

Photonics *and* Crime Scene Investigations

EPIC Online Technology Meeting On Photonic Systems for High-en Research



02 november 2020

J.W. Hansté MSc. BSc

Scientific Forensic Investigator and Researcher

Dutch National Police Agency

Unit Special Operations

Department for Technological Development & Expertise



« waakzaam en dienstbaar »

POLITIE

Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

Investigate is what I do best, but will I find the tech?

Wishes in tech:

- 1) 3D-modelling of Shoeprints;
- 2) 3D-modeling of Toolmarks;
- 3) Visualisation of Gunshot Residue (GSR);
- 4) Detection of specific metals.

Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research



◆ 3D modelling of shoeprints:

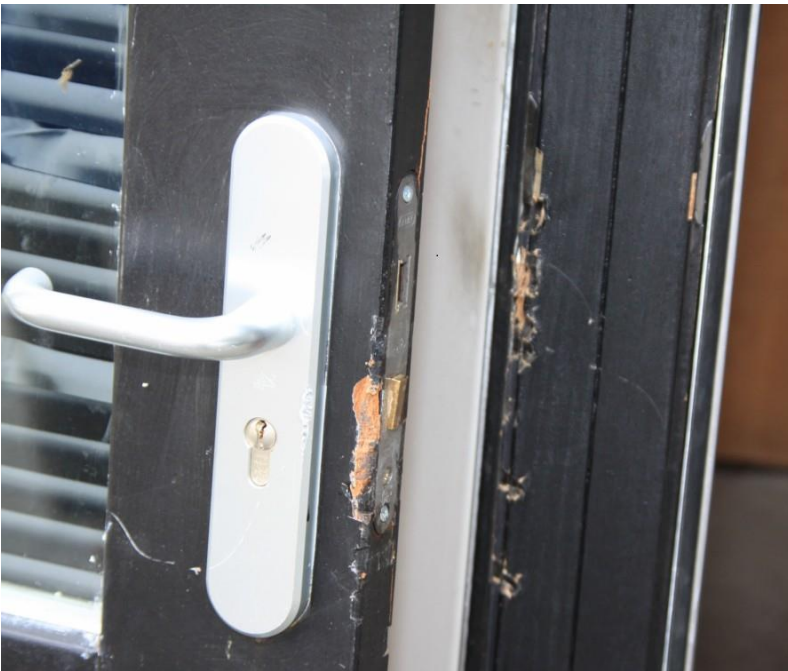


Accuracy: 0,1 mm

Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

◆ 3D modelling of Toolmarks:



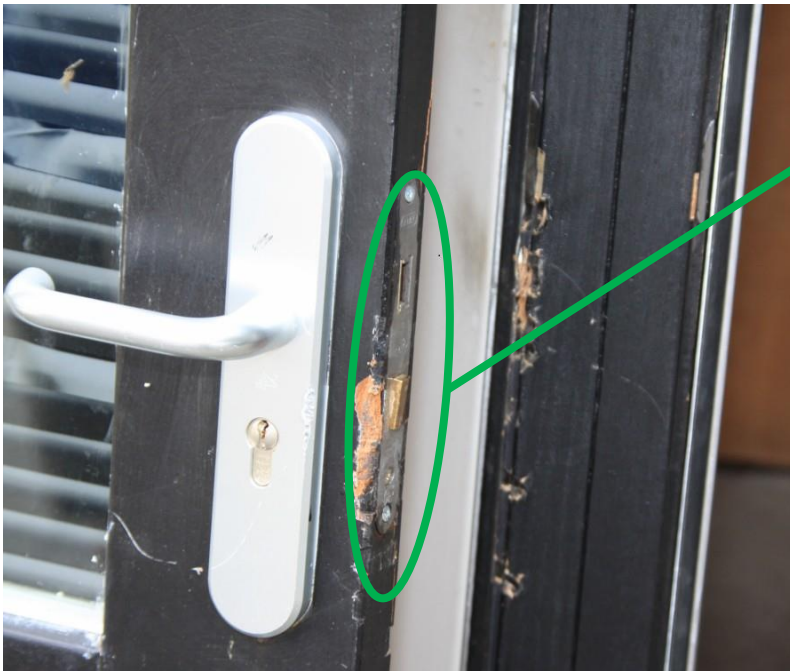
Accuracy: 0,01 mm



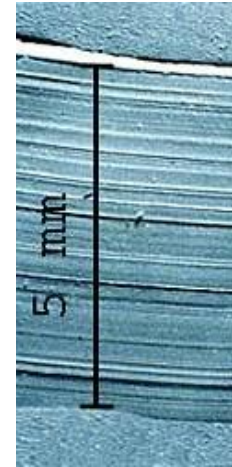
Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

◆ 3D modelling of Toolmarks:



Trace
from
CS:



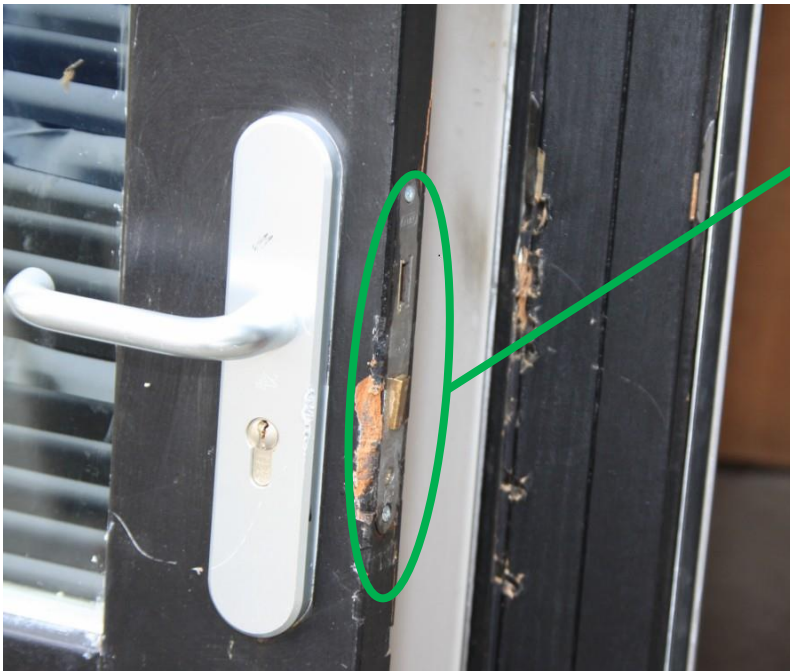
Accuracy: 0,01 mm



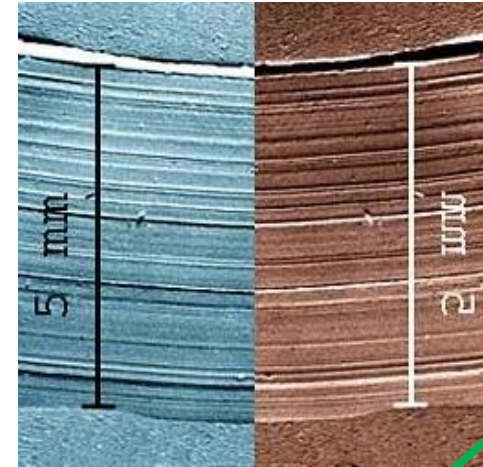
Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

◆ 3D modelling of Toolmarks:



Trace from CS:



Accuracy: 0,01 mm

Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

◆ Visualisation of Gunshot Residue (GSR);



Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

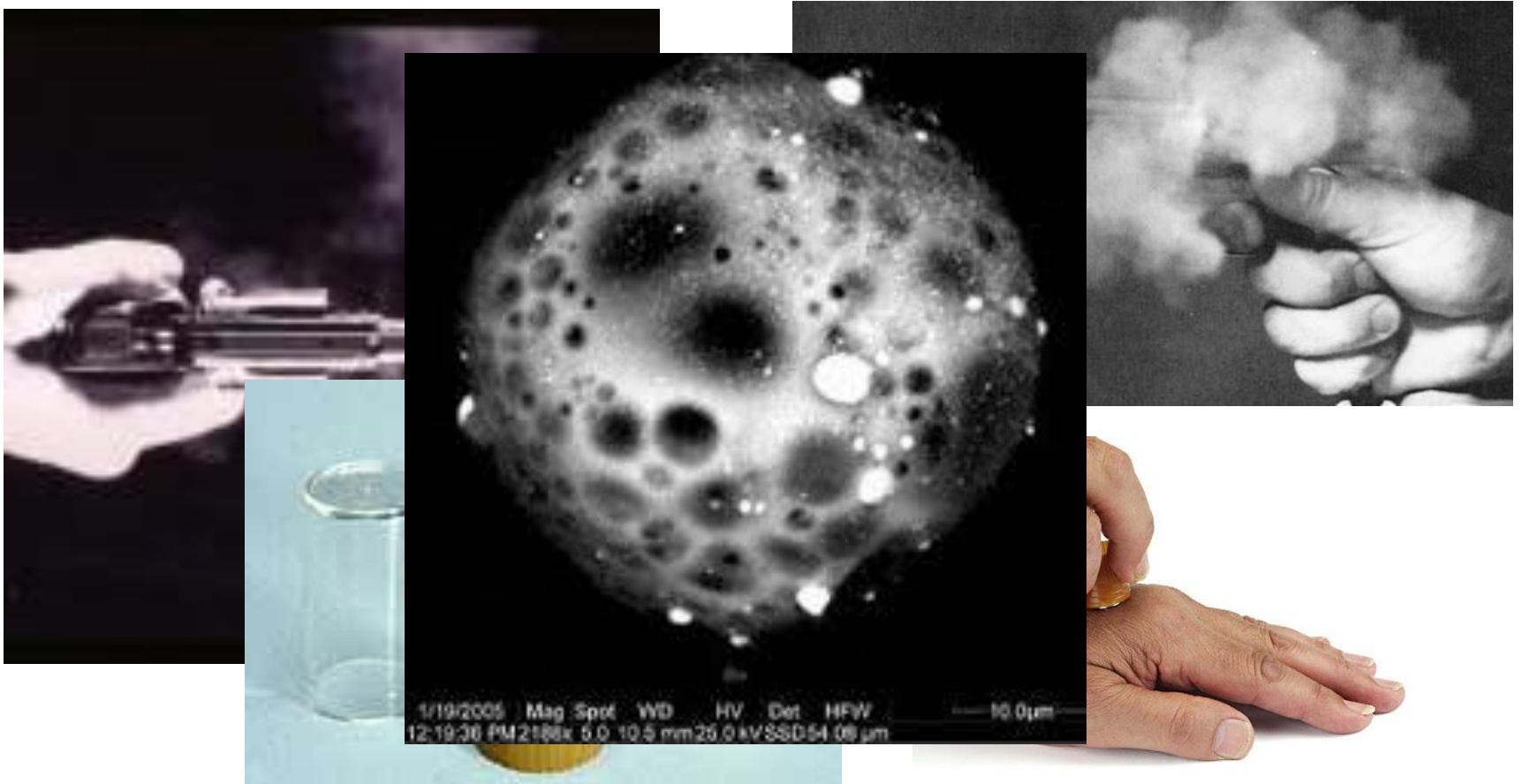
◆ Visualisation of Gunshot Residue (GSR);



Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

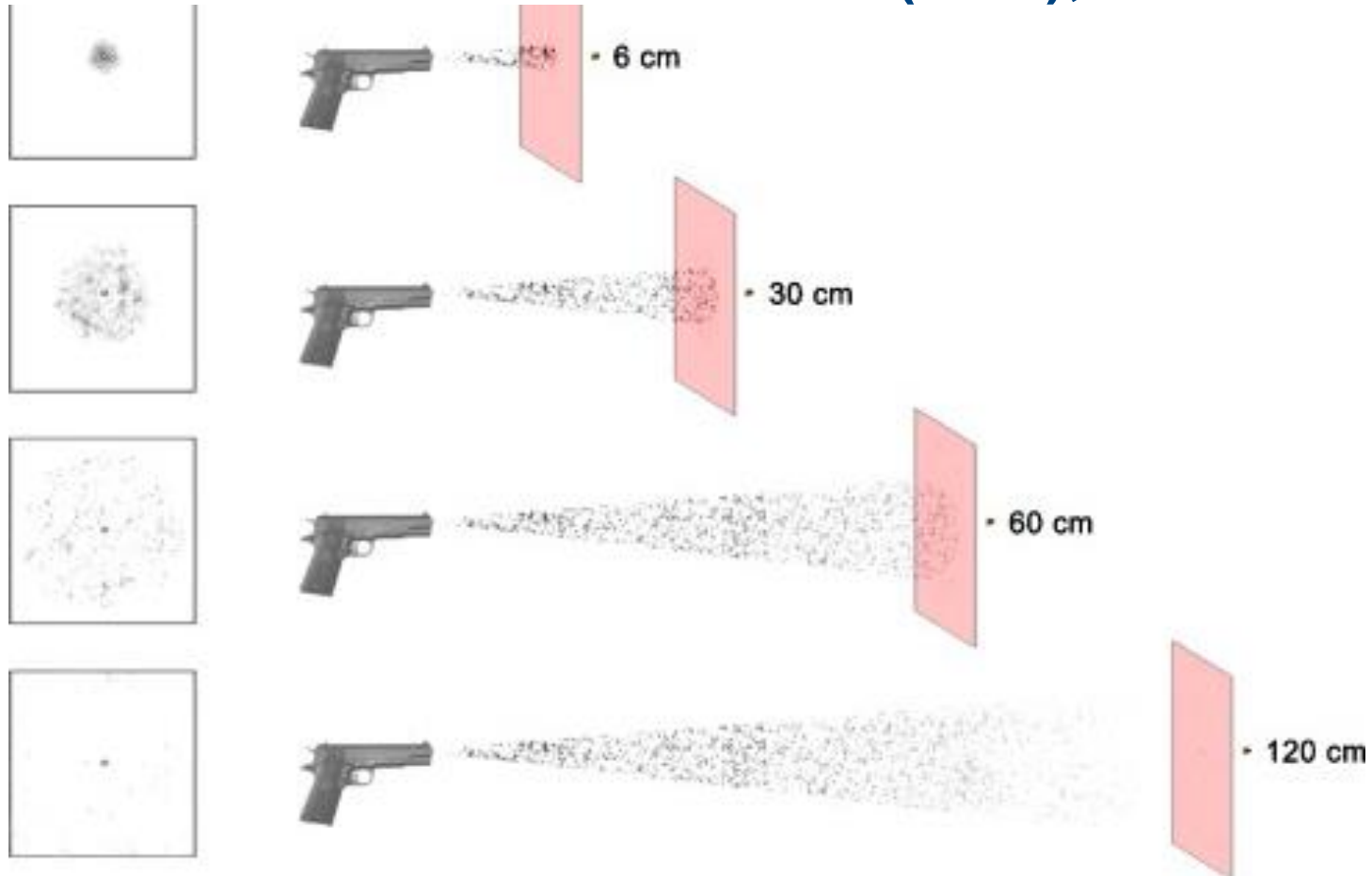
◆ Visualisation of Gunshot Residue (GSR);



Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

◆ Visualisation of Gunshot Residue (GSR);



Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

◆ Detection of specific metals:



Photonics and Crime Scene Investigation

EPIC Online Technology Meeting On Photonic Systems for High-End Research

- ◆ Detection of specific metals:

