Progress Report

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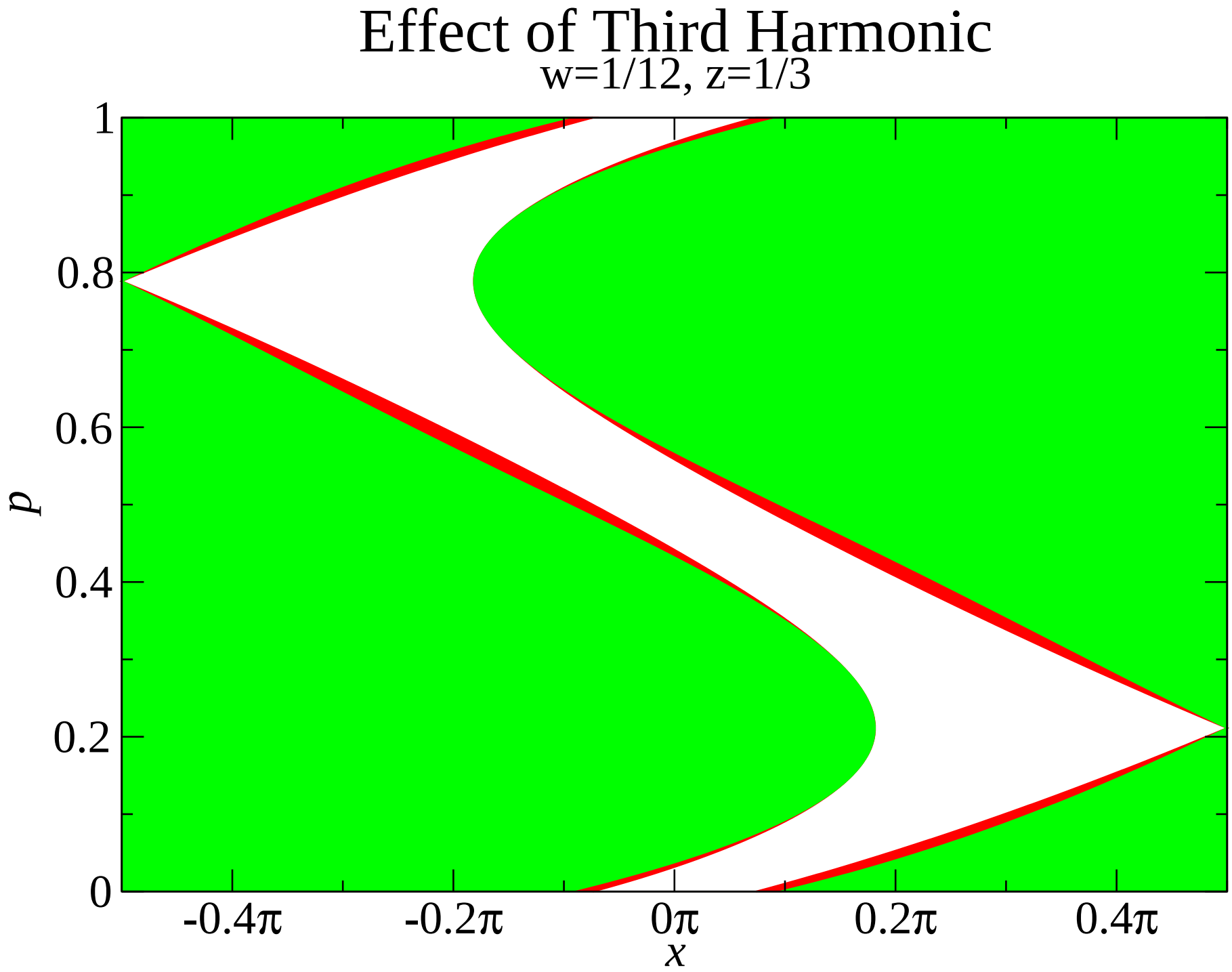
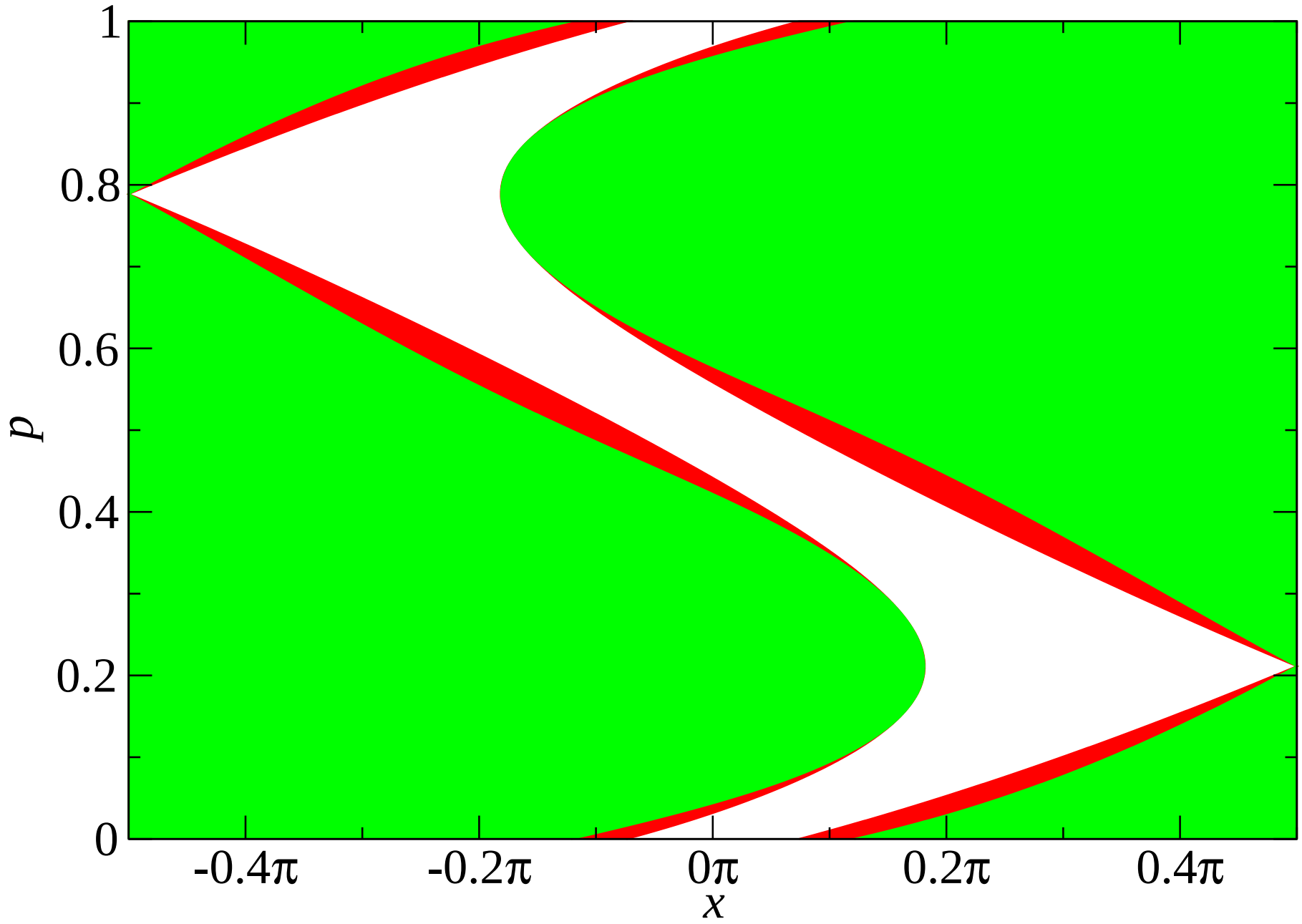
FFAG03, KEK

Updated Parameter Table

Minimum Energy (GeV)	2.5	2.5	5	10
Maximum Energy	5	5	10	20
Cells	216	208	154	150
D-F drift length (cm)	50	50	50	50
Cavity drift length (cm)	200	100	200	200
D quad center (mm)	2.23	7.53	7.50	8.07
D quad radius (cm)	15.26	12.48	10.72	7.97
D quad length (cm)	44.2	30.4	53.2	83.4
D quad field (T)	-2.51	0.74	2.12	3.07
D quad gradient (T/m)	-29.0	-53.4	-48.9	-54.8
F quad center (mm)	-6.62	-3.89	0.21	1.36
F quad radius (cm)	11.02	8.77	7.15	5.95
F quad length (cm)	22.5	14.1	17.8	29.4
F quad field (T)	3.32	1.08	-0.61	-1.58
F quad gradient (T/m)	35.5	70.5	89.6	93.2
$V/(\omega\Delta T\Delta E)$	1/6	1/6	1/8	1/12
Circumference (m)	840.7	537.7	598.8	663.2
RF Voltage (MV)	1261	807	898	995
Time-of-flight range (ps)	2393	1531	1136	944
Time-of-flight range (cm)	72	46	34	28


Effect of Third Harmonic
w=1/12, z=1/3
1
0.8
0.6
0.4
0.2
0
p
-0.4π
-0.2π
0π
0.2π
0.4π
x

Effect of Double Third Harmonic

w=1/12, z=1/3