be required?



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# Does QD6 need to be modified? Can it be modified?

- Presently part of quad QD6 is in way of low energy photon beam coming from laser wire
- Does QD6 need to have its poletips cut back so photons are not hitting the poles?
- Can field quality in QD6 be maintained if poletip has to be modified?
- Will be corresponding with Royal Holloway people about their requirements
  - Will take action as appropriate
  - Any implications for the design of dipole B5 through which the photons also appear to pass?