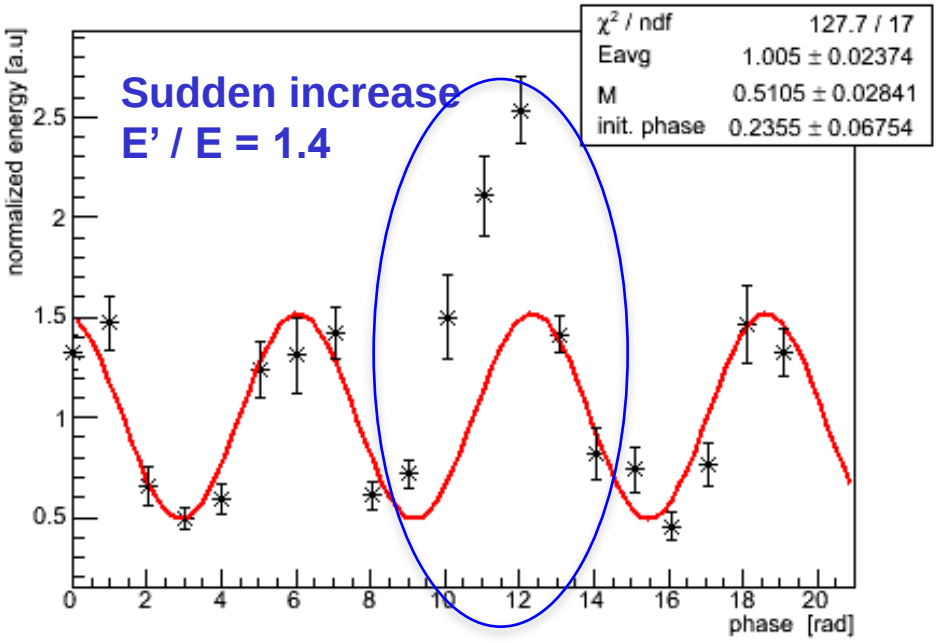
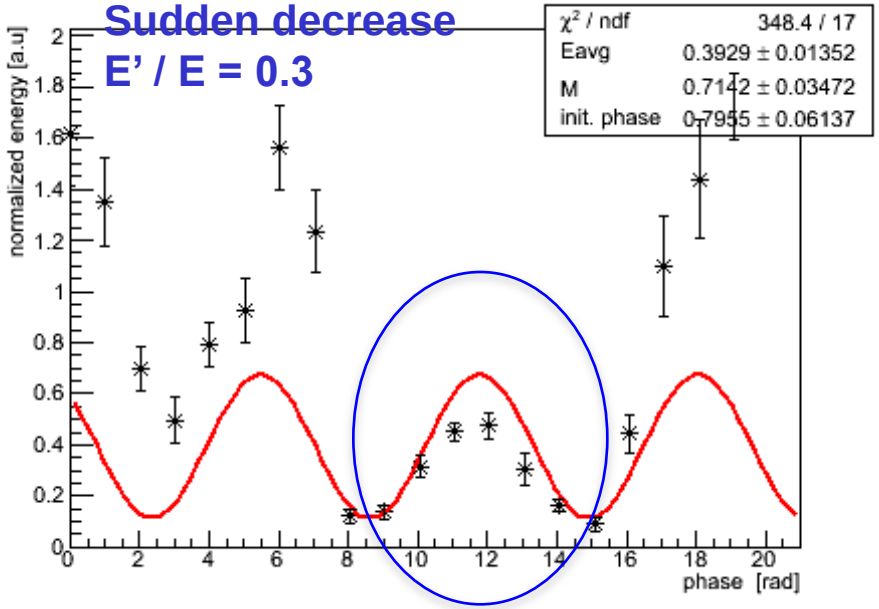
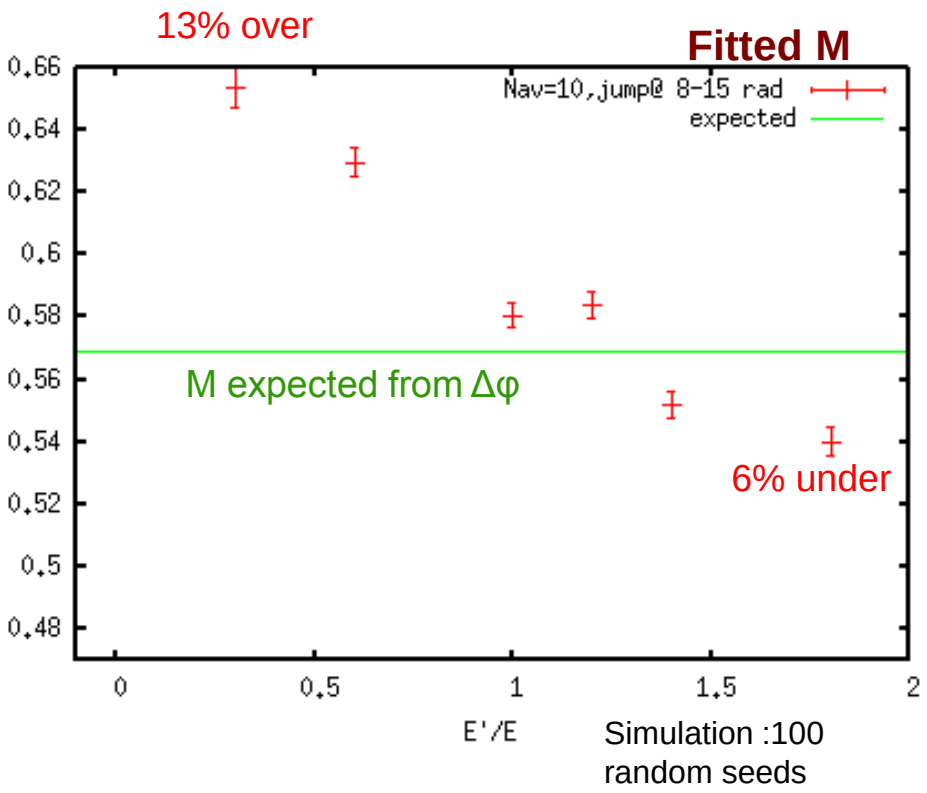
Effect of laser instability on M_meas : Nav=10

Assume Comp. signal intensity suddenly change @ 8 – 15 rad (drift ?)





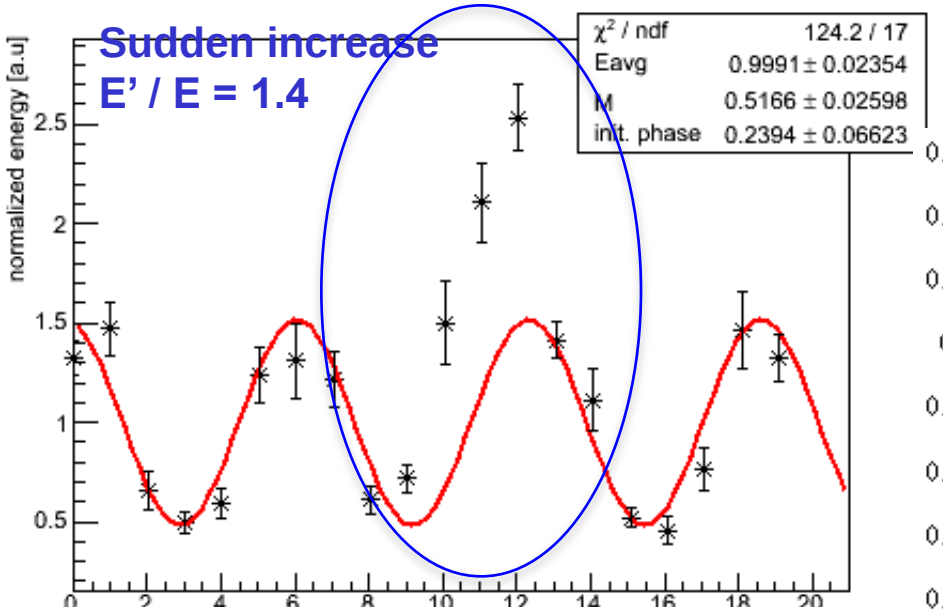
Include 2 valleys

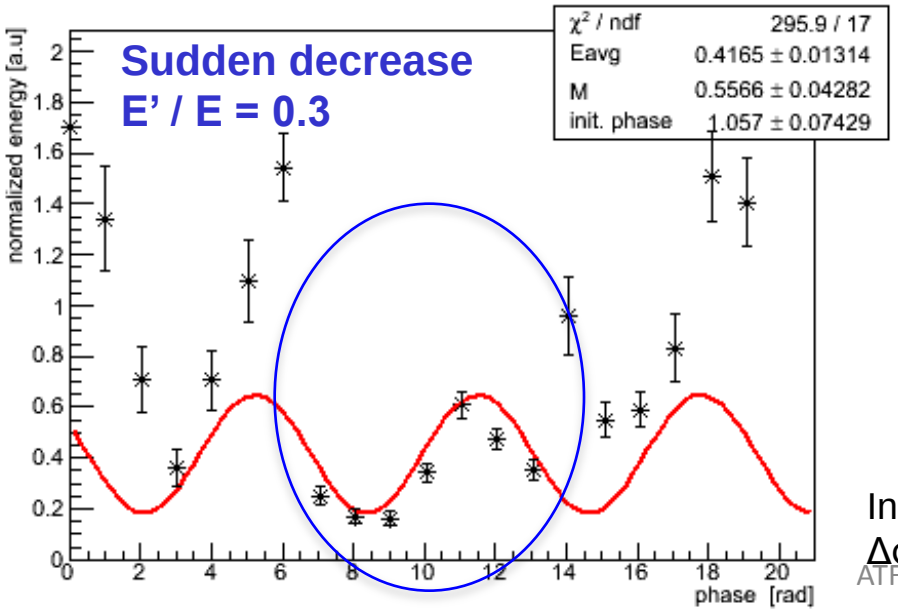


Simulation :100 random seeds

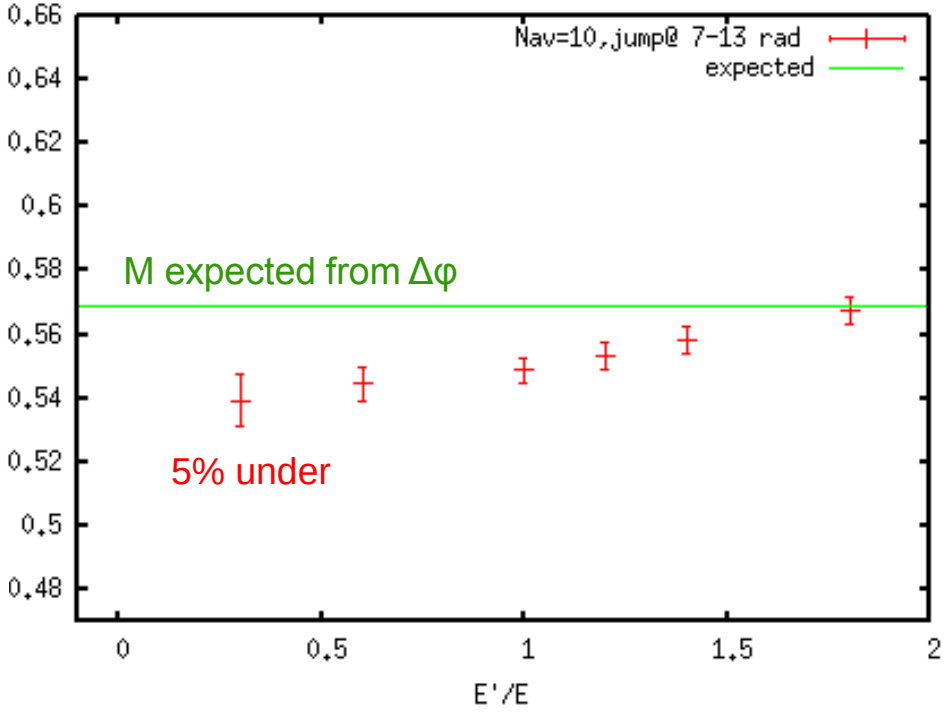
Input : M0 = 0.636, Nav=10, 174 deg mode,
Δφ = 470 mrad, Clinear = 0.3, Cstat = 0.1, Cconst = 0.05

Assume Comp. signal intensity suddenly change @ 7 – 13 rad (drift ?)
Include only 1 valley , jump range ~ 2π





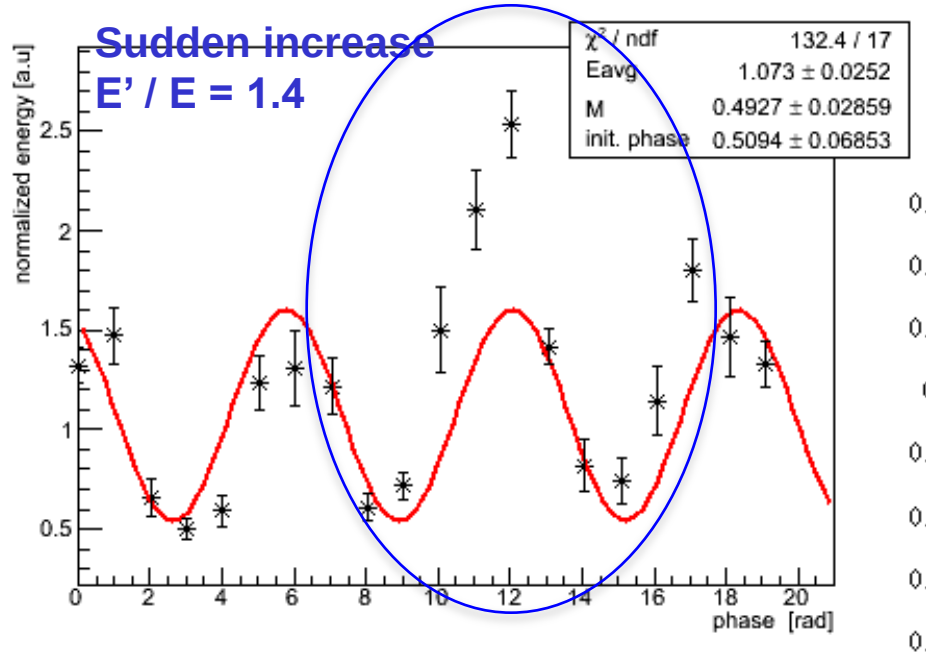
Fitted M

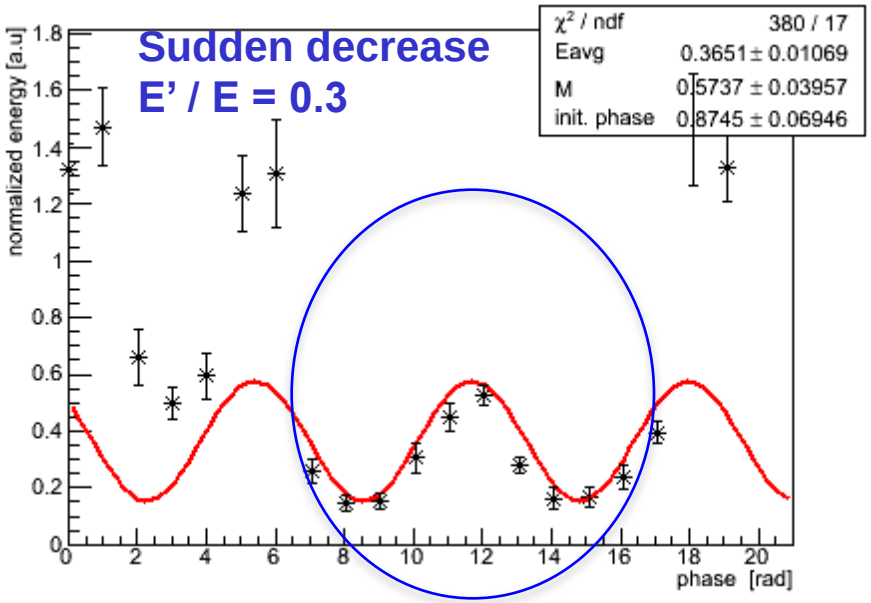


Simulation :100
random seeds

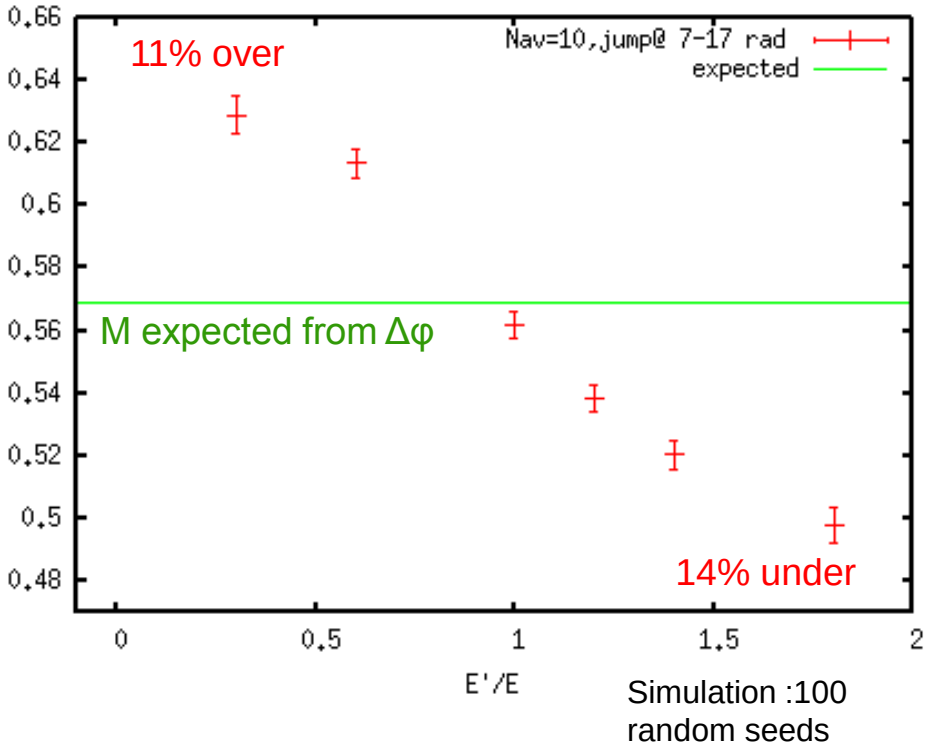
Input : M0 = 0.636, Nav=10, 174 deg mode,
Δφ = 470 mrad, Clinear = 0.3, Cstat = 0.1, Cconst = 0.05

Assume Comp. signal intensity suddenly change @ 7 – 17 rad (drift ?)
Include 2 valleys , jump range < ~ 4π





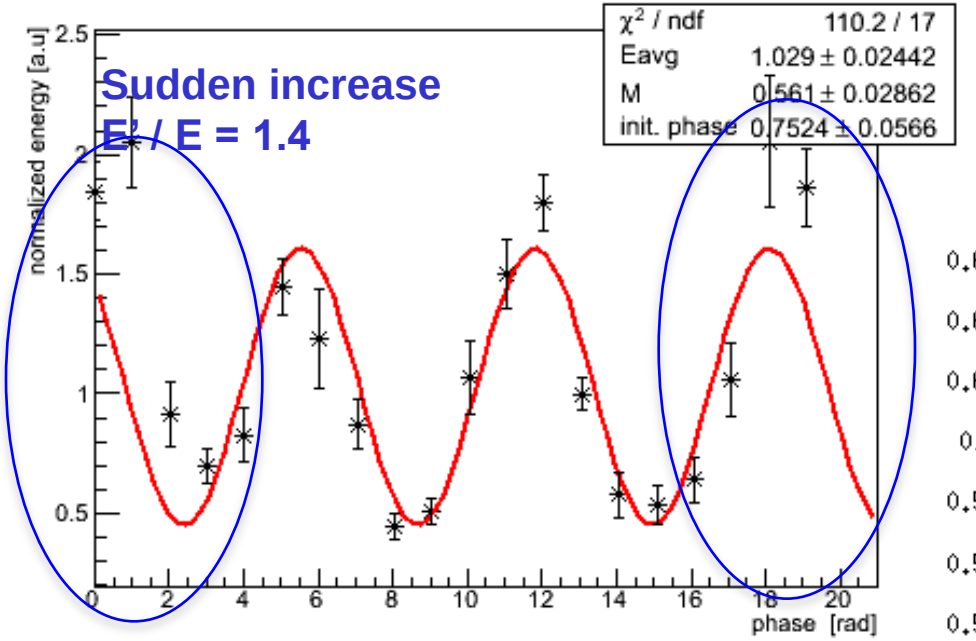
Fitted M



Simulation :100 random seeds

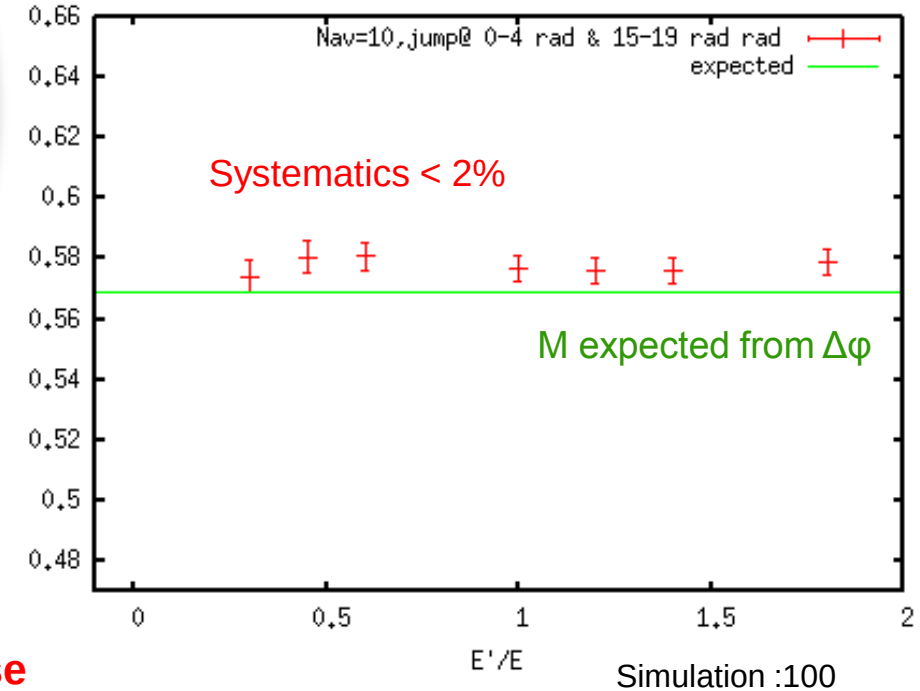
Input : M0 = 0.636, Nav=10, 174 deg mode,
Δφ = 470 mrad, Clinear = 0.3, Cstat = 0.1, Cconst = 0.05

Assume Comp. signal intensity suddenly change twice@ 0 – 4 rad AND 16-19 rad (drift ?)

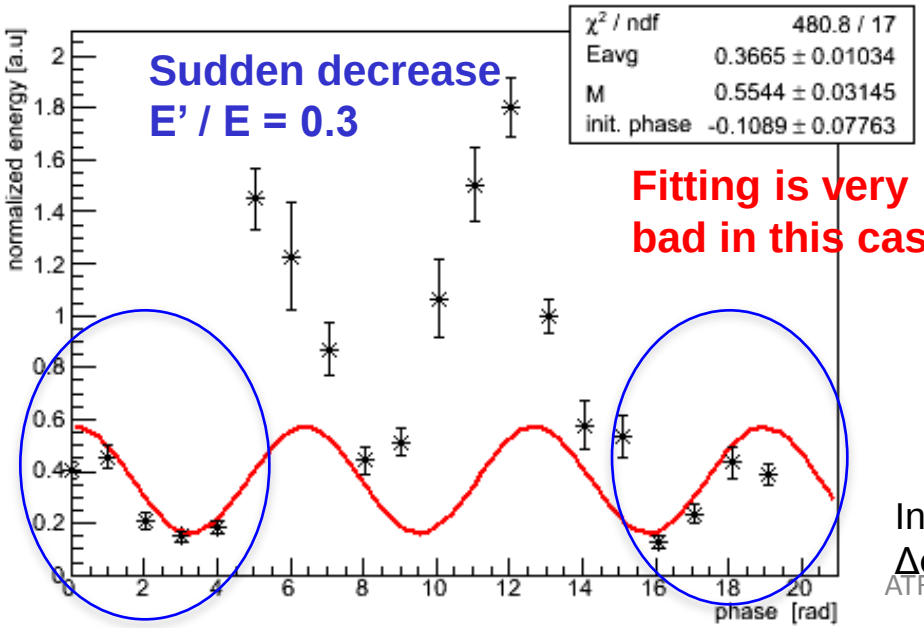


Systematics seem to be partially cancelled between two parts

Fitted M



Simulation :100 random seeds



Fitting is very bad in this case

Input : M0 = 0.636, Nav=10, 174 deg mode,
Δφ = 470 mrad, Clinear = 0.3, Cstat = 0.1, Cconst = 0.05