

# 17MHz noise reduction of 200VDC PS (1)

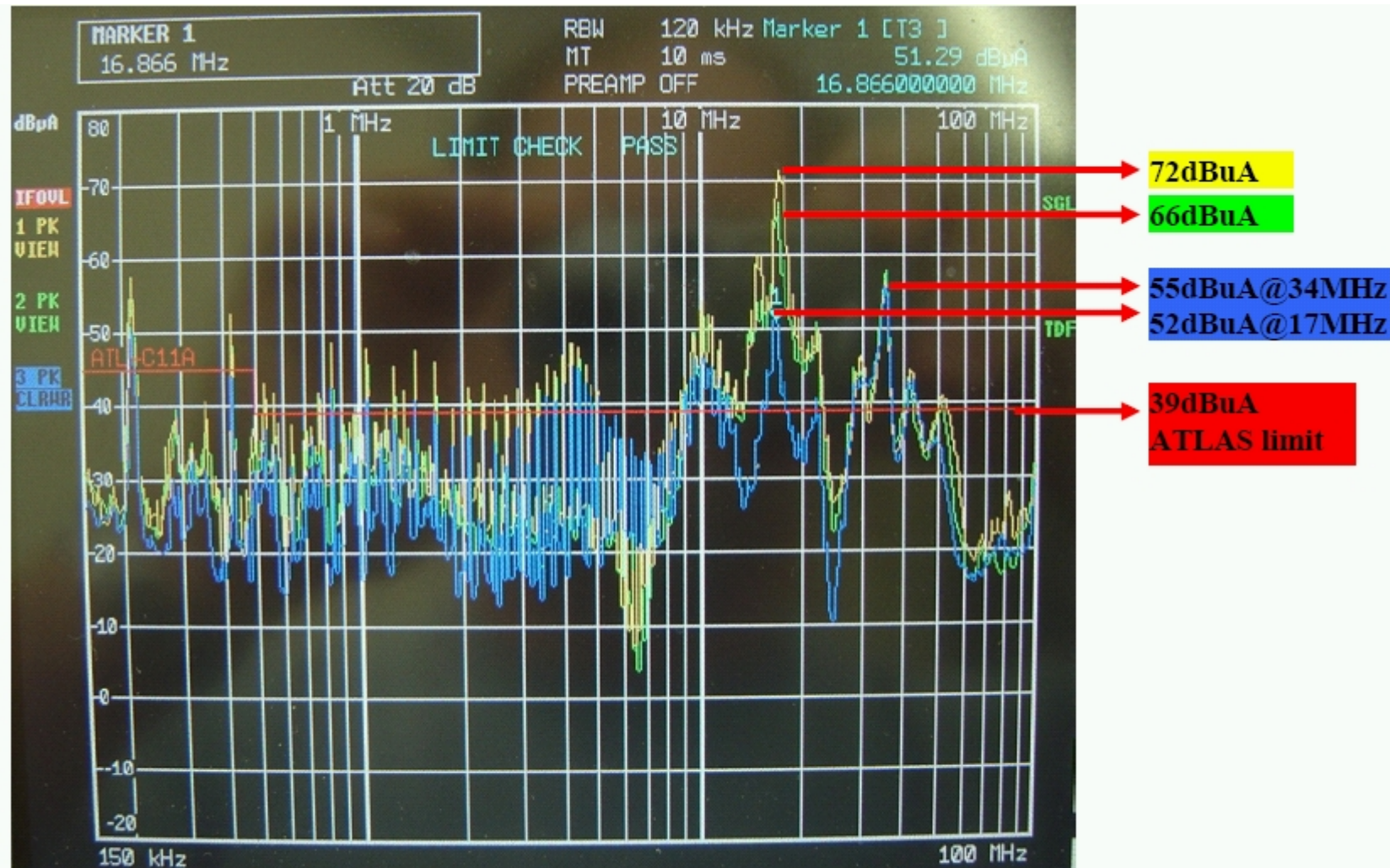
Ferrites mounted on 200V cables on 10-26 Oct 07.

All 64x 200V cables are now equipped with 2 ferrites on 1 turn (20dBuA induced noise reduction at 17MHz peak).



**24 x TESLA 3ch 200V PS in USA15. Mounted ferrites on 200V cables.**

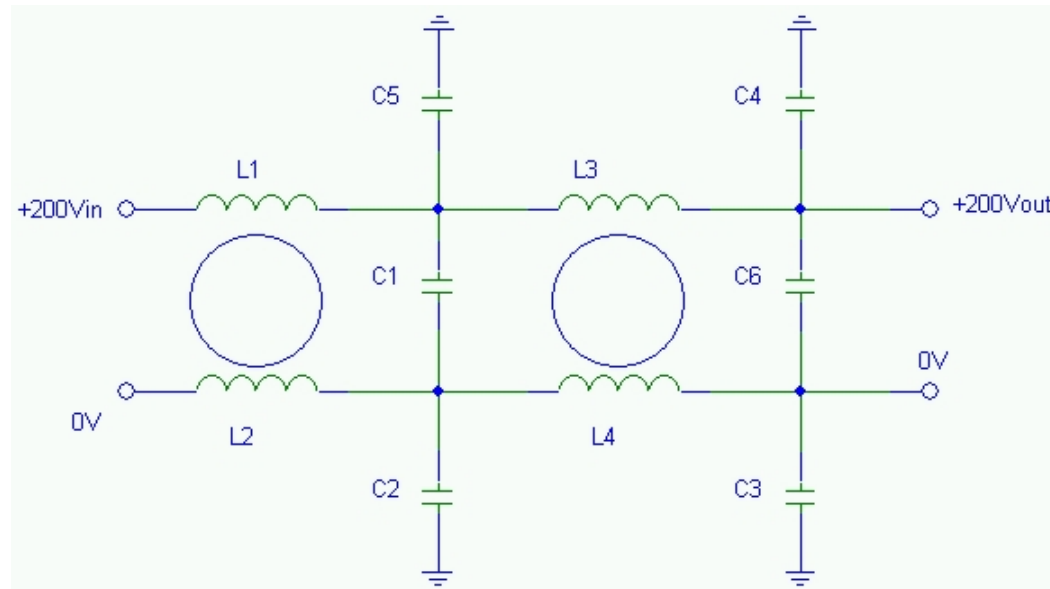
# 17MHz noise reduction of 200VDC PS (2)



**Figure 15. Comparative measurements of 17MHz peak suppression:** without ferrites (yellow curve, the same as on Figure 13), with one ferrite (green curve), and with two ferrites mounted on 200V cable (blue spectrum). The HPS1 Vout conducted emission spectrum; ch1 is ON and loaded by resistive equivalent load.

# 17MHz noise reduction of 200VDC PS (3)

TESLA designed a passive LC filter to reduce 17MHz noise peak.  
-mounted inside PS (can be done in USA15, 1h work per PS).



Voltage noise reduction @17MHz -45dB, @21MHz -21dB.

First 2 HPS1 power supplies can be measured on next Tuesday.  
When validated TESLA is ready to apply filter inside all 200V power supplies.