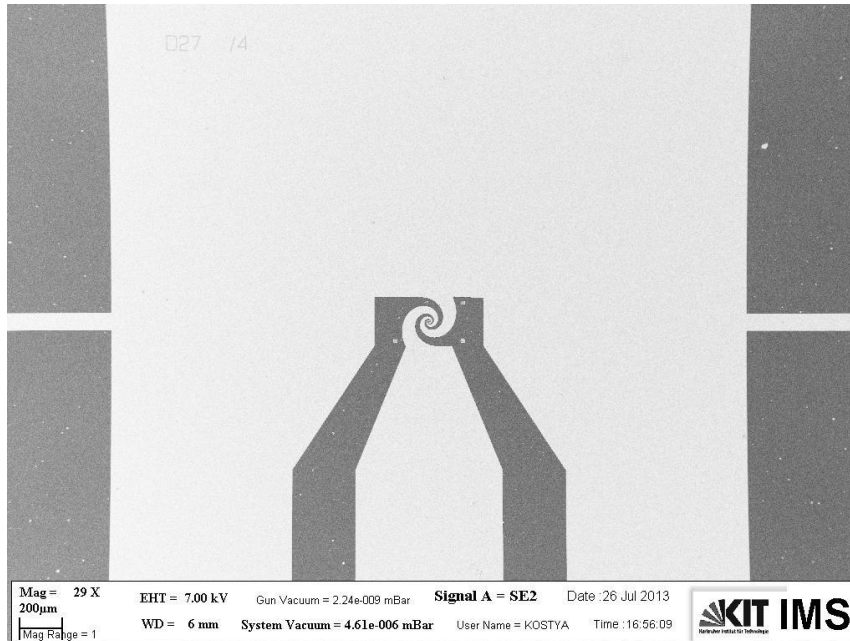


Fast YBCO detector for real-time resolution of picosecond THz pulses

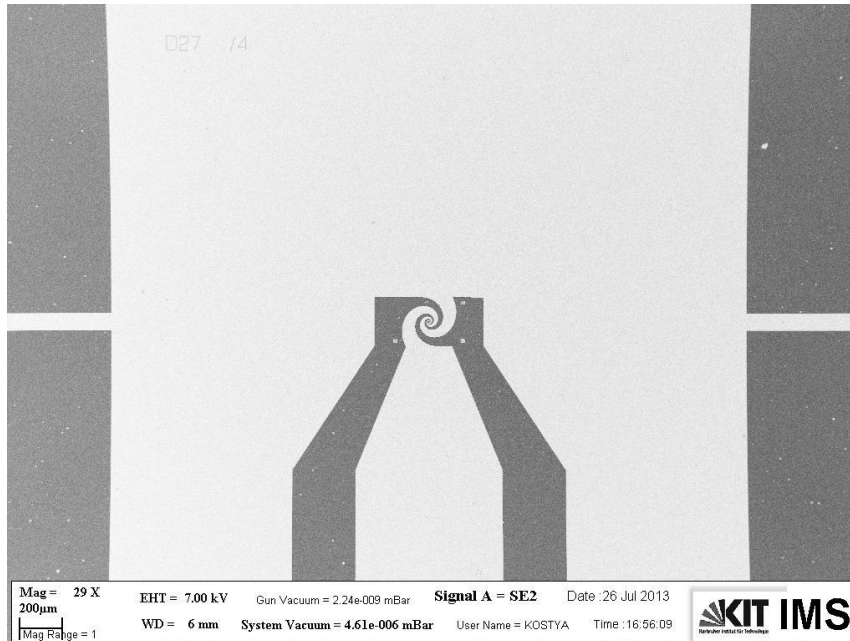
3rd Mini-Workshop on Longitudinal Diagnostics for FELs, Karlsruhe
Juliane Raasch

Institut für Mikro- und Nanoelektronische Systeme (IMS)





Picosecond response time & Electrical field sensitivity



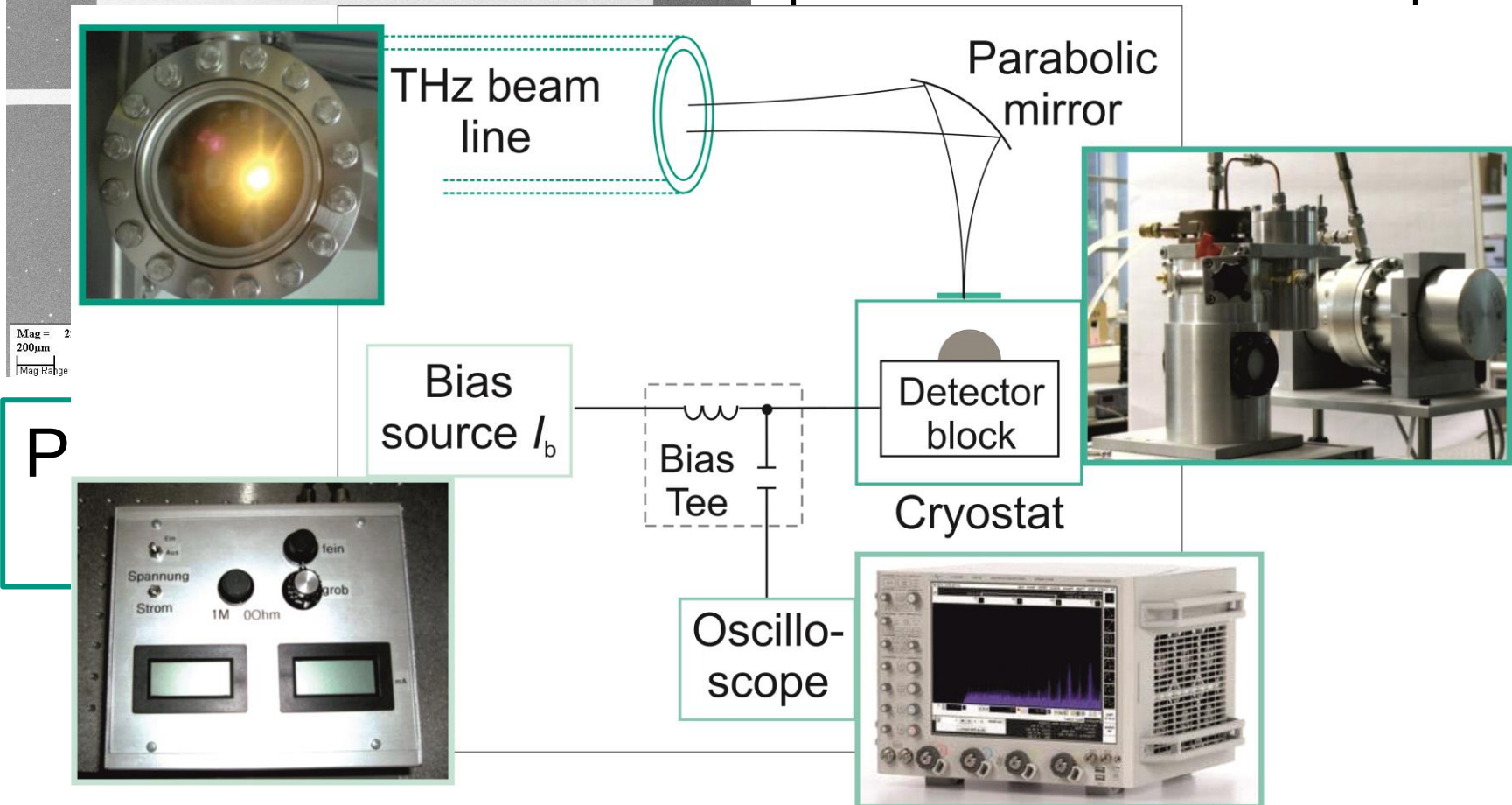
Picosecond response time
Electrical field sensitivity

Detector block:



THz signal

Detector block:



Detector block:

THz beam
line

Parabolic
mirror

Bias
source I_b

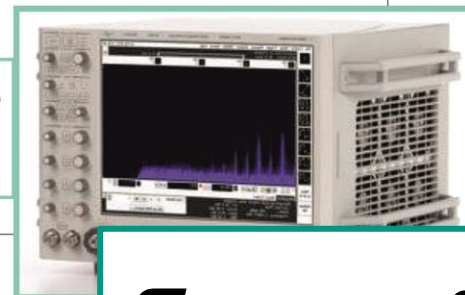
Bias
Tee

Detector
block

Cryostat

Oscillo-
scope

$$\tau_{\text{FWHM}} \approx 15 \text{ ps}$$



Mag = 2
200µm
Mag Range

P

