

# QA-Phantome in Neuruppin

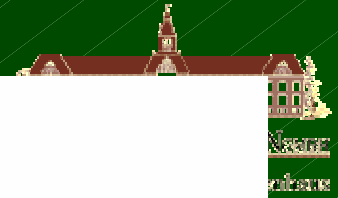


Eyck Blank, Dietrich Sidow, Andre Buchali

Ruppiner Kliniken GmbH (Neuruppin)

Ines Eichwurzel

Charité Campus Berlin Mitte (Berlin)



# Blindflug

oder

"Ich denke immer an  
Hans Mustermann"

# IMRT-Dosimetrie Verfahren



- **Filmdosimetrie**

Feld-Fluenzdosimetrie

Ganzplan Filmdosimetrie  
transversal

Ganzplan Filmdosimetrie  
coronal

Ganzplan Filmdosimetrie  
sagittal

**MLC - T&G und Leakage  
messbar**

- **Messkammerdosimetrie**

Kammermessung  
im Isozentrum

Kammermessungen  
in Spezialphantomen  
an verschiedenen Stellen

**Dosismessung genauer**

# Kommerzielle Phantome



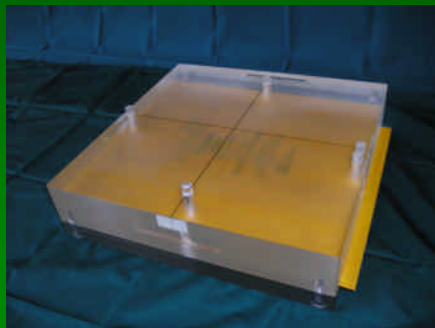
- PTW-  
Plattenphantom



- Heidelberger  
Zylinderphantom



- PTW  
Fluenzphantom



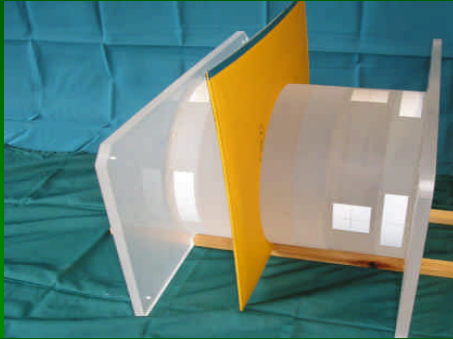
- PTW Kreisphantom



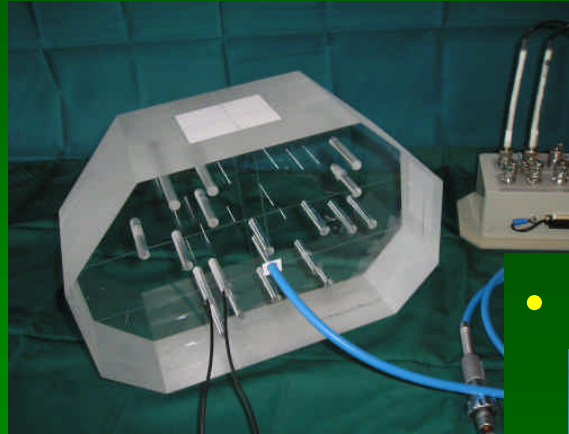
# Eigene Phantome



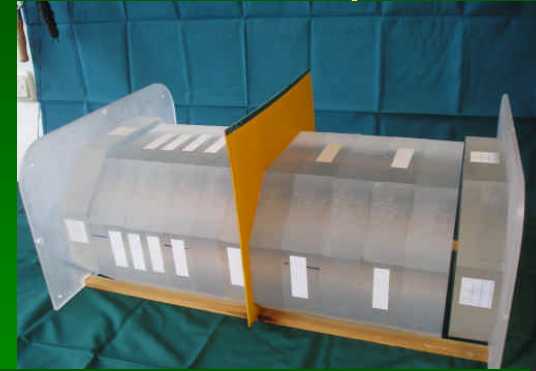
- Zylinder-Filmphantom



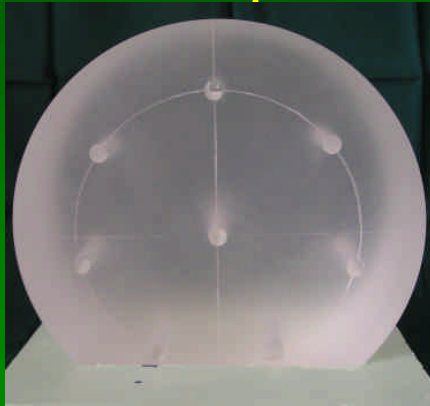
- Hals Kammerphantom



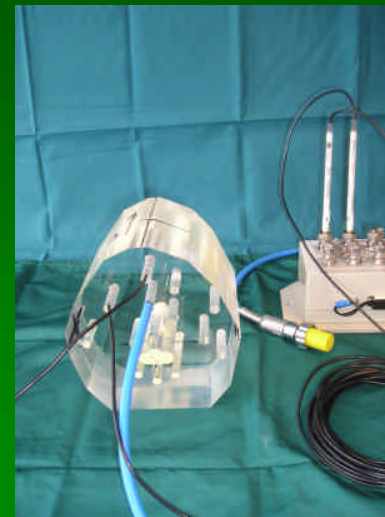
- Stamm Filmphantom



- Kammer Kalibrierphantom



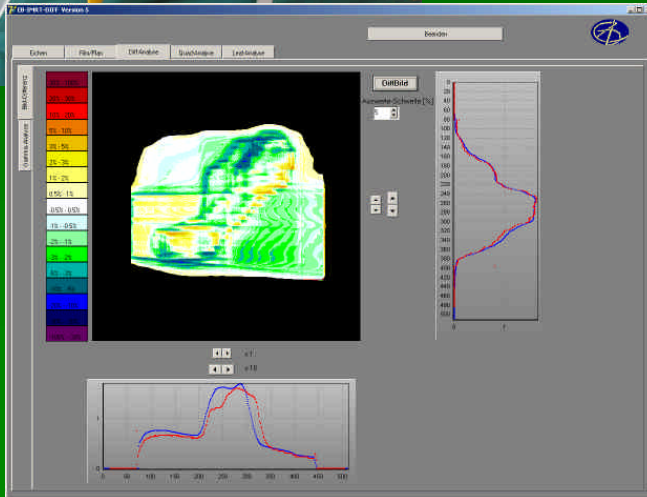
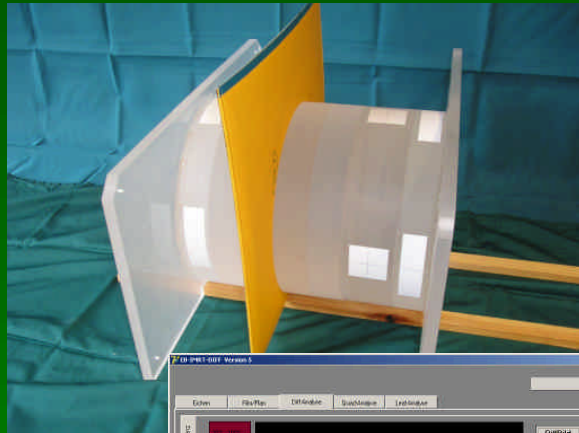
- Hals Kammerphantom



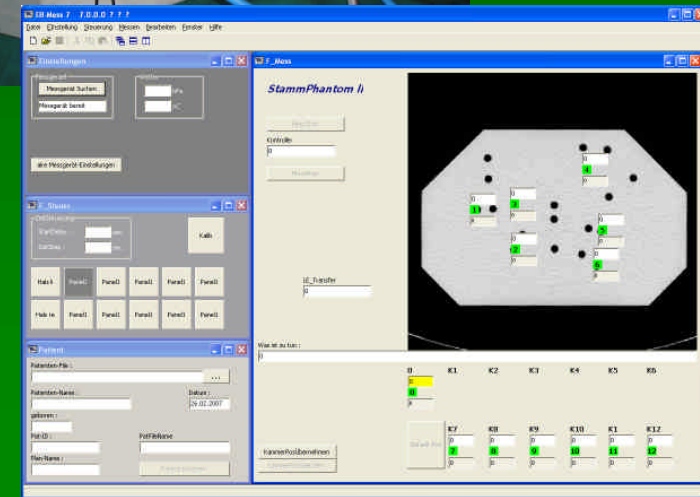
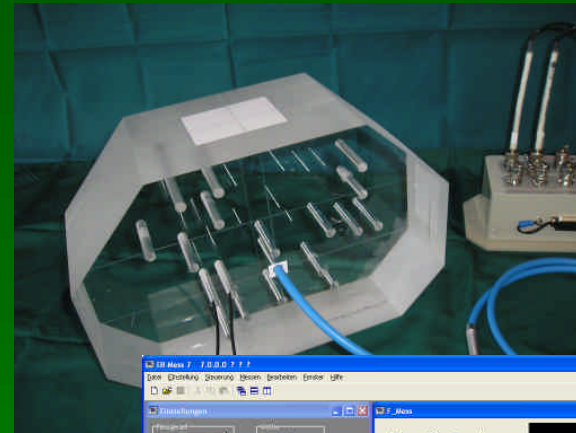
# Dosimetrie-Arten



- Film-Dosimetrie



- Kammer-Dosimetrie

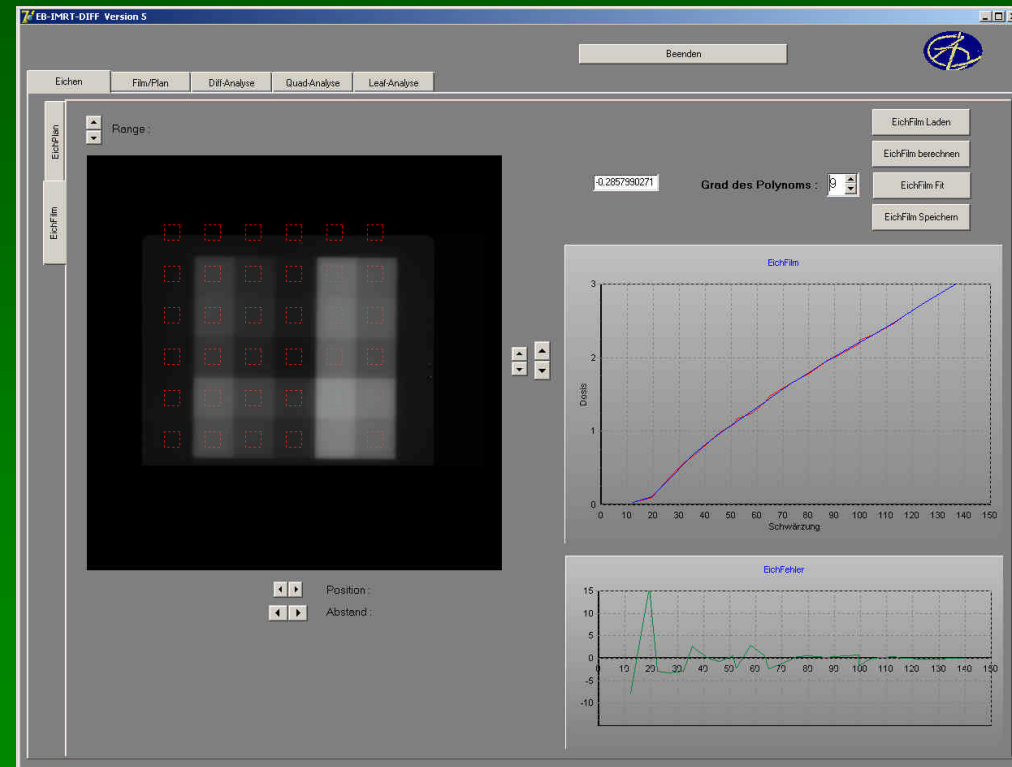
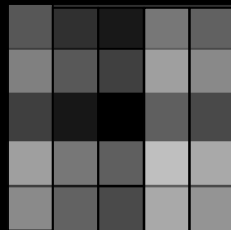


# Film-Dosimetrie 1

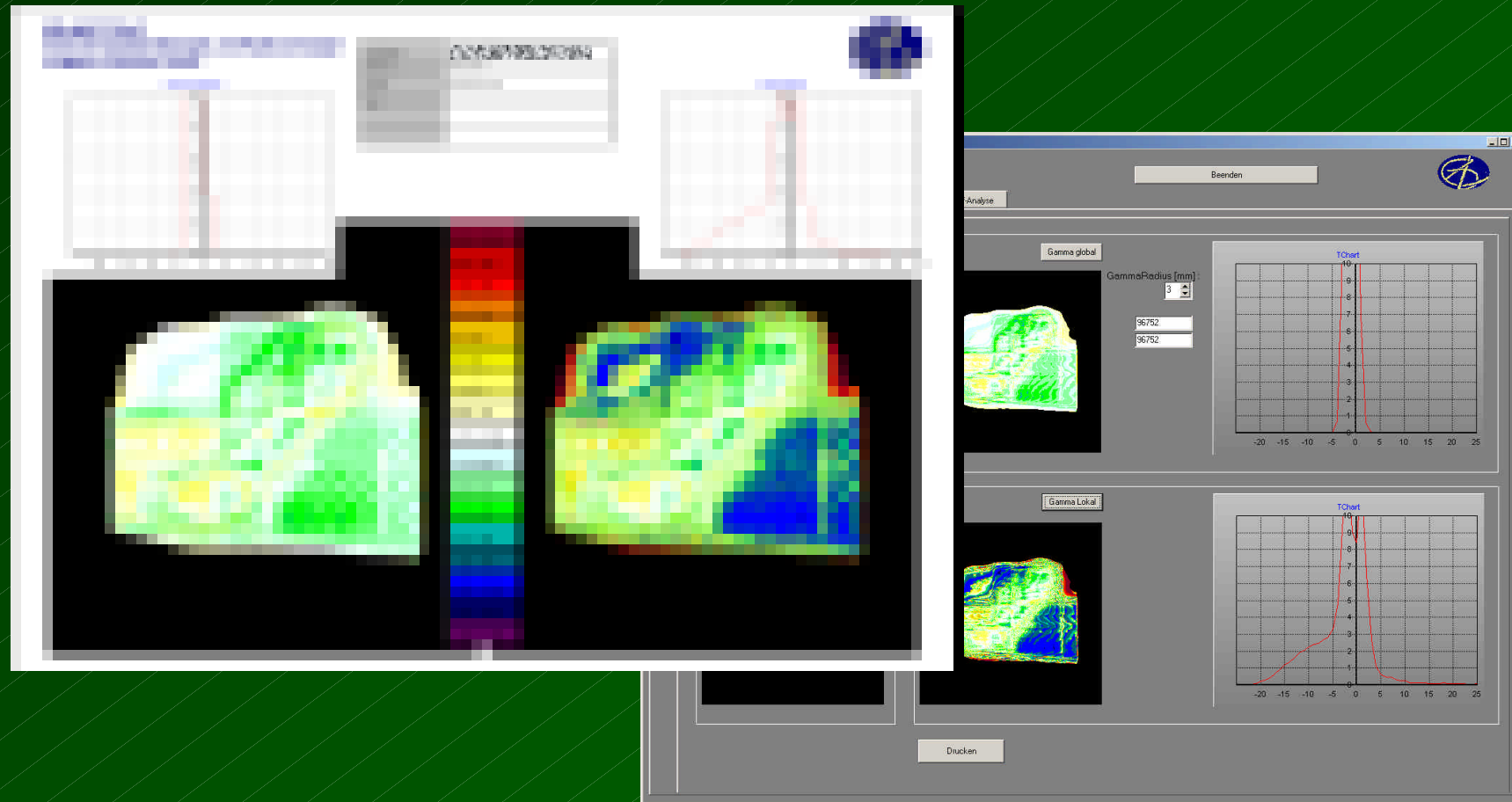


## Eichverfahren

1. Feld
2. Feld
3. Feld
4. Feld
5. Feld
6. Feld
7. Feld
8. Feld

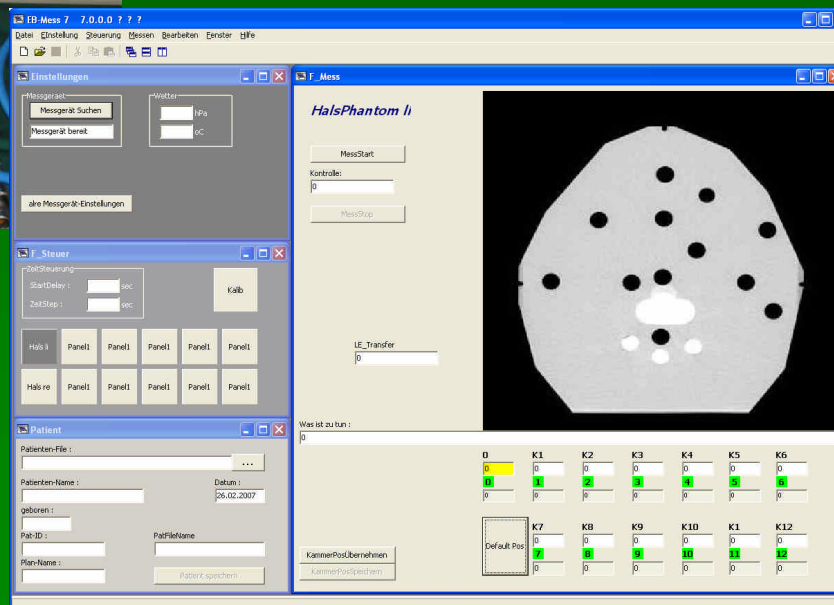
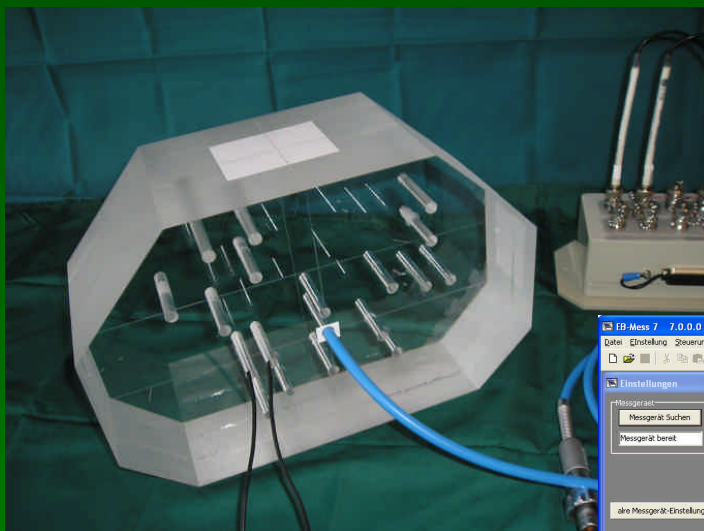


# Film-Dosimetrie 2





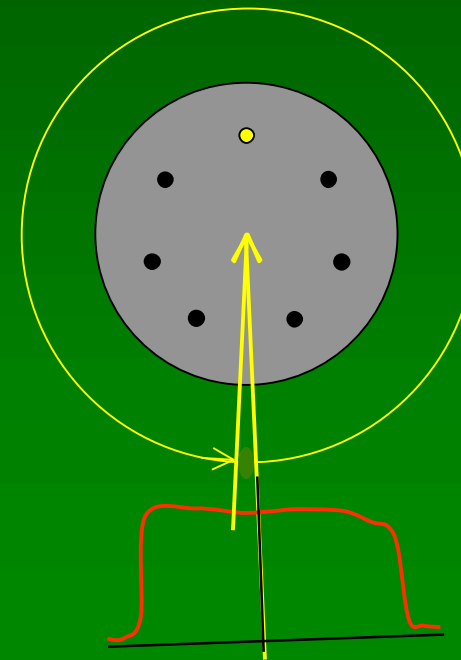
# Kammer-Dosimetrie 1



# Kammer-Dosimetrie 2



## Eichverfahren



# Kammer-Dosimetrie 3



The screenshot displays the EB-Mess 7 software interface, which is used for chamber dosimetry. The main window shows a patient image with dosimeter positions marked. The interface is divided into several panels:

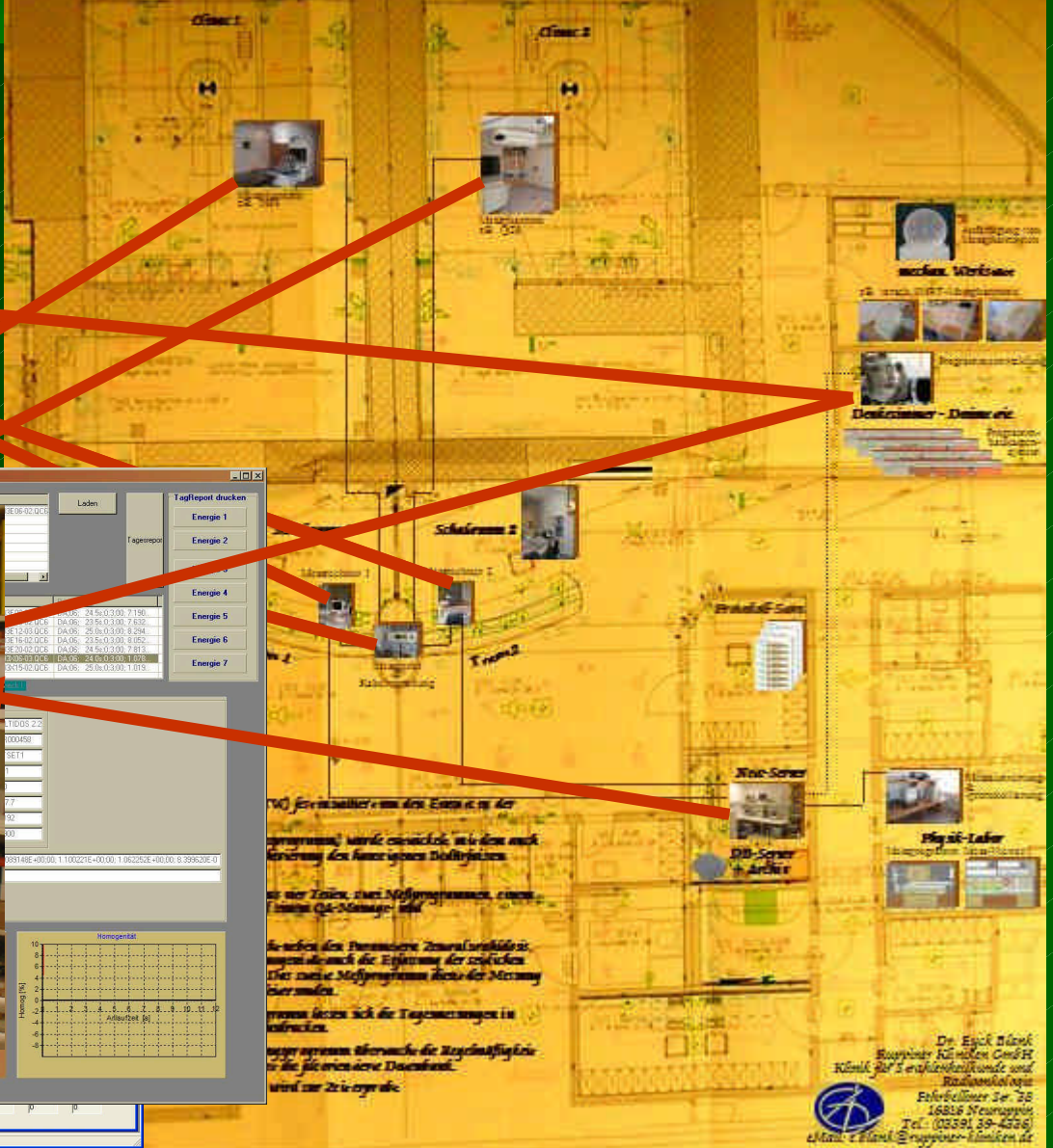
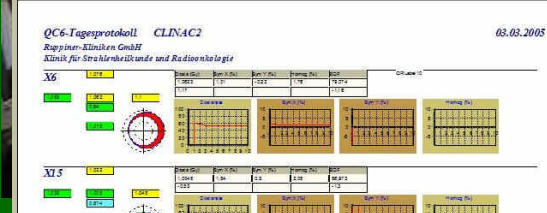
- Einstellungen (Settings):** Includes fields for 'Messgerät' (Search/Ready) and 'Wetter' (Weather) in hPa and °C.
- F\_Mess (Measurement):** Features 'MessStart' and 'MessStop' buttons, a 'Kontrolle' field, and a 'LE\_Transfer' field.
- F\_Steuer (Control):** Includes 'Zeitsteuerung' (Time Control) with 'StartDelay' and 'ZeitStep' fields, and a grid of buttons for 'Hals li', 'Stamm li', 'Panel1', 'Panel1', 'Panel1', 'Panel1', 'Hals re', and 'Stamm re'.
- Patient:** Includes fields for 'Patienten-File', 'Patienten-Name', 'Datum' (27.02.2007), 'geboren', 'Pat-ID', 'Pat-Name', and 'Pat-File-Name'.
- Measurement Grid:** A grid of 12 dosimeter positions (K1-K12) with numerical values. The values are: K1: 0, K2: 0, K3: 0, K4: 0, K5: 0, K6: 0, K7: 7, K8: 8, K9: 9, K10: 10, K11: 11, K12: 12.

# Dosimetrie-Netzwerk

Fest installiertes QA-Meßsystem (QC6, PTW) für die Teletherapie mit eigener Meß-, Analyse- und QA-Manager-Software



E. Blank, D. Sidow, G. Koebke, A. Buchali  
Klinik für Strahlentherapie und Radioonkologie, Ruppiner Kliniken, Neuruppin



TagReport drucken

- Energie 1
- Energie 2
- Energie 4
- Energie 5
- Energie 6
- Energie 7

Strahlendosis	DA:06	DA:09	DA:08	DA:05	DA:02	DA:03	DA:04
387148E+000	1.103221E+000	1.062252E+000	8.355629E-0				

Homogenität

Y-axis: Homogenität (%)

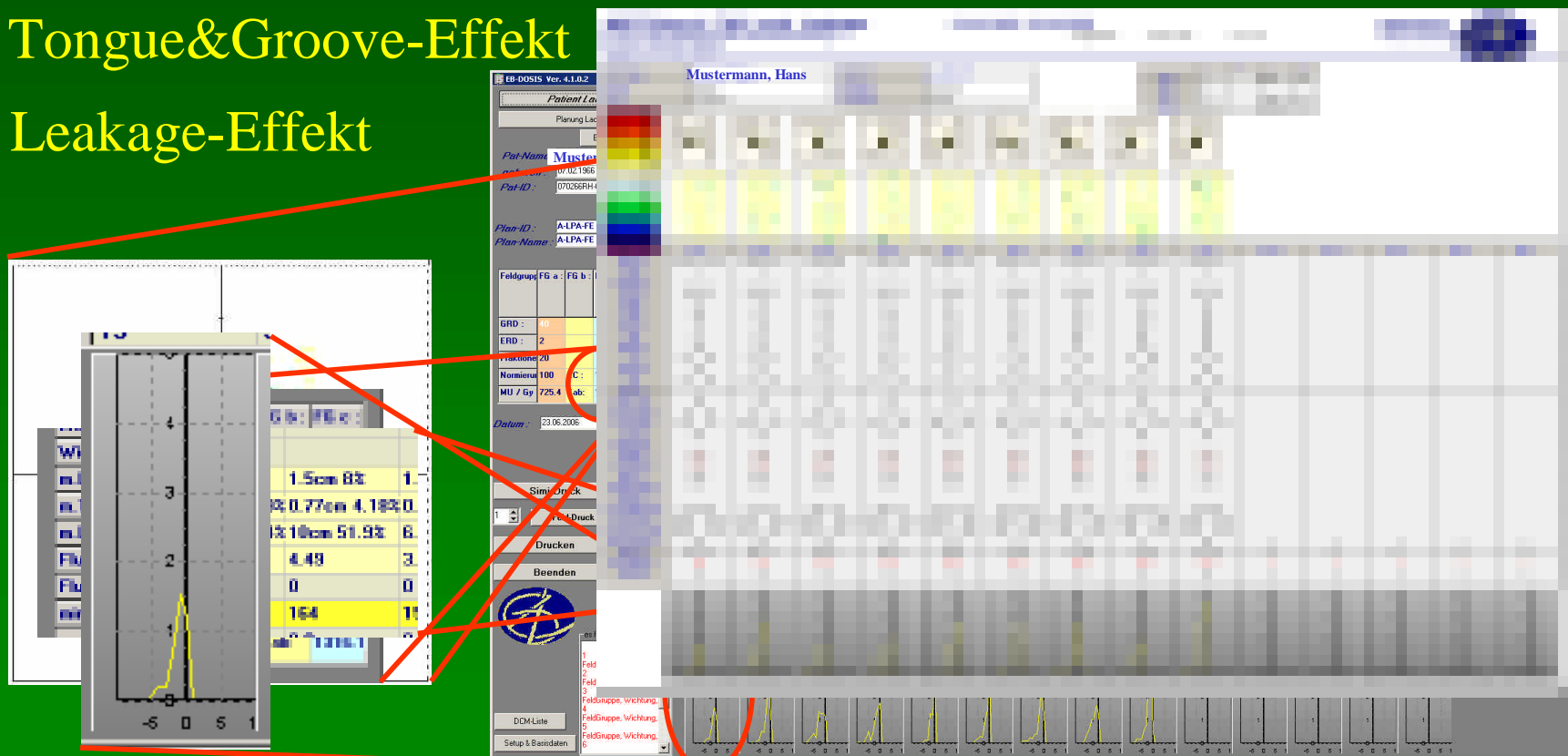
X-axis: Anlaufzeit (s)

Dr. Egon Blank  
Ruppiner Kliniken GmbH  
Klinik für Strahlentherapie und  
Radioonkologie  
Pferdellager Str. 28  
16816 Neuruppin  
Tel.: (0389) 39-4336  
email: e.blank@ruppiner-kliniken.de

# Software-Phantom für MLC



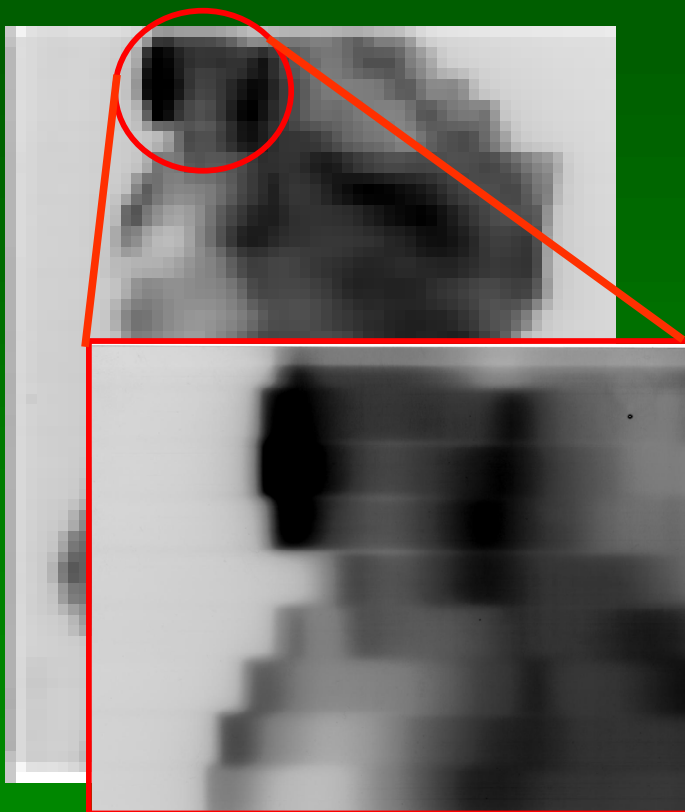
Kontrolle der IMRT-MU's  
Tongue&Groove-Effekt  
Leakage-Effekt



# Anwendung MLC-Phantom



- T&G Film



- T&G MLC-Phantom



# Phantom



## Phantom:

(Zitat Wikipedia)

kommt aus dem ~~griech.~~, ~~franz.~~ und bedeutet **Trugbild**, unwirkliche **Erscheinung**.

Es bezeichnet auch **Nachbildung** eines Körperteils (z.B. für Unterrichtszwecke).

**Empfindungen**, die das Fortbestehen abgetrennter Gliedmaßens suggerieren, beispielsweise den Phantomschmerz....

...

*Siehe auch:* Fantomas, Geist, Phantombild...

~~φαντομ ?~~

φαντασμα



Städtisches Gesundheitszentrum  
an der Ruppiner Straße



Ruppiner Kliniken GmbH - AK IMRT - Heidelberg 2007