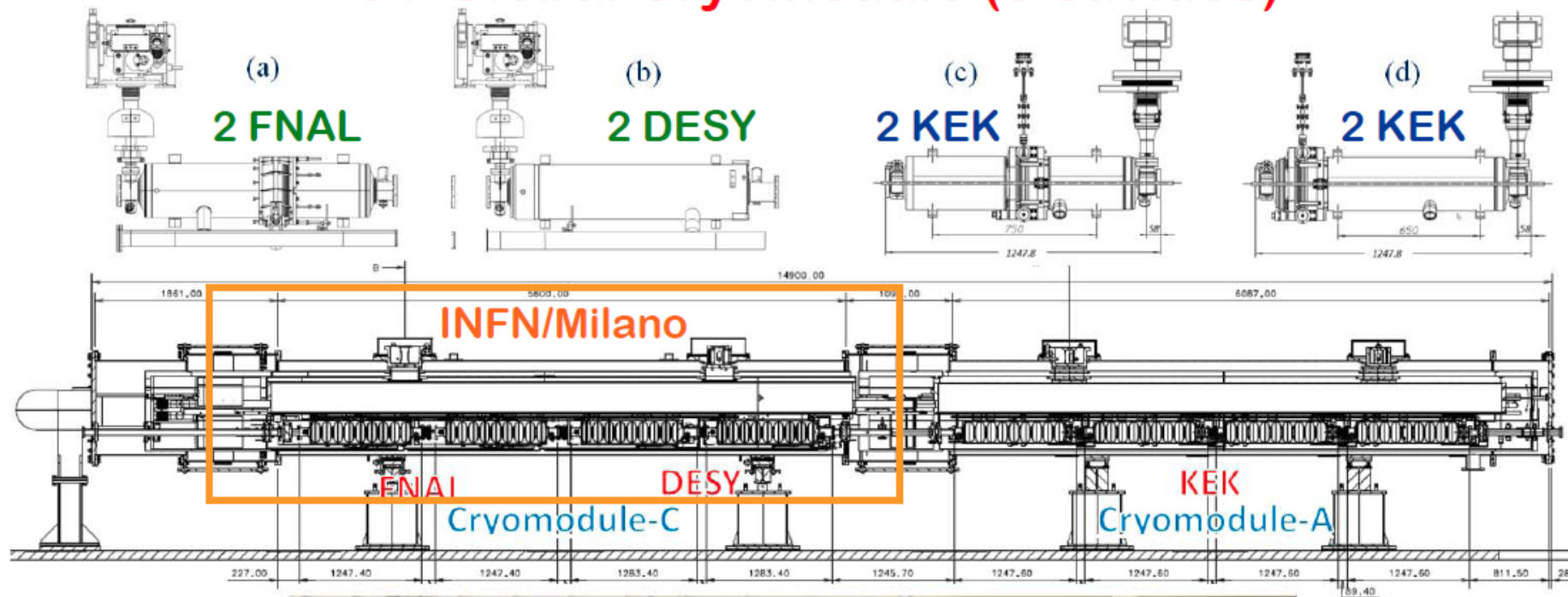

Microphonics observed at STF in KEK

Shin MICHIZONO (KEK)

S1-Global Cryomodule

S1-Global Cryomodule (8 cavities)



STF: test stand for ilc
1.3GHz 1.5ms 5Hz



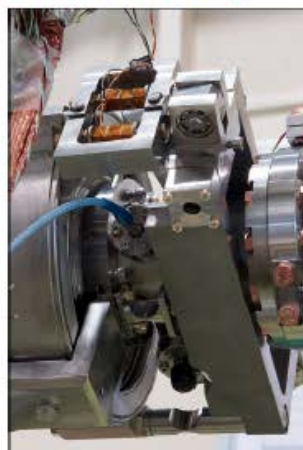
Cavities, Tuners, Couplers in S1-G Cryomodule



TESLA Cavity (DESY/FNAL)



Blade Tuner (FNAL)



Saclay Tuner (DESY)

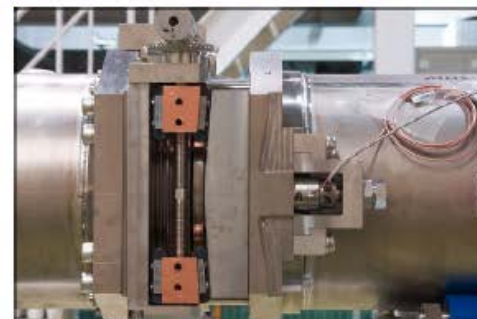


TTF-III Coupler (DESY/FNAL)

Comparison
of
Performance



Tesla-like Cavity (KEK)



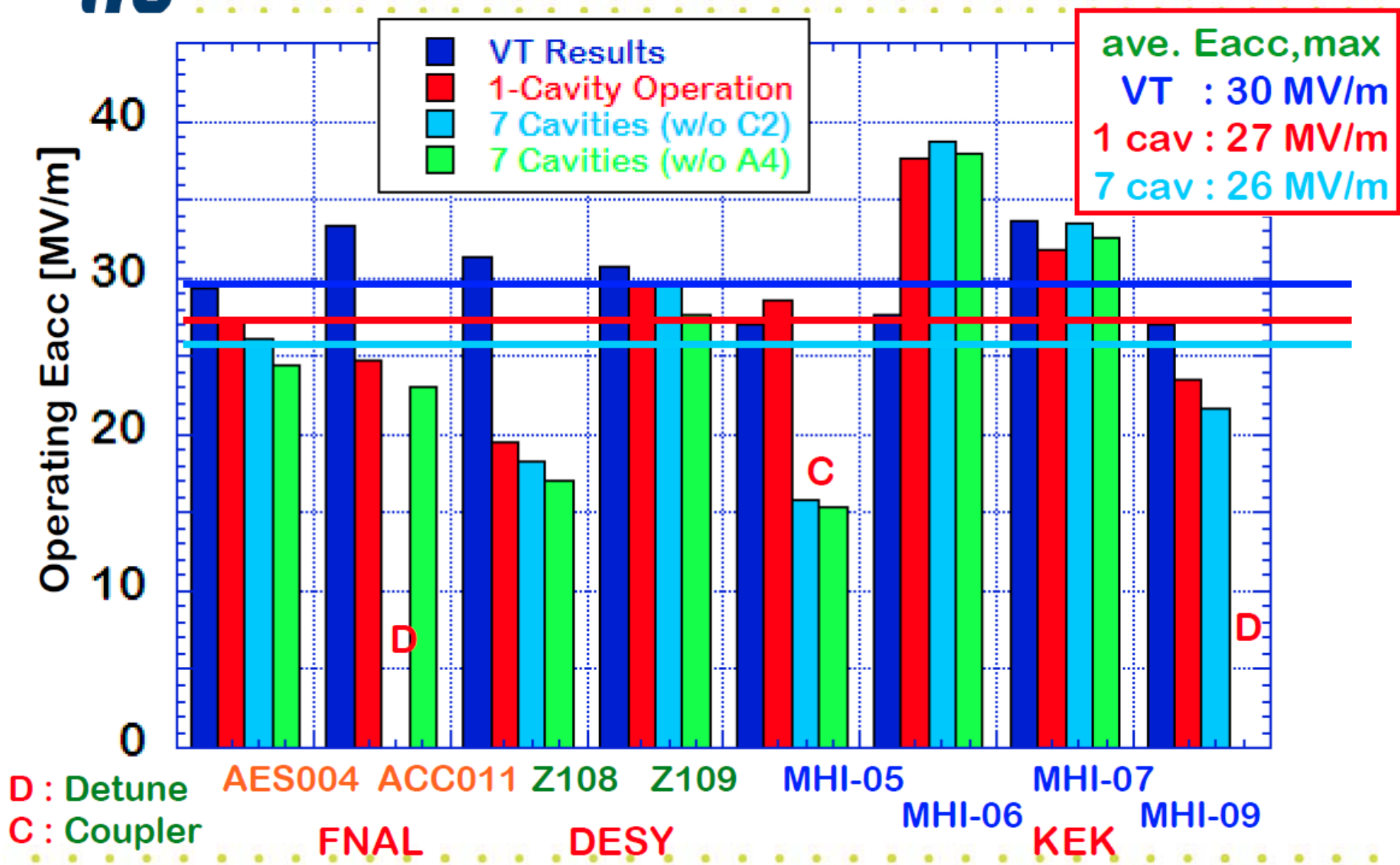
Slide-Jack Tuner (KEK)



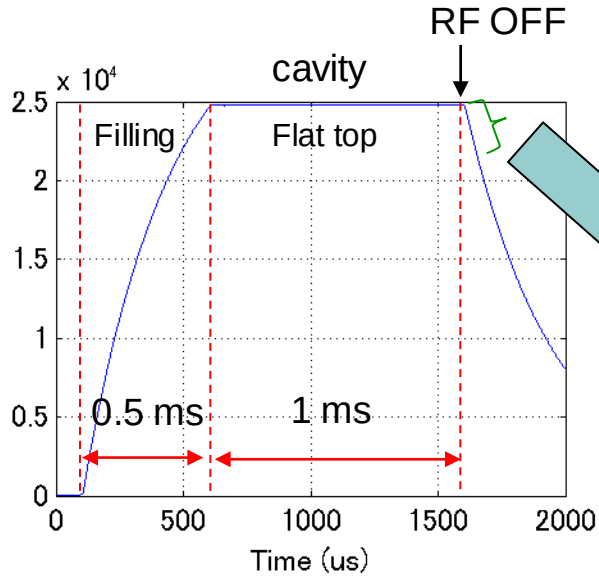
STF-II Coupler (KEK)



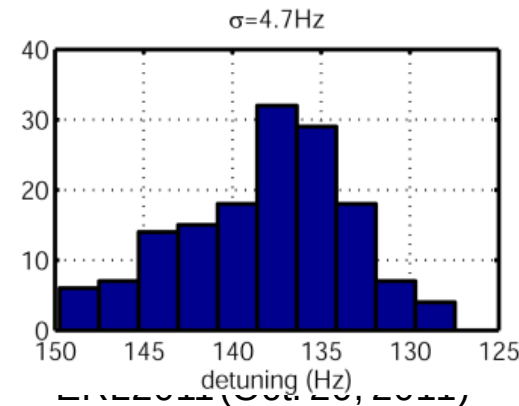
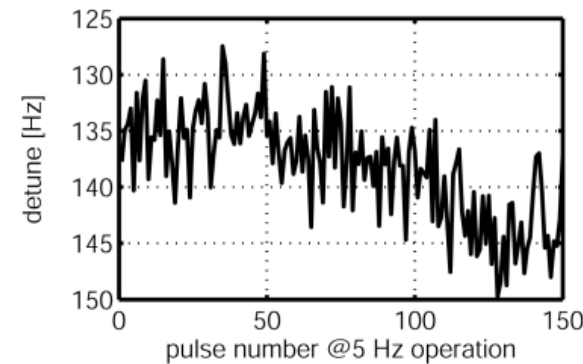
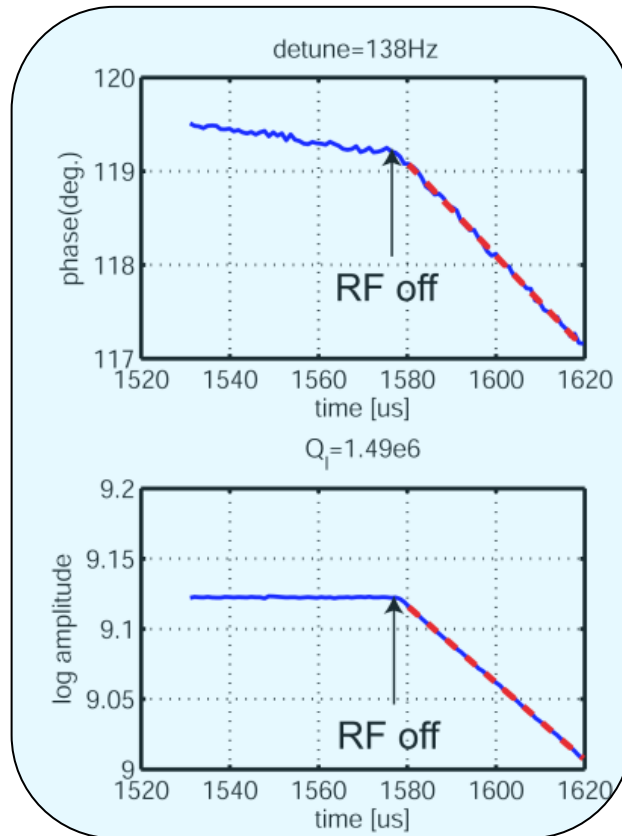
Comparison of cavity performance



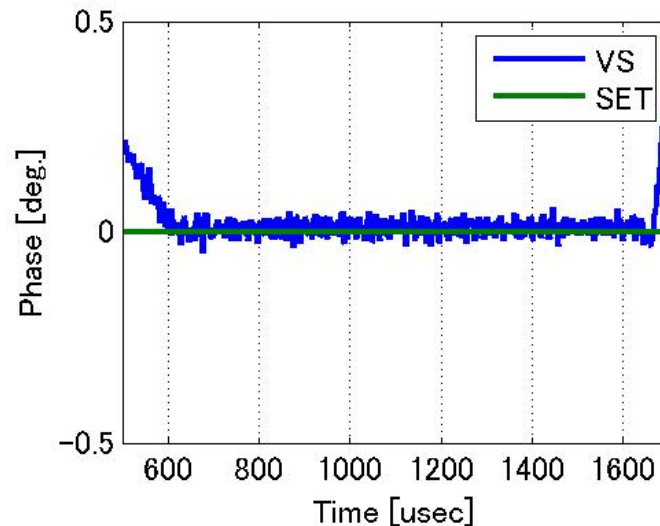
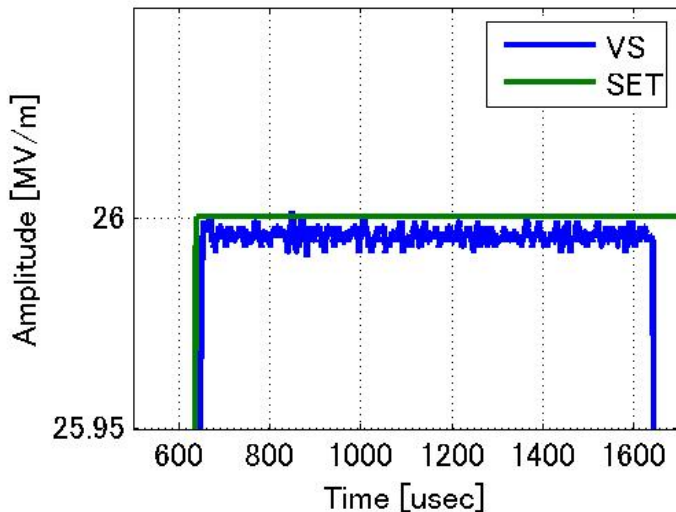
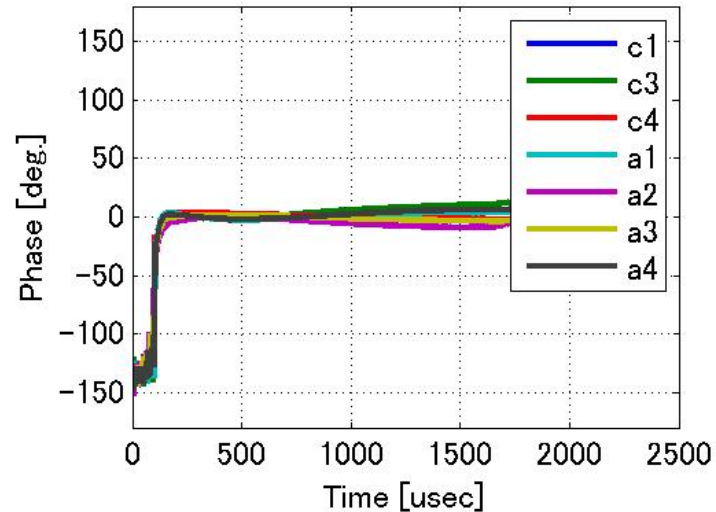
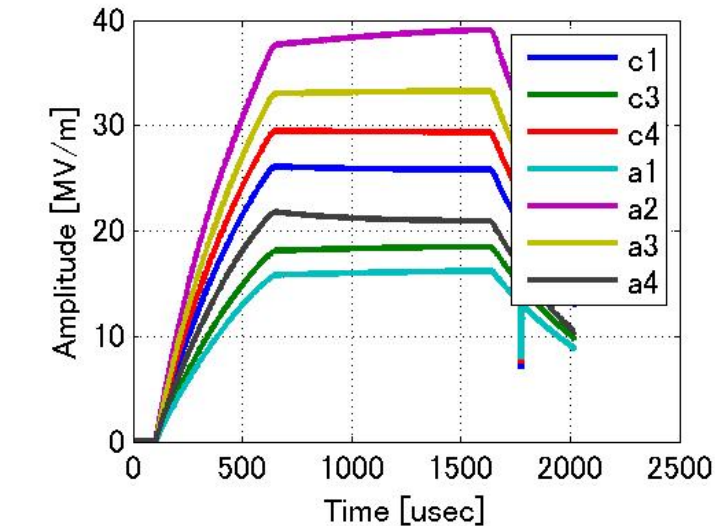
Detuning measurements



- Amplitude decay (after rf off) $\rightarrow$ Q
- Phase change (after rf off) $\rightarrow$ detuning



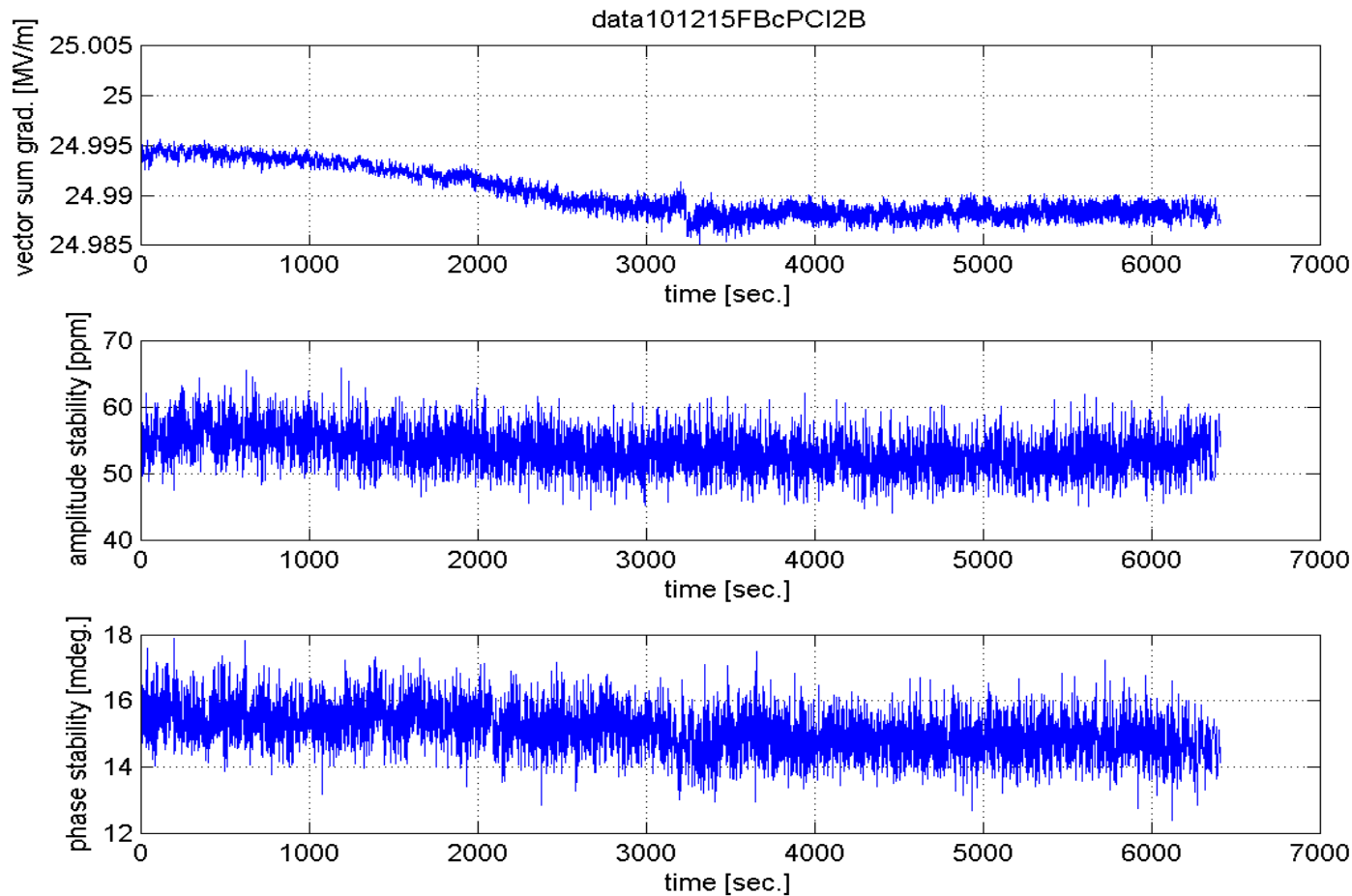
Stabilities at 26 MV/m operation



- **0.0067%rms (in amplitude), 16.5mdeg.rms (in phase) @690~1590us**

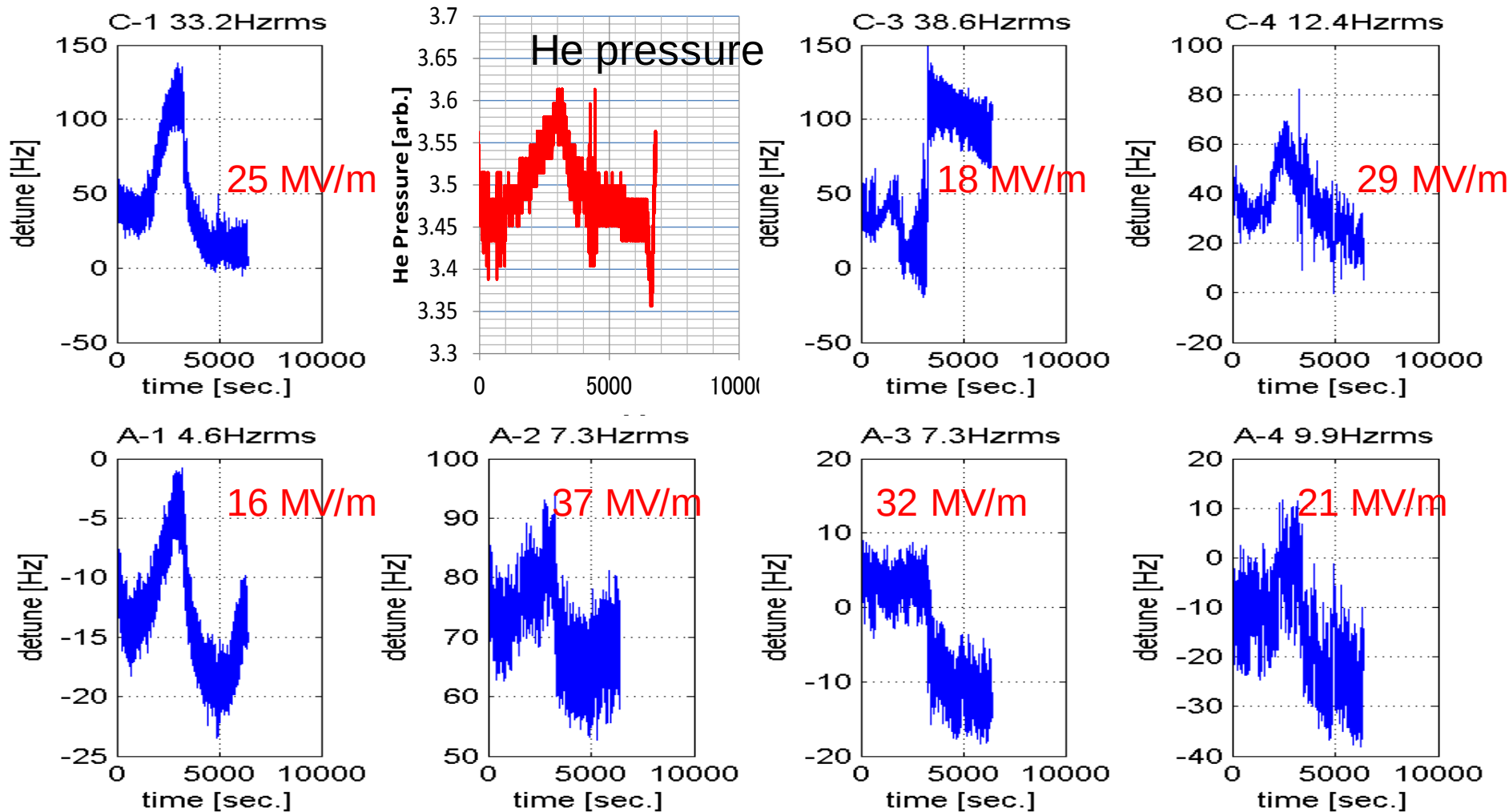
RF stabilities during 2H operation

- Vector sum amplitude and phase are kept constant during 2H operation.



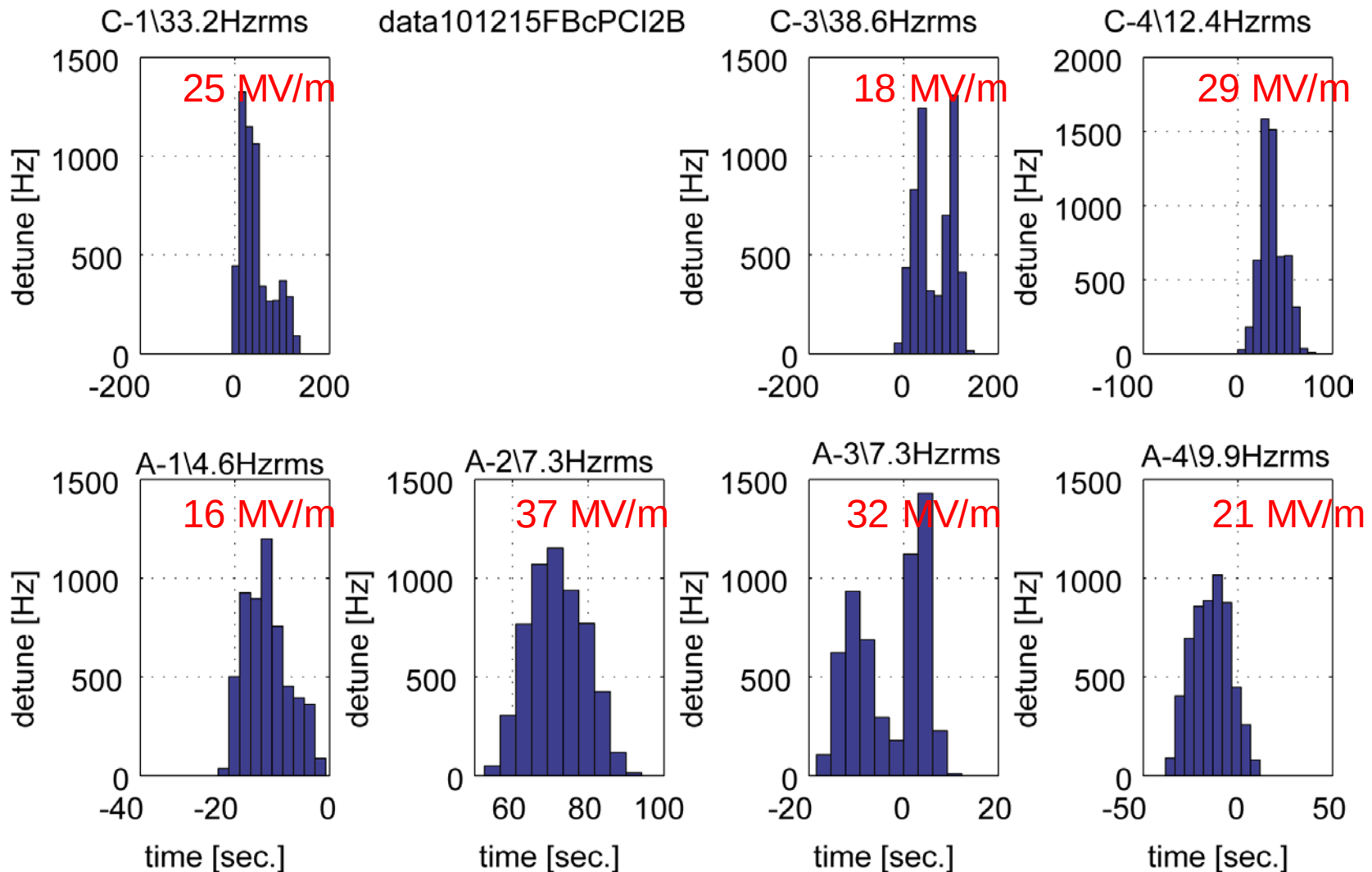
Detuning change during 2H operation

- Detuning depends on cavity structure.



- Similar tendency with He pressure
- Rather stiff at A-1~4. (~1/4 compared with C-1~4)

Histograms of detuning



● Detuning looks sensitive to the stiffness of the cavity.

20, 2011)