DRAFT: Plans of beta-matching task in the extraction line

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Task members:

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Procedure of beta matching:

1, Measure Twiss parameters around the extraction kicker in Damping Ring.
    Measurement of tunes changing quadrupole strength around the kicker.
2, Calculate a proper setting of quadrupole magnets in the extraction line and set it.
    We need to decide which magnets should be changed.
3, Measure emittance and Twiss parameters in the extraction line.
    Multi-wire measurement and/or Q-scan methods.
    We need to decide what is the best method.
4, Calculate a proper setting of quadrupole magnets in the extraction line and set it.
    We need to decide which magnets should be changed.
5, Perform 3 again to confirm the matching.
6, Iterate 4 and 5 if necessary.

Simulation:

Simulate the procedure above.
We should include “standard” (realistic) errors. Probably we may use the assumption, which Glen White used.
Limit of magnet strength, etc. should be taken into account.
It is practical to perform simulations including all basic corrections: orbit, dispersion, (and maybe coupling).

Prepare operation:

Prepare interface to ATF control. Define format of measured data and format of magnet setting.