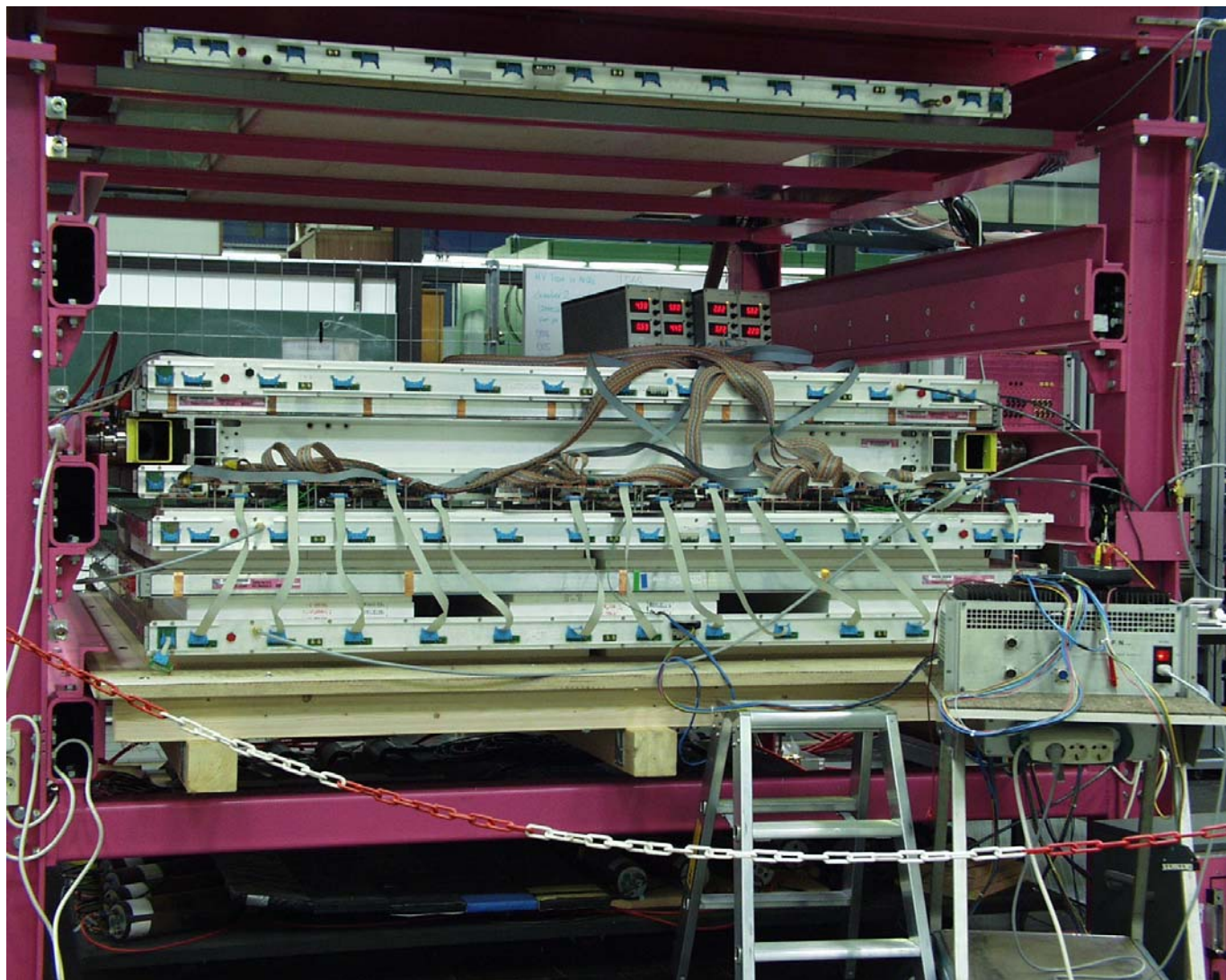
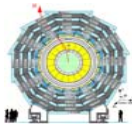


# Quality Control at Aachen Site



- Quality Control
- Noise
- Dead channel statistics
- Efficiency
- Planarity of assembled chambers





# Verify the Quality of Produced SL

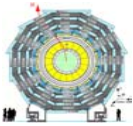


- ◆ Wire **tension** -> OK
- ◆ Wire **position**, corner block position, **thickness** -> OK
- ◆ Chamber **planarity** -> under control
- ◆ **HV** stability in ArCO<sub>2</sub> (3700/1800/-1400 V @ Aachen) -> Good
- ◆ **Gastightness** -> 3/40 SL below 140 min
- ◆ Electrical functionality of all cells -> Cosmics Teststand
- ◆ TDC **time window**, check for disconnected electrodes
- ◆ **Noise** behaviour -> plots
- ◆ **Efficiency** -> plots

40 SL out of 45 mechanically finished SL are fully tested  
QC criteria fulfilled

➡ Raw data & summary files are stored in Aachen DB





# Data Storage in Aachen



**Local Data Repository at Aachen** containing raw data from production and QC

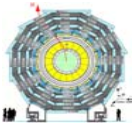
One directory per SL:  
SL\_phi\_XXX  
SL\_phii\_XXX  
SL\_th\_XXX

↙ Chamber directory

Directory Name	Date	Time	Size
SL_ph1_001/	29-May-02	22:21	2K
SL_ph1_004/	16-May-02	16:49	1K
SL_ph2_003/	29-May-02	22:20	1K
SL_ph2_006/	16-May-02	16:50	1K
SL_phi_007/	30-May-02	19:56	2K
SL_phi_010/	06-Jun-02	18:55	3K
SL_phi_013/	06-Jun-02	18:56	2K
SL_phi_016/	05-Jun-02	22:24	2K
SL_phi_019/	06-Jun-02	18:56	3K
SL_phi_022/	05-Jun-02	22:26	3K
SL_phi_025/	05-Jun-02	22:26	4K
SL_phi_028/	07-Jun-02	17:04	2K
SL_phii_008/	30-May-02	19:56	1K
SL_phii_011/	06-Jun-02	10:45	3K
SL_phii_015/	05-Jun-02	22:28	3K
SL_phii_018/	06-Jun-02	18:56	3K
SL_phii_021/	06-Jun-02	10:47	3K
SL_phii_024/	05-Jun-02	22:29	2K
SL_phii_027/	05-Jun-02	22:30	2K
SL_th_002/	29-May-02	22:22	1K
SL_th_005/	16-May-02	16:49	1K
SL_th_009/	05-Jun-02	22:33	3K
SL_th_012/	05-Jun-02	22:30	3K
SL_th_014/	05-Jun-02	22:30	2K
SL_th_017/	06-Jun-02	16:53	3K
SL_th_020/	06-Jun-02	18:56	3K
SL_th_023/	05-Jun-02	22:32	2K

## Some QC parameters in more detail

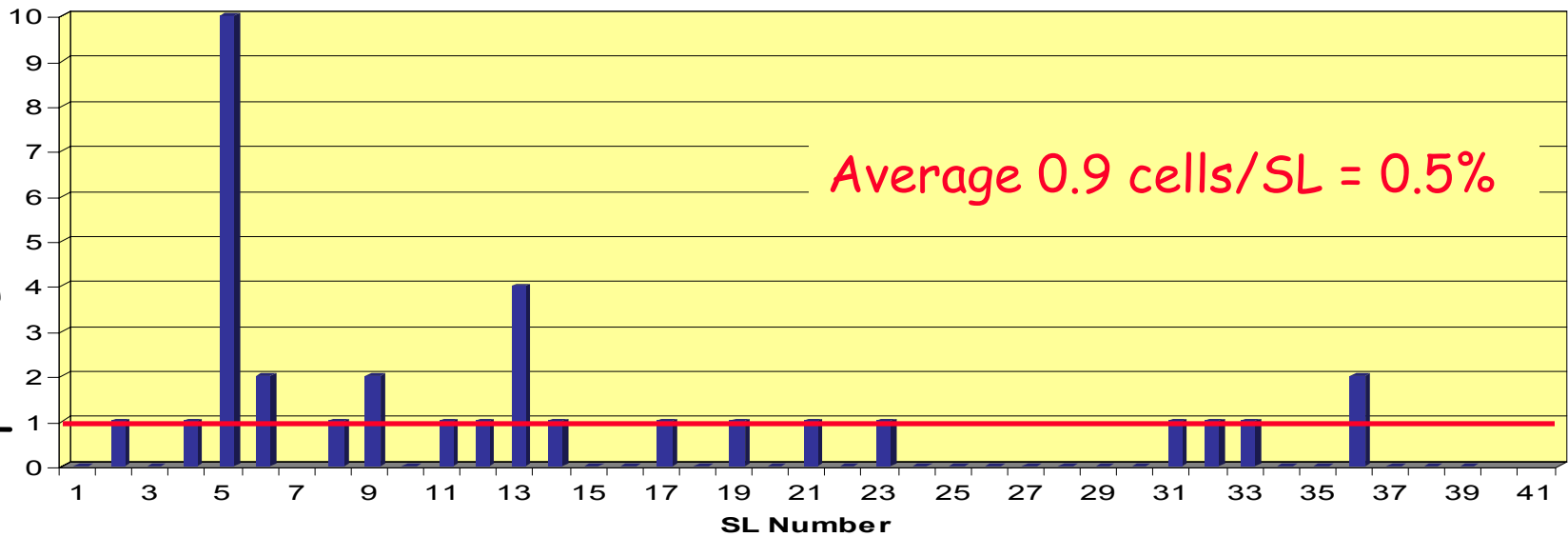
- Dead & noisy channel
- Efficiency
- Noise
- Chamber planarity



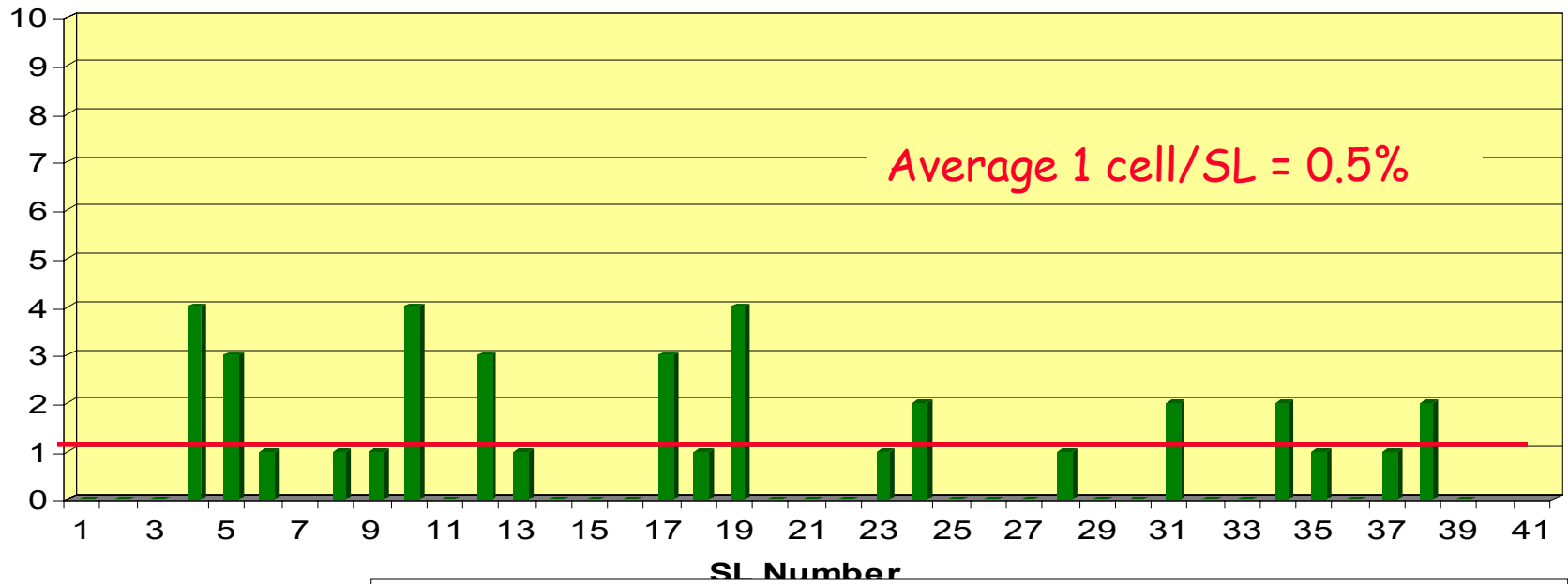
# Dead & Noisy Channels



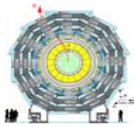
No. Dead Channels  
per SL



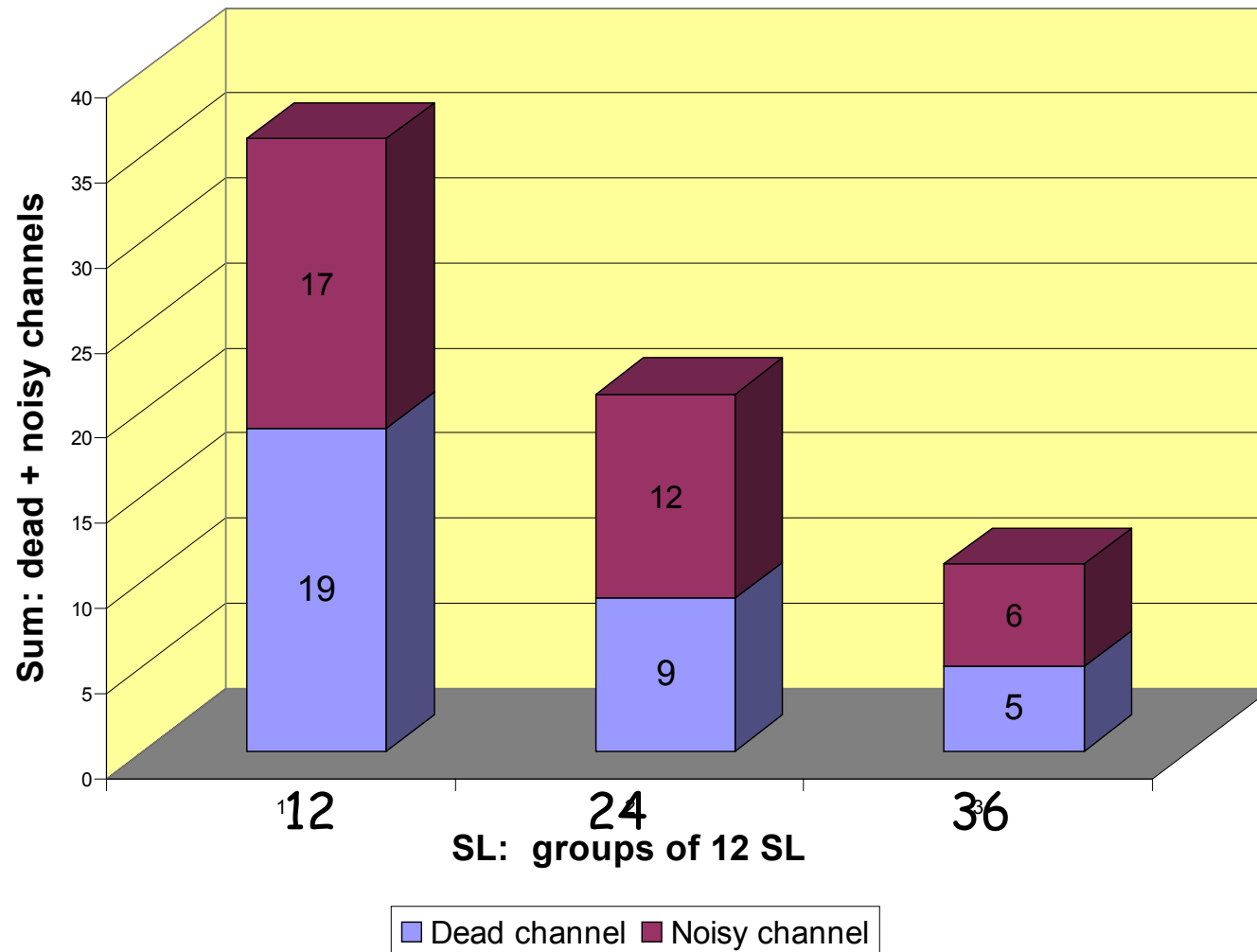
No. Noisy Channels  
per SL

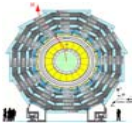


■ Noise > 500 Hz



# Development with Time...

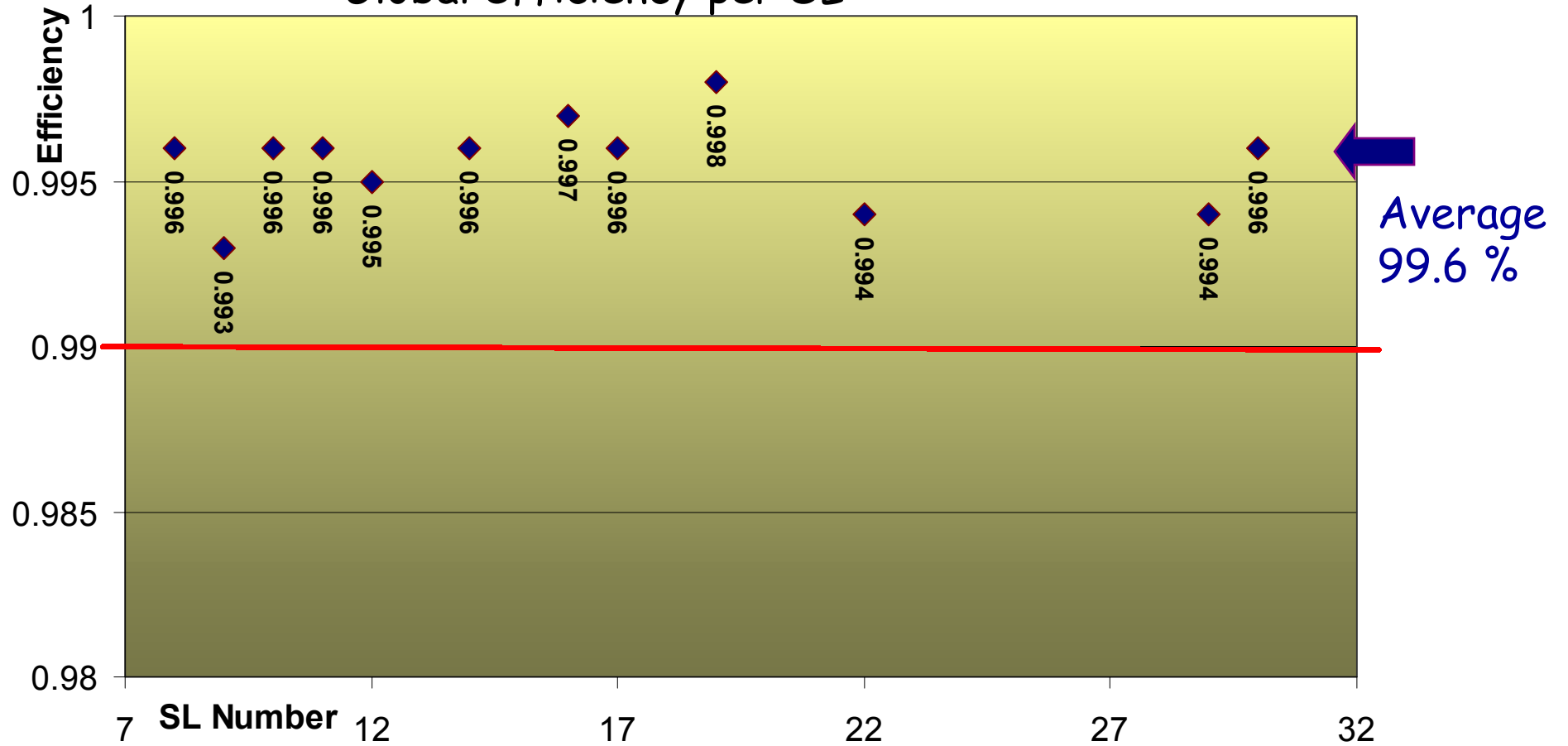


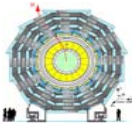


# Efficiency

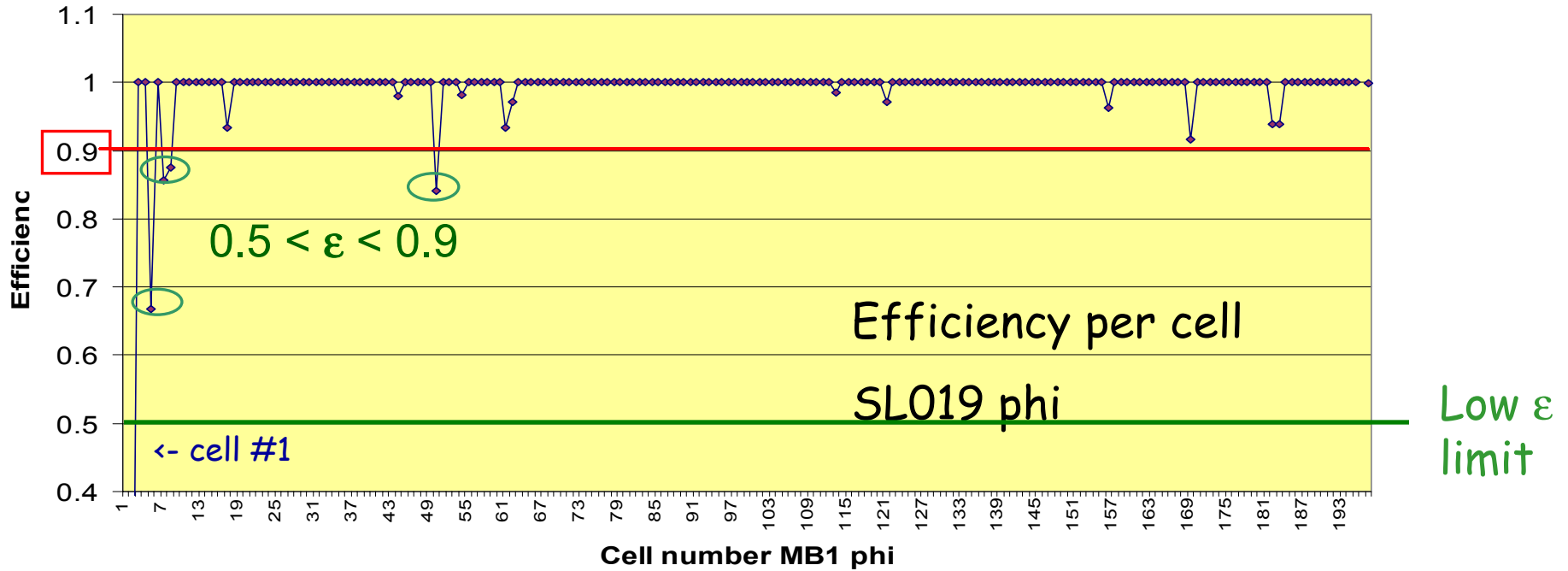


Global efficiency per SL

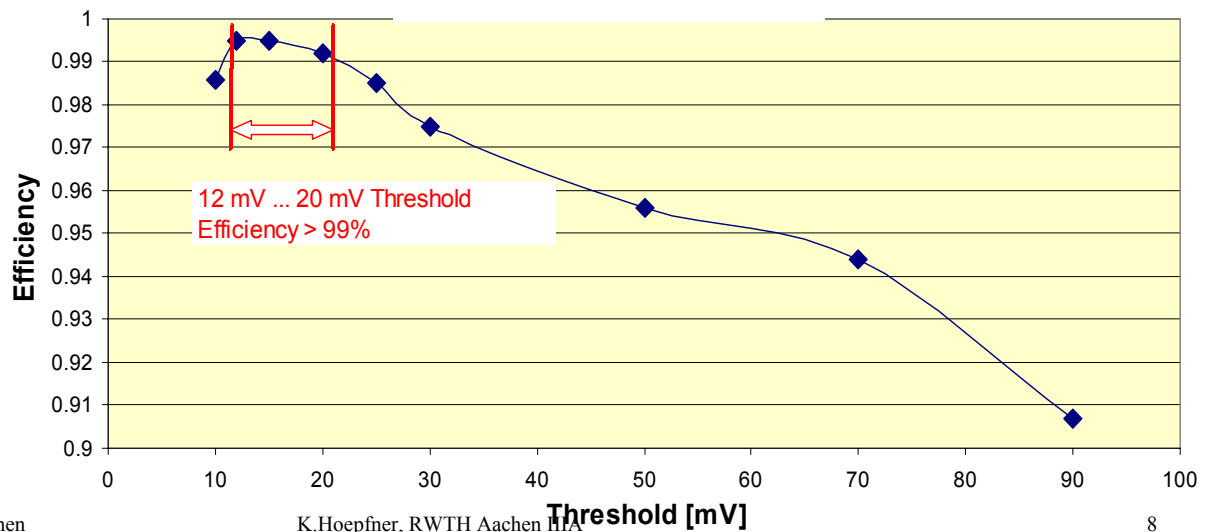




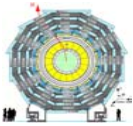
# Efficiency



Efficiency vs. threshold



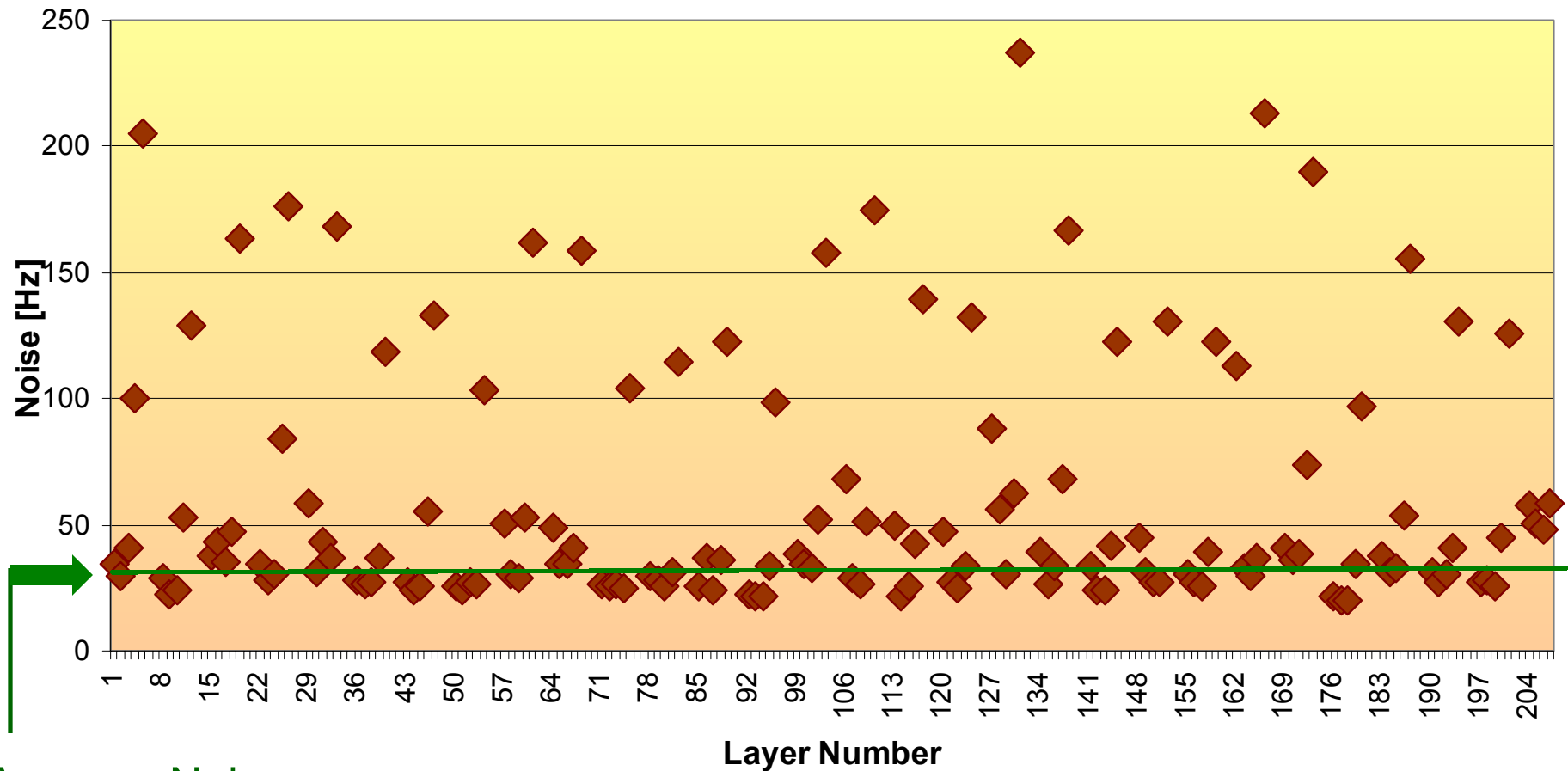




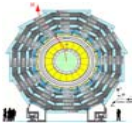
# Noise



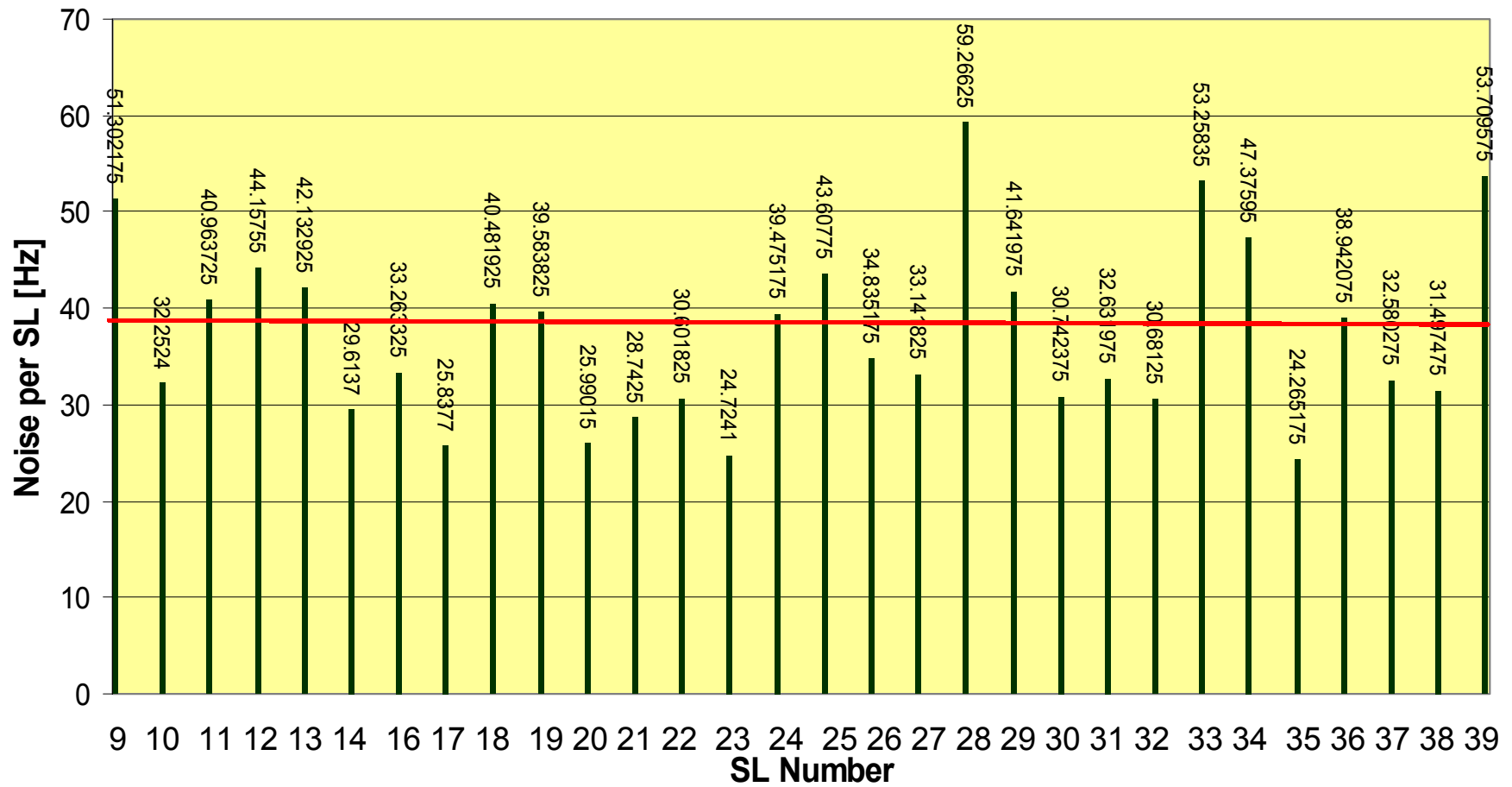
### Average Noise per layer

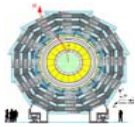


Average Noise  
per Layer 38 Hz  
(incl. Noisy channel)

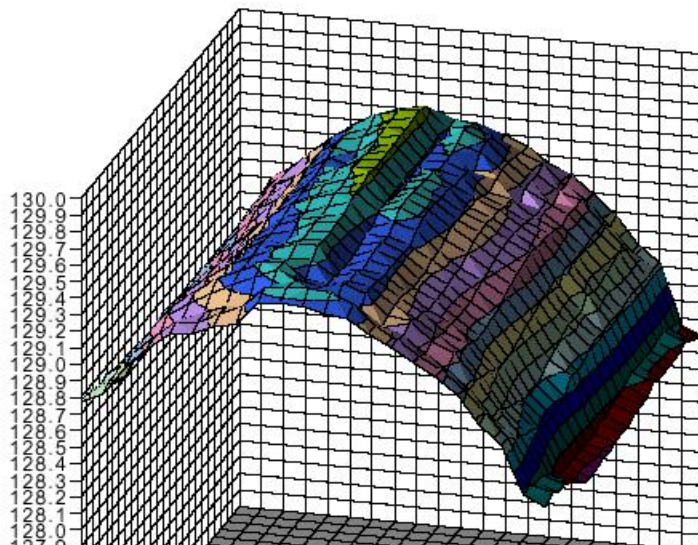
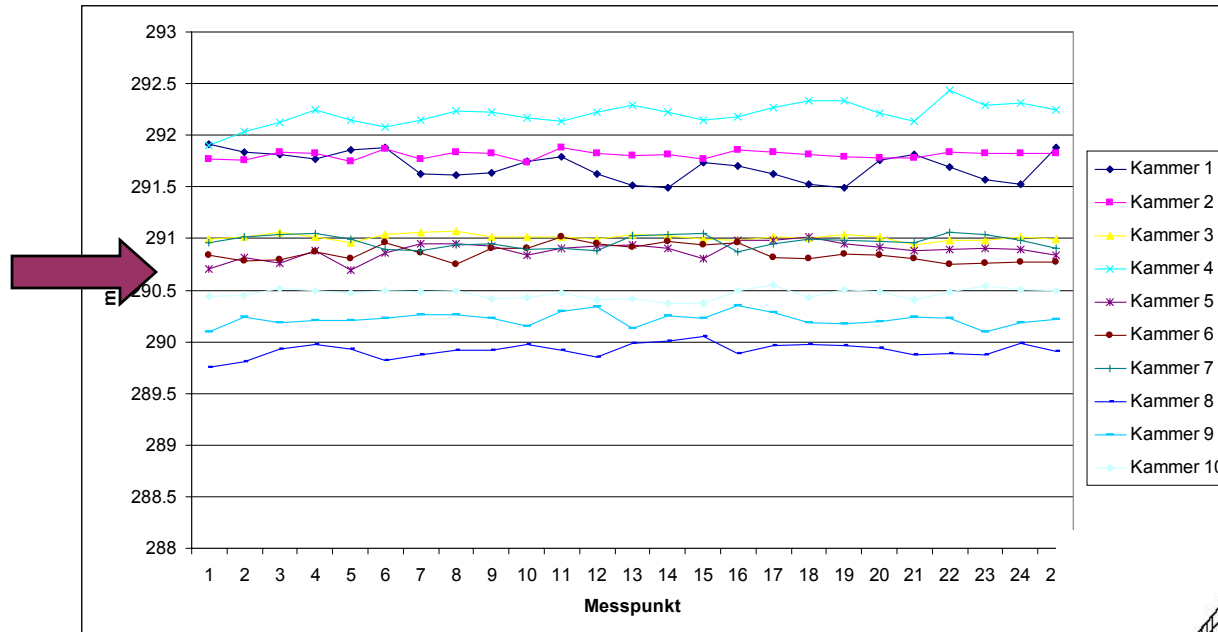


# Average Noise per SL





# Planarity of Chambers



127-127.1	127.1-127.2
127.2-127.3	127.3-127.4
127.4-127.5	127.5-127.6
127.6-127.7	127.7-127.8
127.8-127.9	127.9-128
128-128.1	128.1-128.2
128.2-128.3	128.3-128.4
128.4-128.5	128.5-128.6
128.6-128.7	128.7-128.8
128.8-128.9	128.9-129
129-129.1	129.1-129.2
129.2-129.3	129.3-129.4
129.4-129.5	129.5-129.6
129.6-129.7	129.7-129.8
129.8-129.9	129.9-130

