

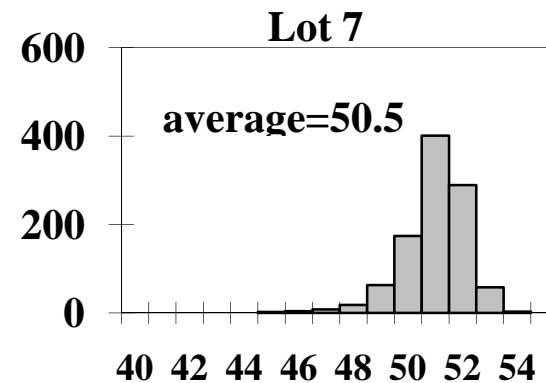
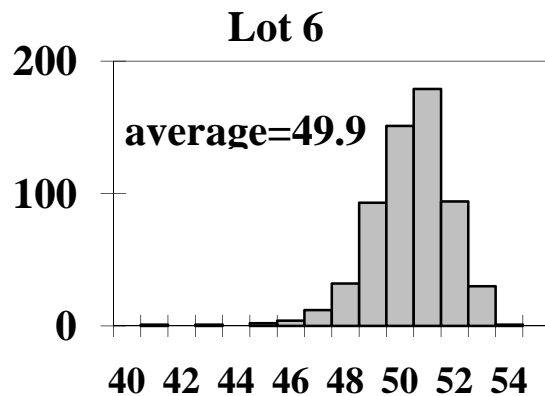
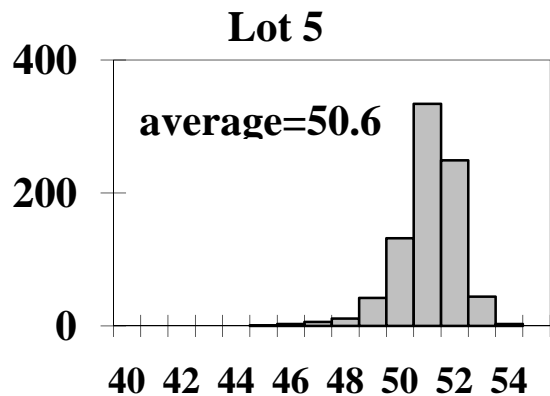
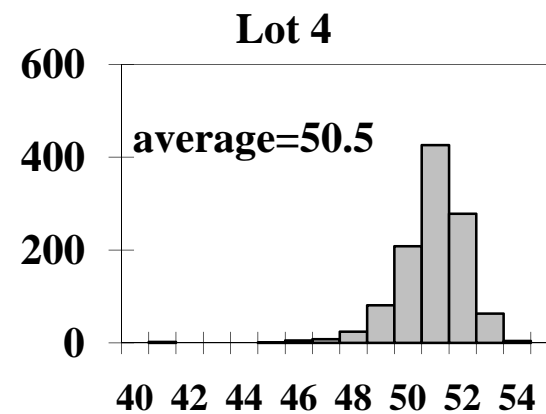
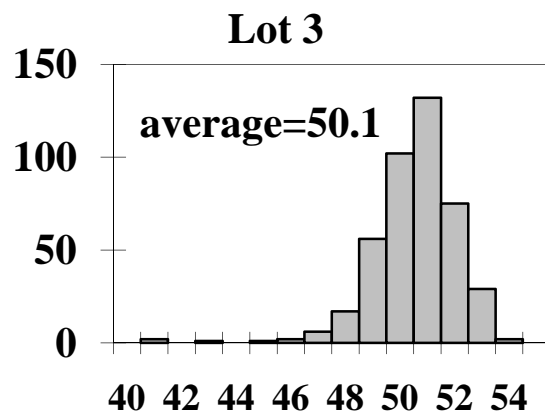
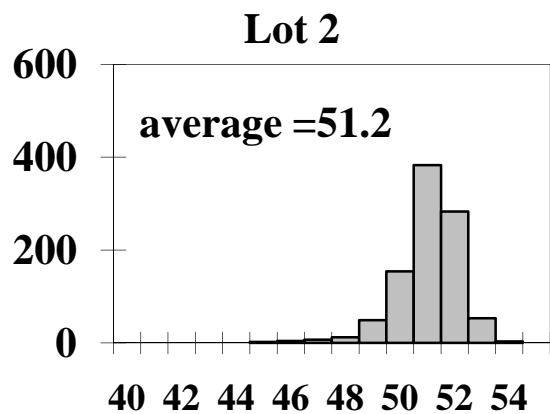
# **Certification of the PWO-II crystals for PANDA EMC**

O.V. MISSEVITCH  
*INP Minsk*

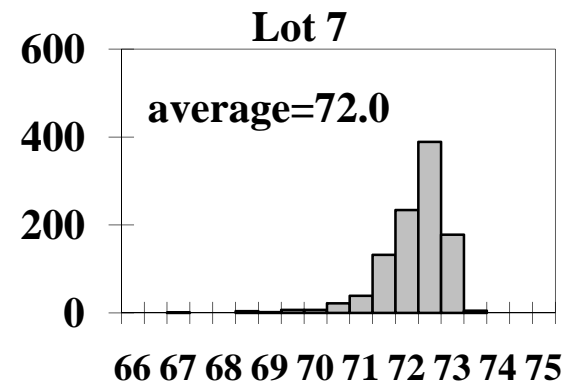
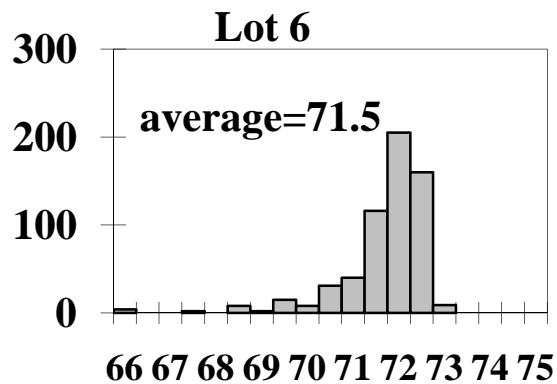
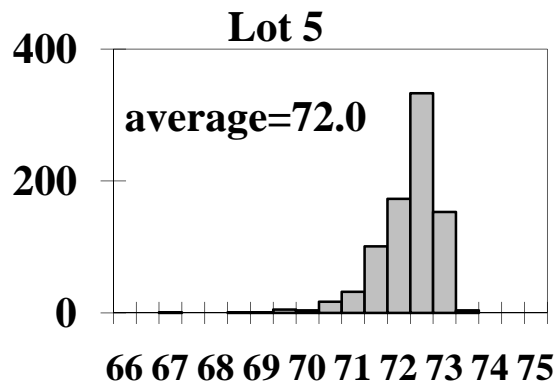
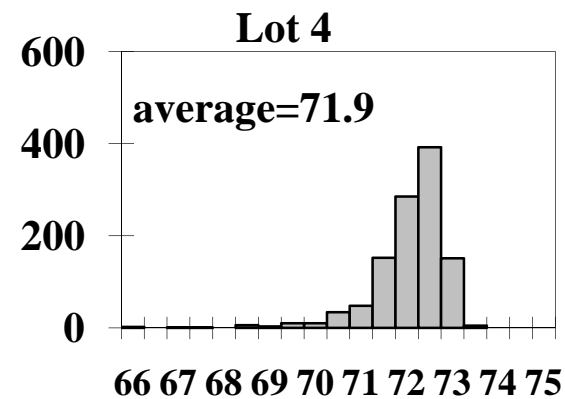
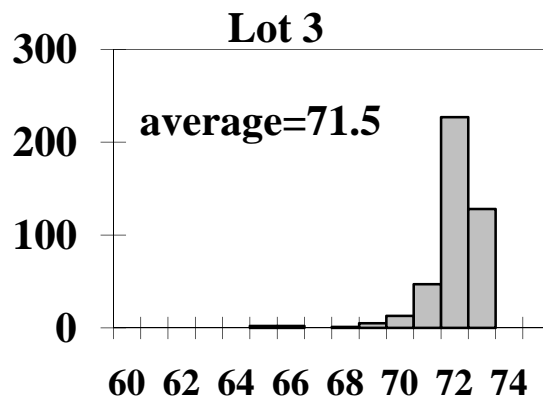
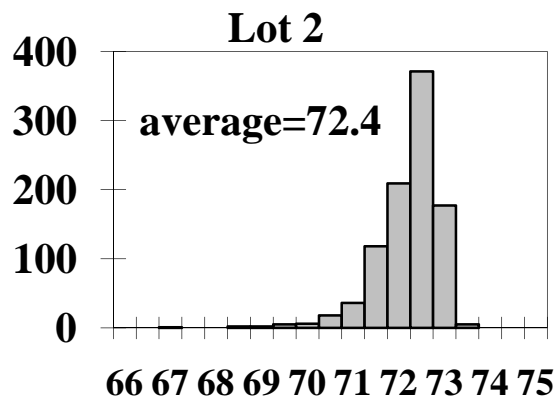
# **Status of PANDA EMC crystals production and certification**

- **7 lots of full-sized crystals were delivered:  
1995 Barrel and 4400 EndCap crystals in total**
- **All crystals were tested in BTCP**
- **Lot #3 is under certification at CERN**
- **700 samples were irradiated and measured in Minsk**

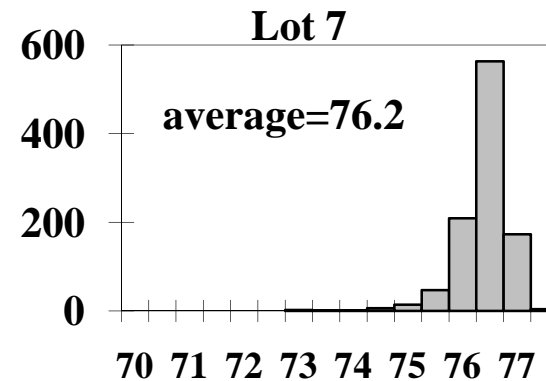
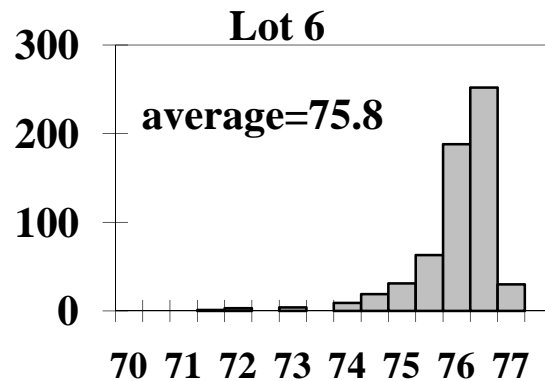
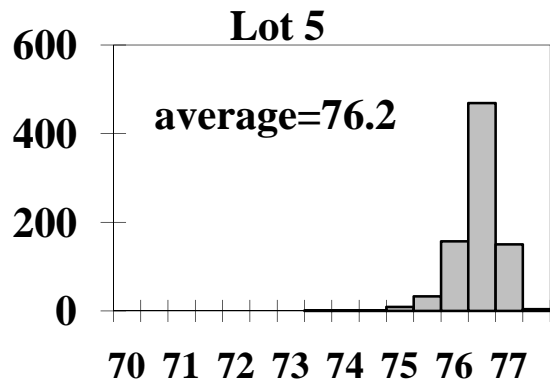
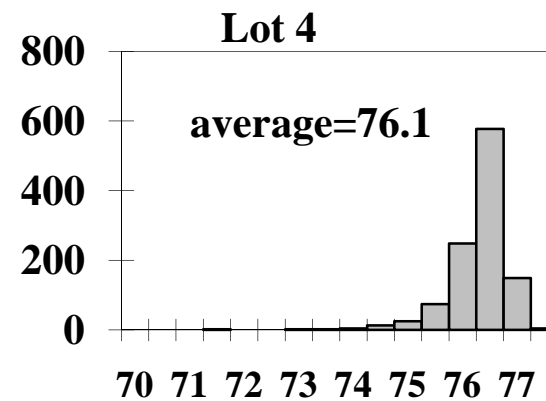
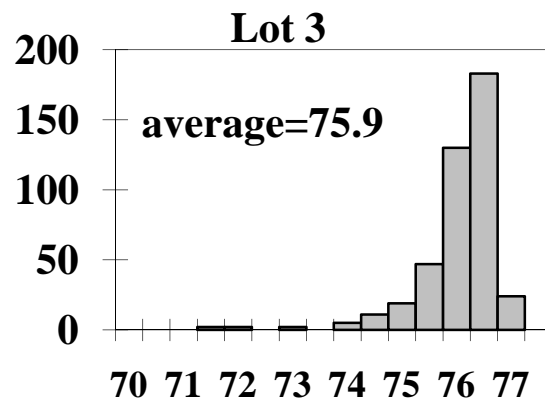
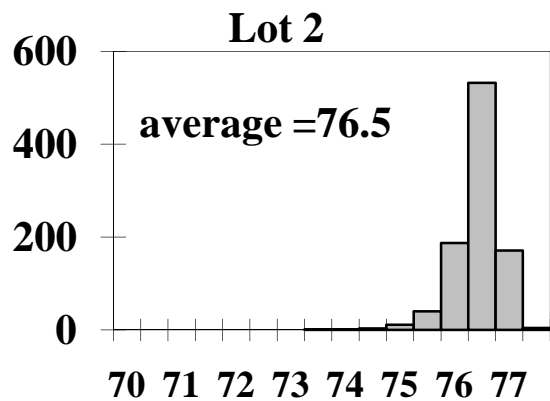
# Transmittance at 360 nm, %



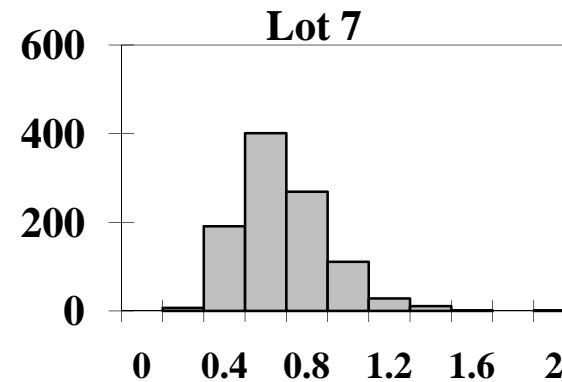
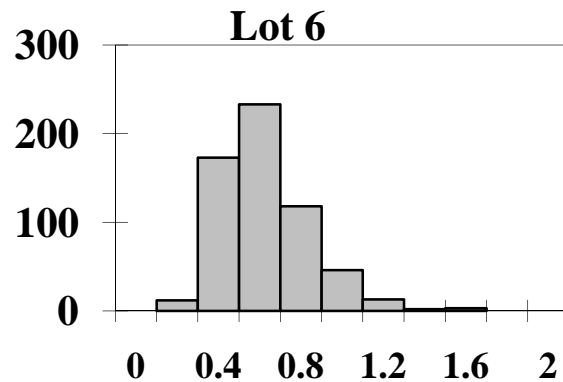
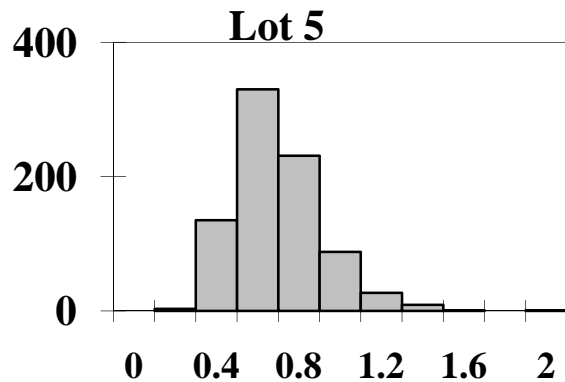
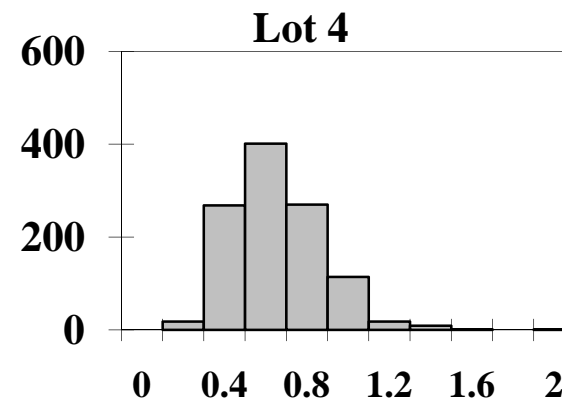
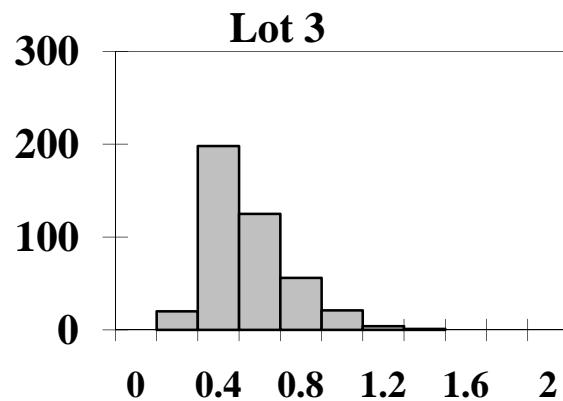
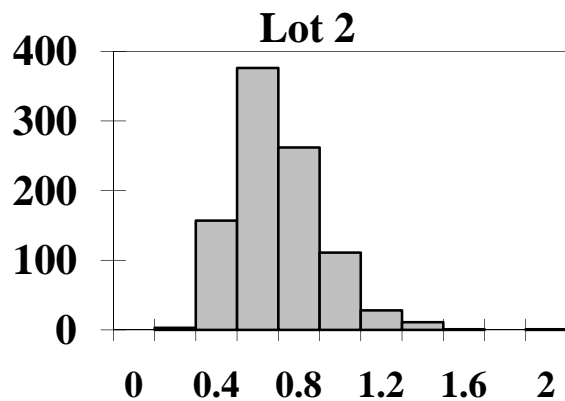
# Transmittance at 420 nm



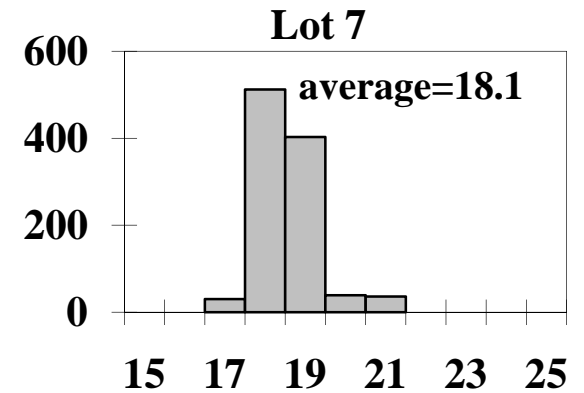
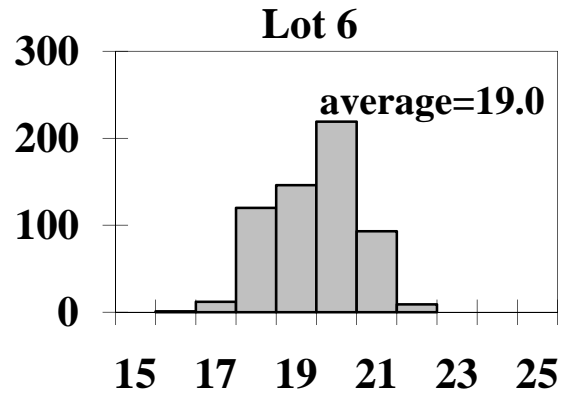
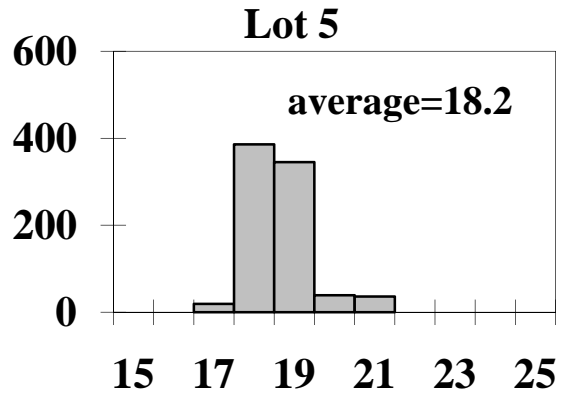
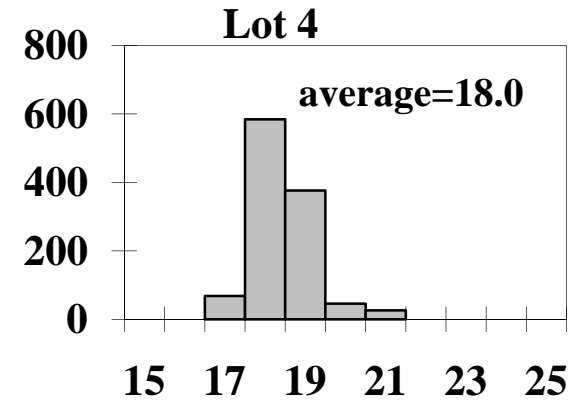
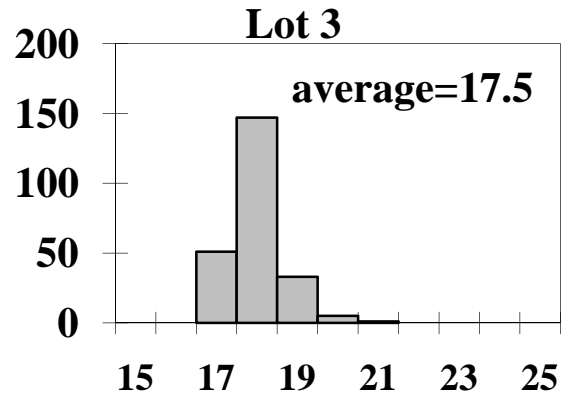
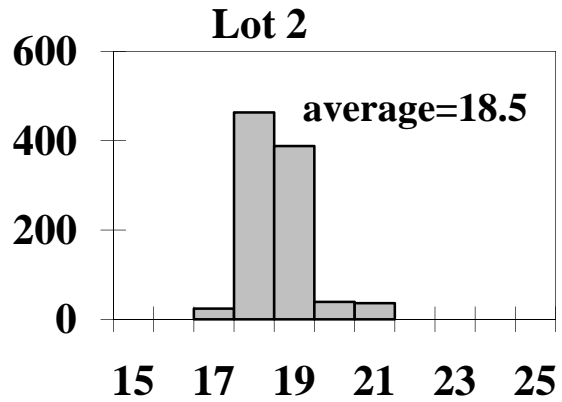
# Transmittance at 620 nm



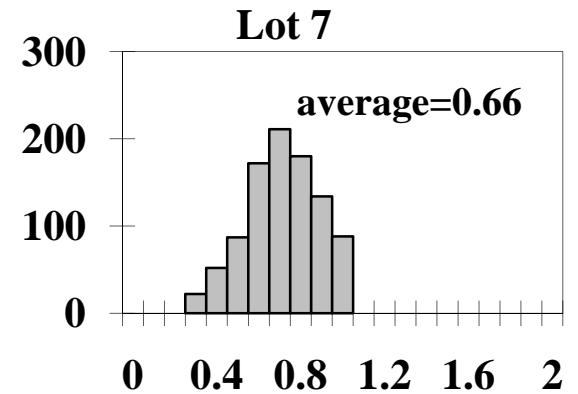
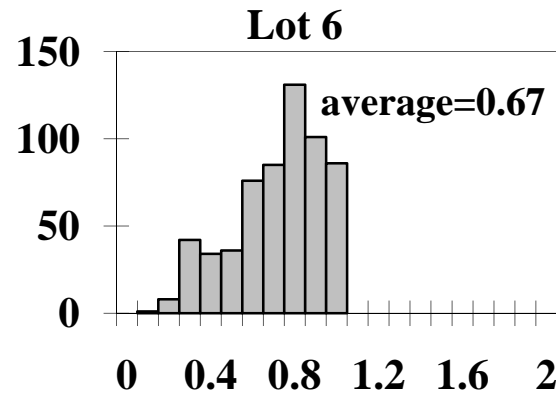
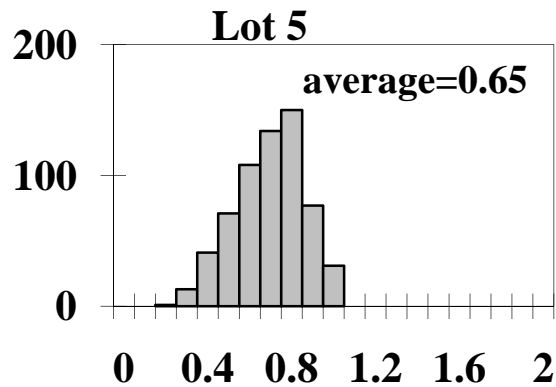
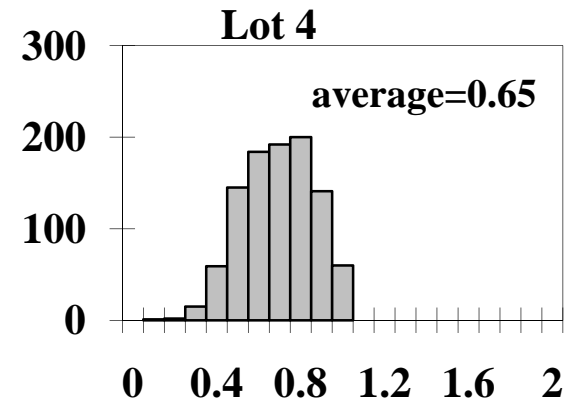
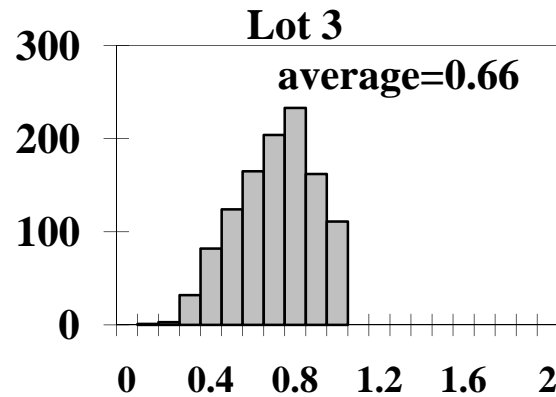
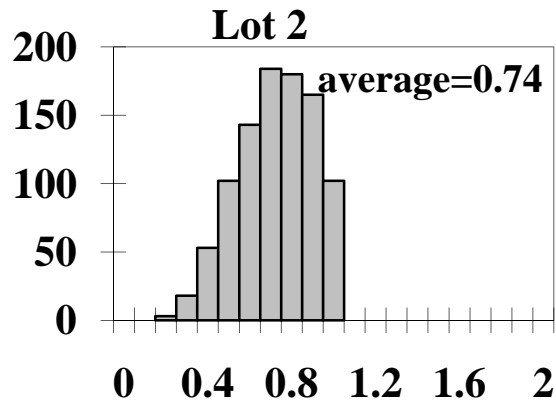
# Transmittance non-uniformity at the level T=50%, nm



# Light Yield, phe/MeV

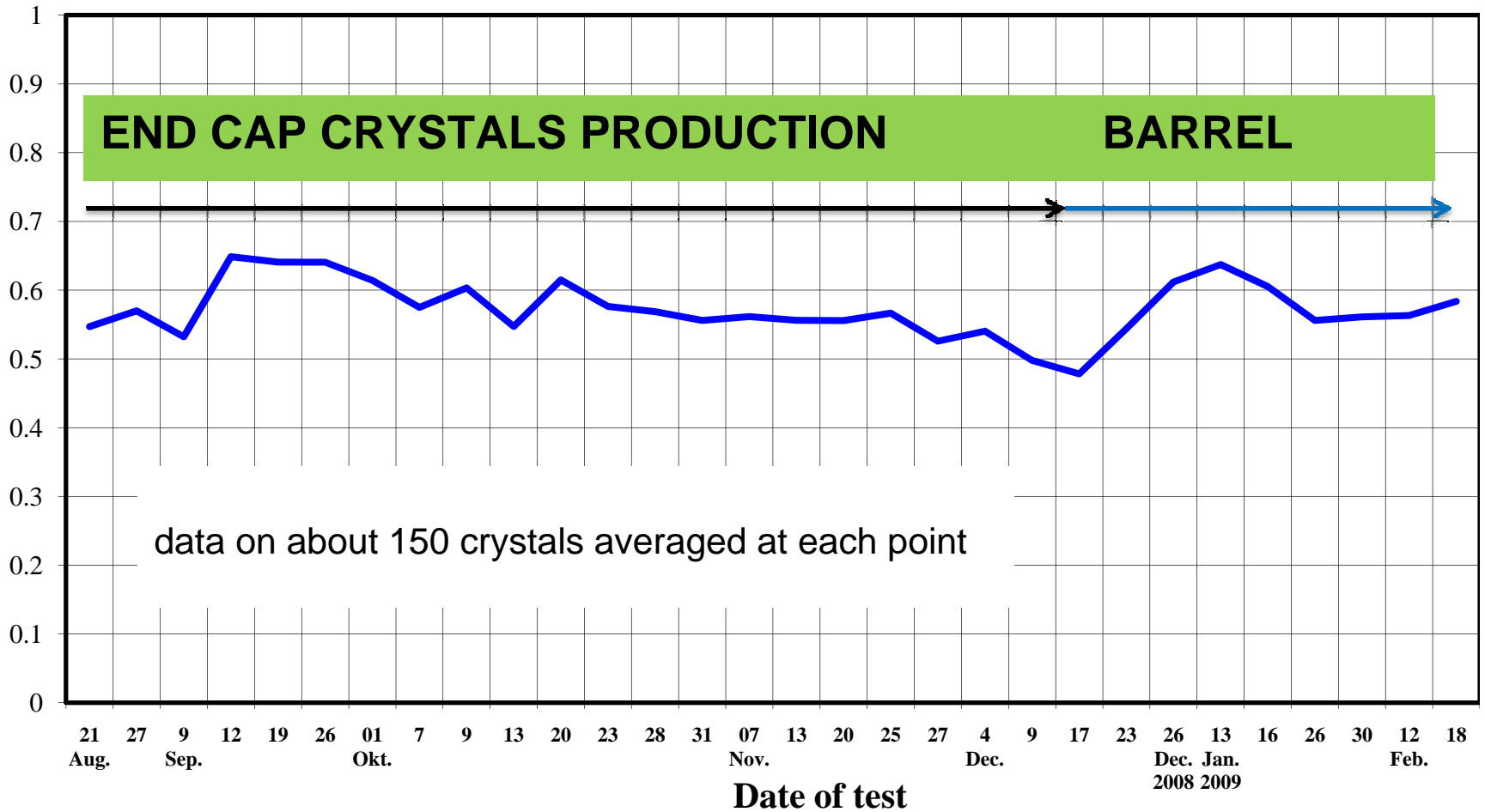


# Induced absorption coefficient at 420 nm, $\text{m}^{-1}$



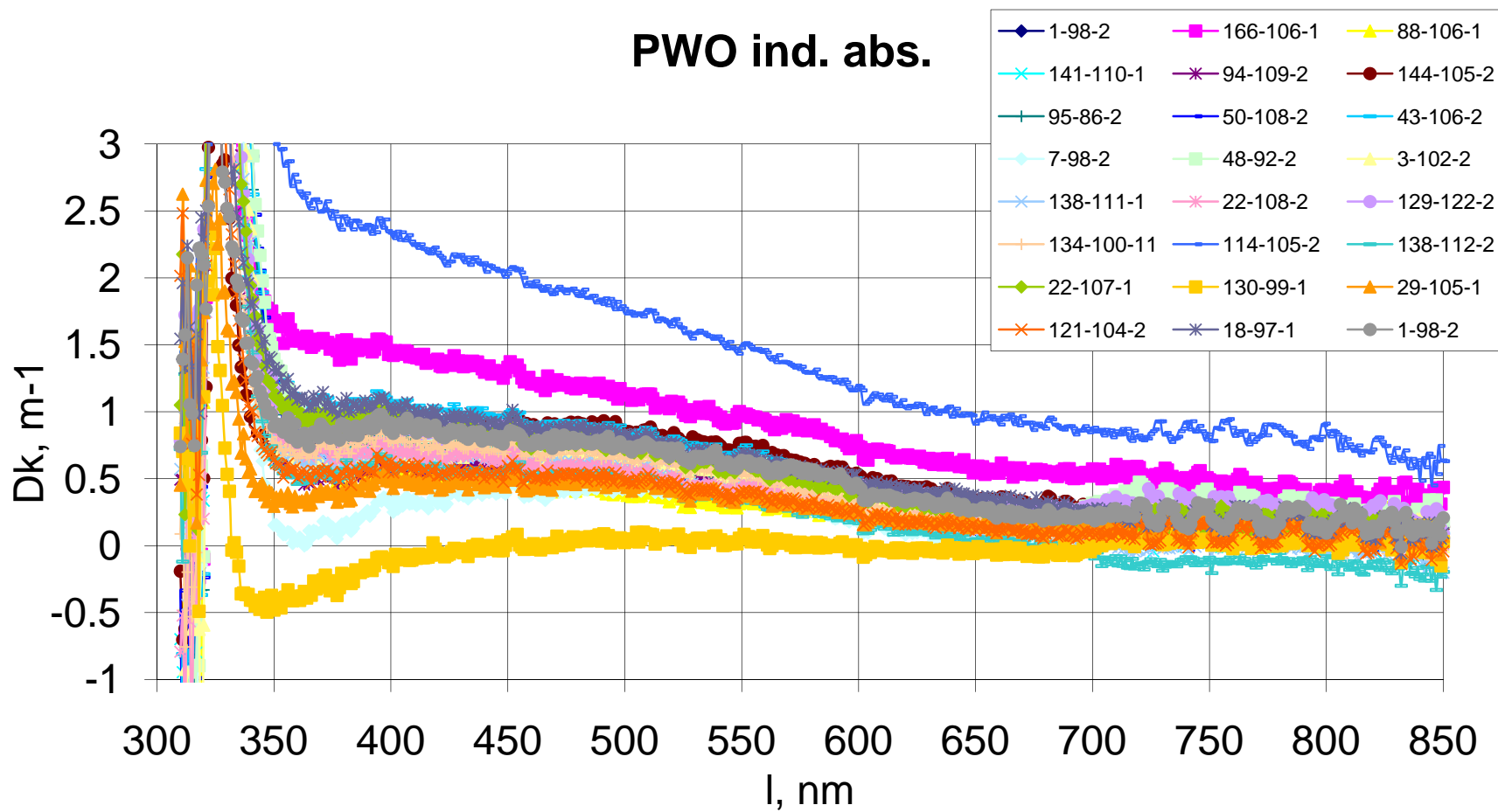


$\langle dk \rangle, m^{-1}$  Variation of induced absorption coefficient, Aug'08 – Feb'09



# Typical radiation induced absorption spectra (small samples of the boule top part)

Measurements were performed in INP (Minsk) at room temperature.



# Conclusions

- **Production and certification of crystals is going on according to the schedule.**
- **Radiation hardness is the dominating reason for the internal rejection of crystals.**