

	Method SE	Motivation	Main issues	Hardt?
CERN	Q sweep, large $Q' -1$ (-26), debunched	ripple	Beam loss, activation, ripple, stability	No
MIT	RF KO, bunched, $Q' -1$?	Simplicity, ease of rate modulation	Ripple, pointing/spot stability	No
BNL	Q sweep with large $Q' -1$ (-5), debunched	Simple, reliable	None	No
HIT	As MIT			
FZJ	3 rd order res. Longitudinal noise driven, debunched, finite $Q' +3$ norm.	Simplicity, reliable, stable, frozen lattice	See noise central freq. at MHz on beam	Yes. Can extract below and above trans.
IHEP	FT: longitudinal noise driven, finite $Q' -8$? (backup with Q sweep with finite Q'). FB - DC KO.	Spill length, fill FT, ripple	Ripple, BTF	No

	Method SE	Motivation	Main issues	Hardt?
GSI	Q sweep, debunched, large Q' -1.5 (-6). Will go to RF KO	RF KO for pointing stability,	ripple	No
MedAustron	Betatron core momentum driven, finite Q' (-4)	Ripple reduction between 0.1-1kHz	No multi energy extraction per spill, ripple	Yes
J-PARC	Q sweep, debunched, low Q' less than -0.5 unnormalised, DB	High efficiency	Ripple, transverse instability during debunch	Yes
CNAO	Betatron core momentum driven + empty sweeping bucket, finite Q' -4 unnormalised	Ripple reduction between 0.1-1kHz	Beamloss, no multi energy extraction per spill	Yes
FNAL	2 nd integer, Q sweep, high Q' , -10? unnormalised bunched	Aperture?	Efficiency, stability	No
FNAL future	Q sweep, bunched, DB, low Q' 1 unnormalised	Reliability,	Stability, beamloss	Yes