

Status of PWO radiation absorption measurements in Giessen

Valery Dormenev

II. Physics Institute JLU, Giessen

60 crystals were tested:

30 Barrel + 30 Endcap

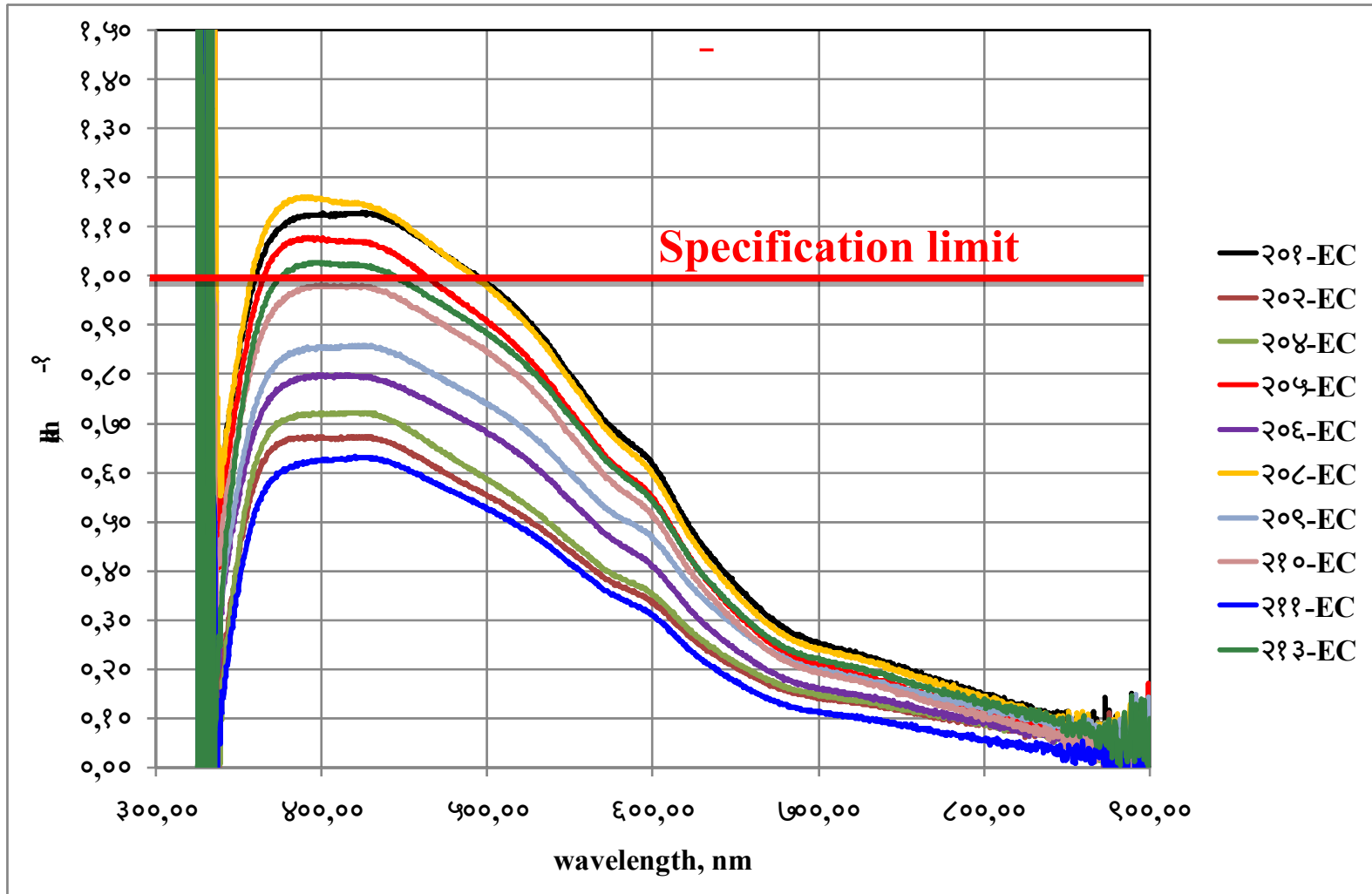
Conditions of measurements:

Dose=30 Gy, Dose rate=3.7 Gy/min

2crystals were irradiated at the same time

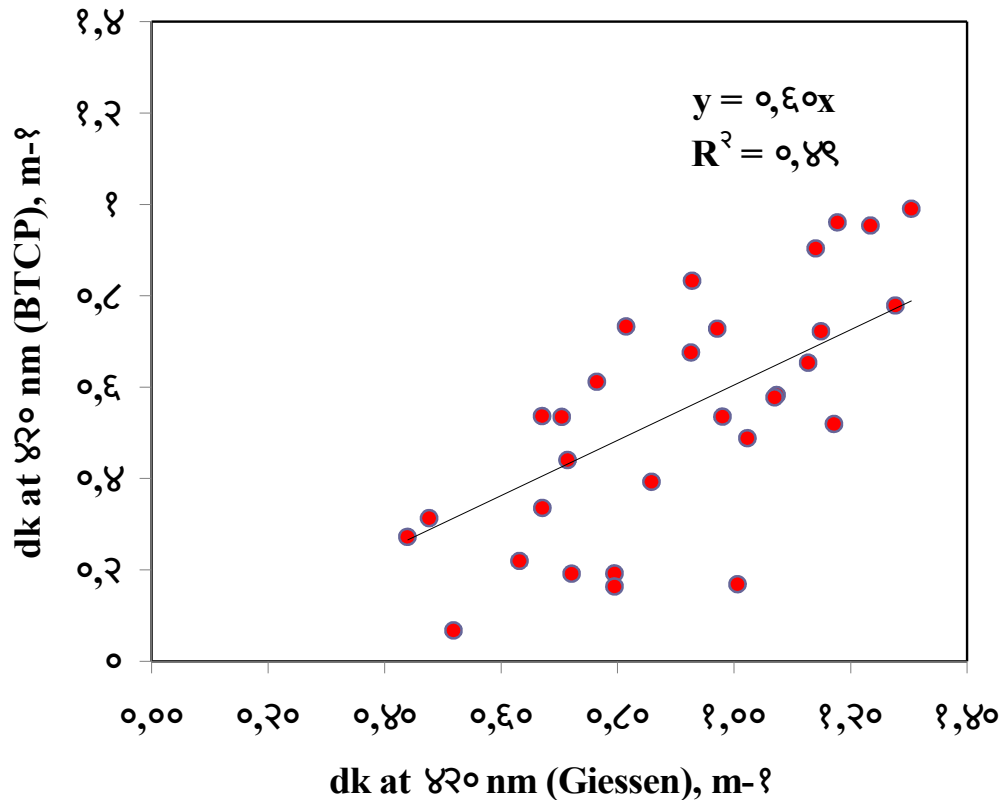
Spectra of the radiation induced absorption coefficient

Delay time of measurements after irradiation is 1-5 minutes



Corelation of radiation absorption. BTCP vs Giessen. 30 Endacap crystals.

Delay time of measurements after irradiation
in Giessen is 1-5 minutes

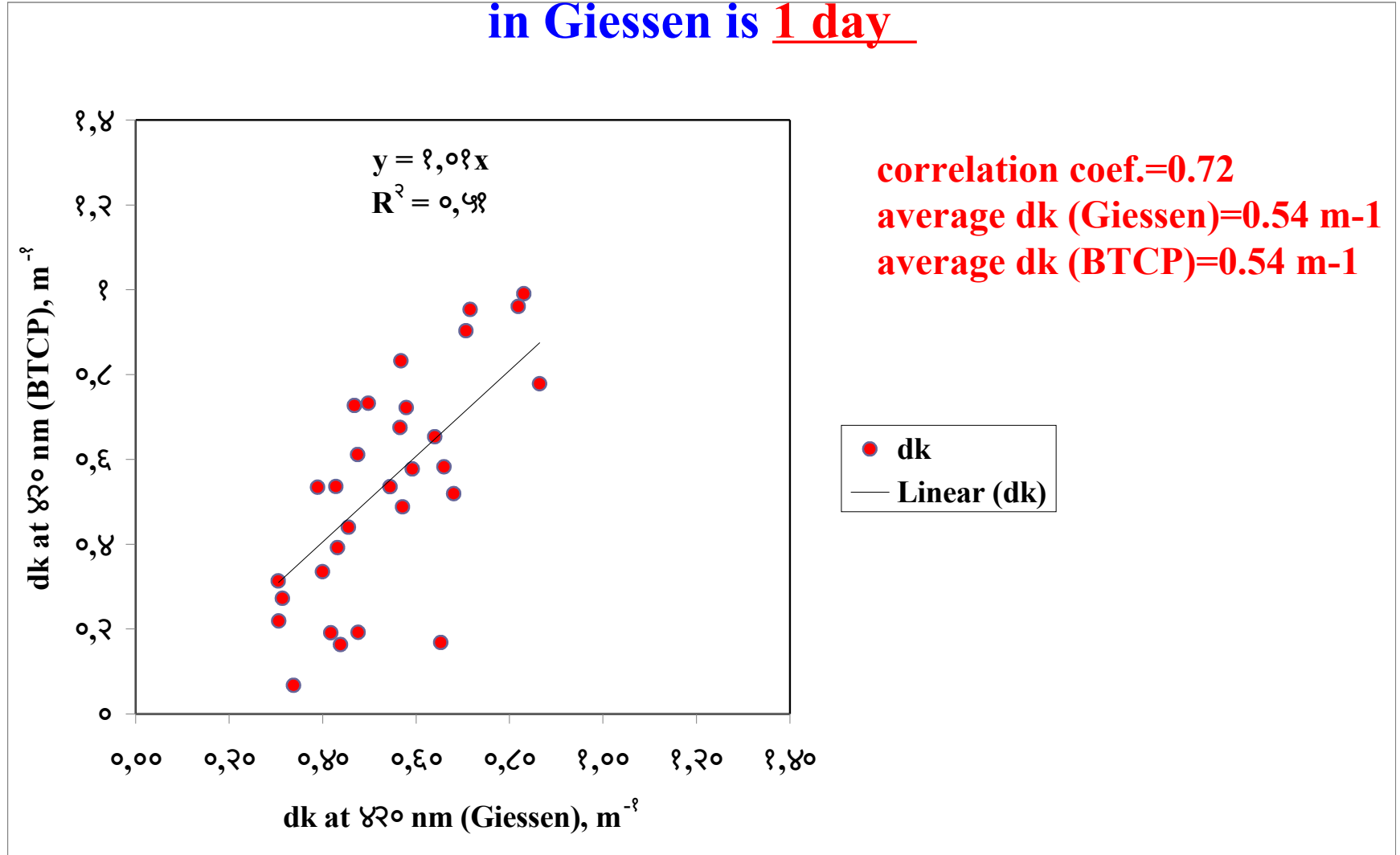


correlation coef.=0.72
average dk (Giessen)=0.90 m-1
average dk (BTCP)=0.54 m-1

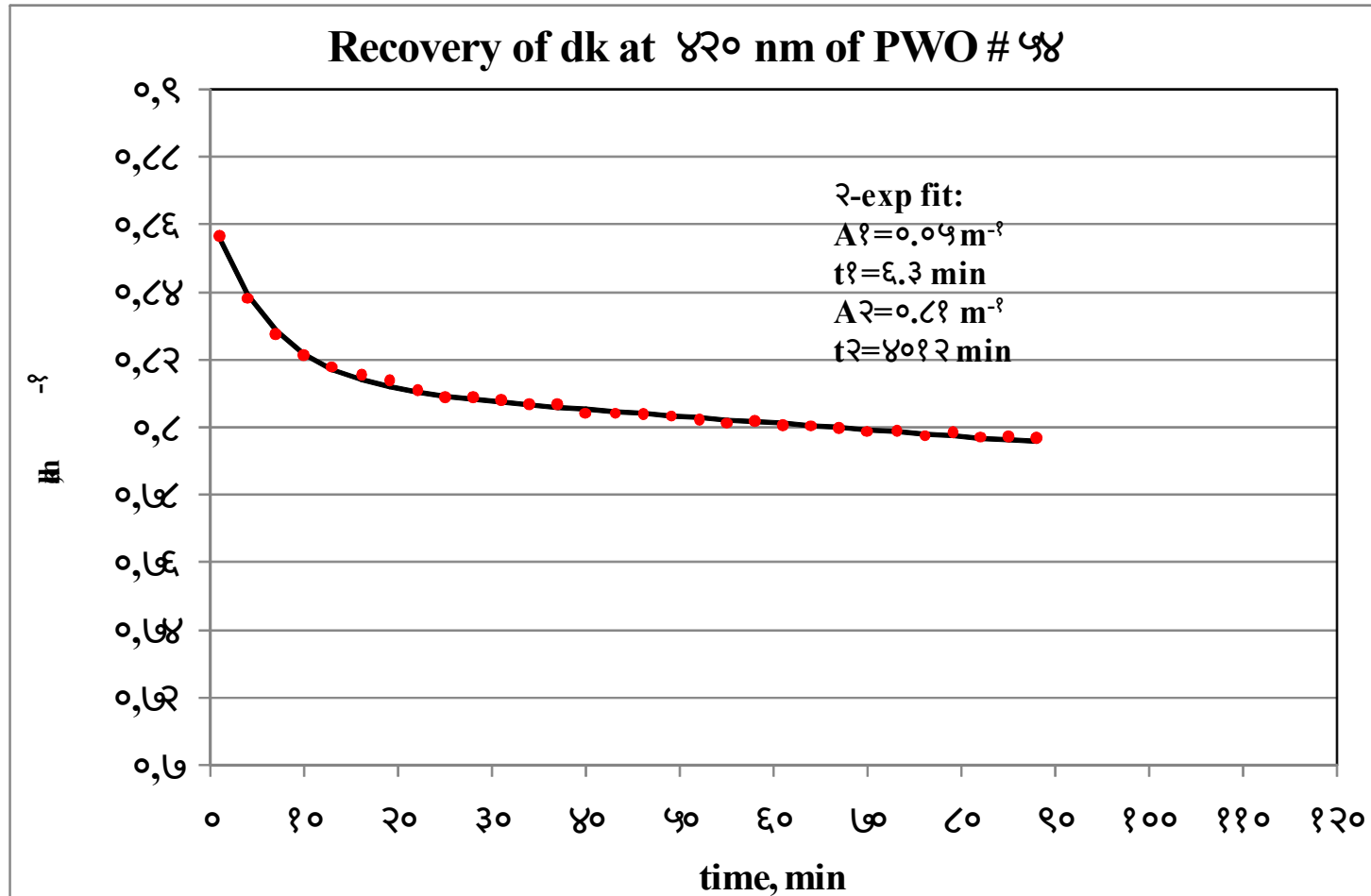
● dk
— Linear (dk)

Correlation of radiation absorption. BTCP vs Giessen. 30 Endacap crystals.

Delay time of measurements after irradiation
in Giessen is 1 day



Recovery of PWO radiation absorption at 420 nm



Conclusion

- **Good correlation between BTCP and Giessen data**
- **Open questions:**
 - Influence of fast recovery component**
 - Conditions of measurements**