

flo-ir

berührungslos messen

Aawasserstrasse 10

CH – 6370 Oberdorf, NW

Tel.: +41 (0)41 871 39 88

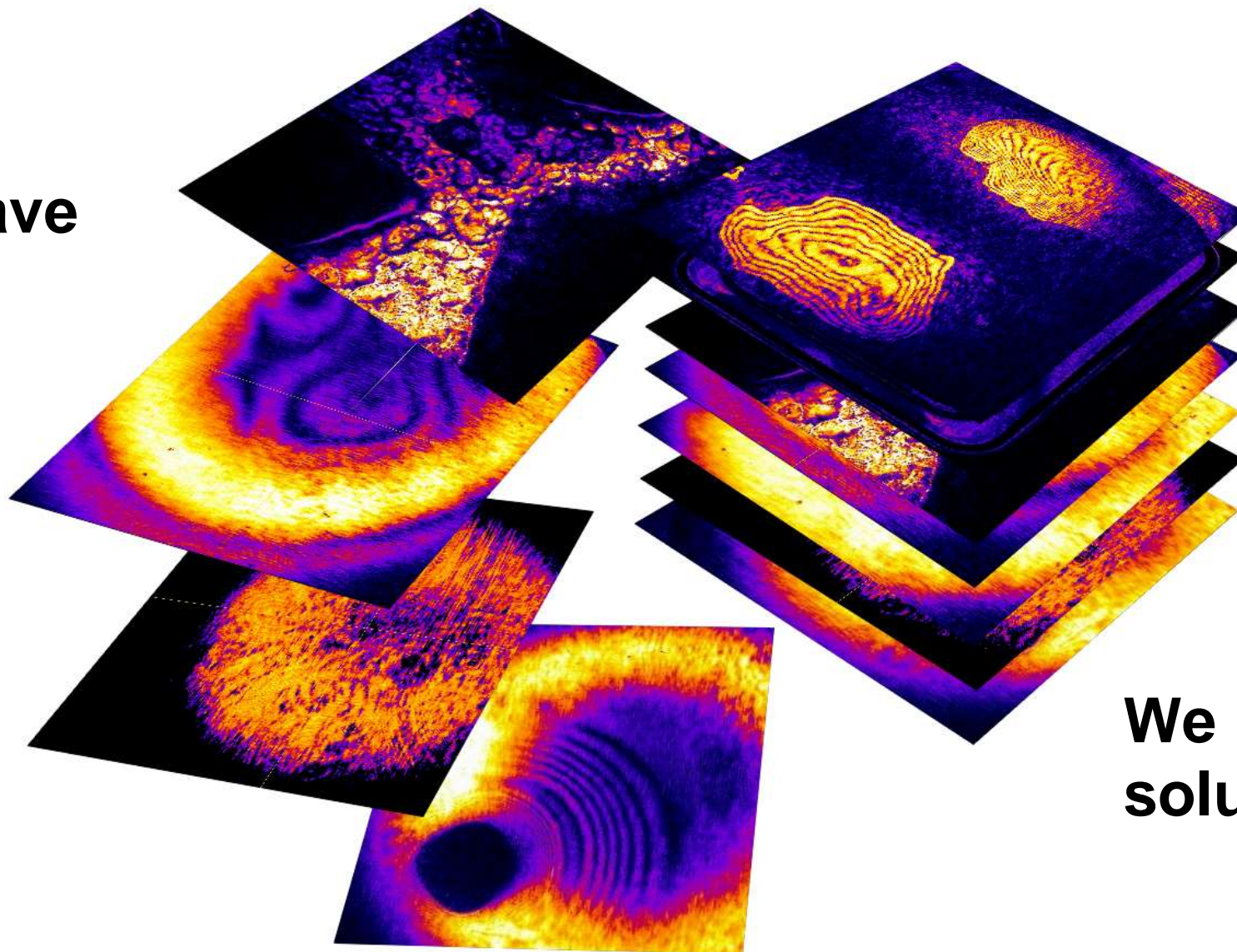
Fax: +41 (0)41 871 39 87

info@flo-ir.ch

www.flo-ir.ch

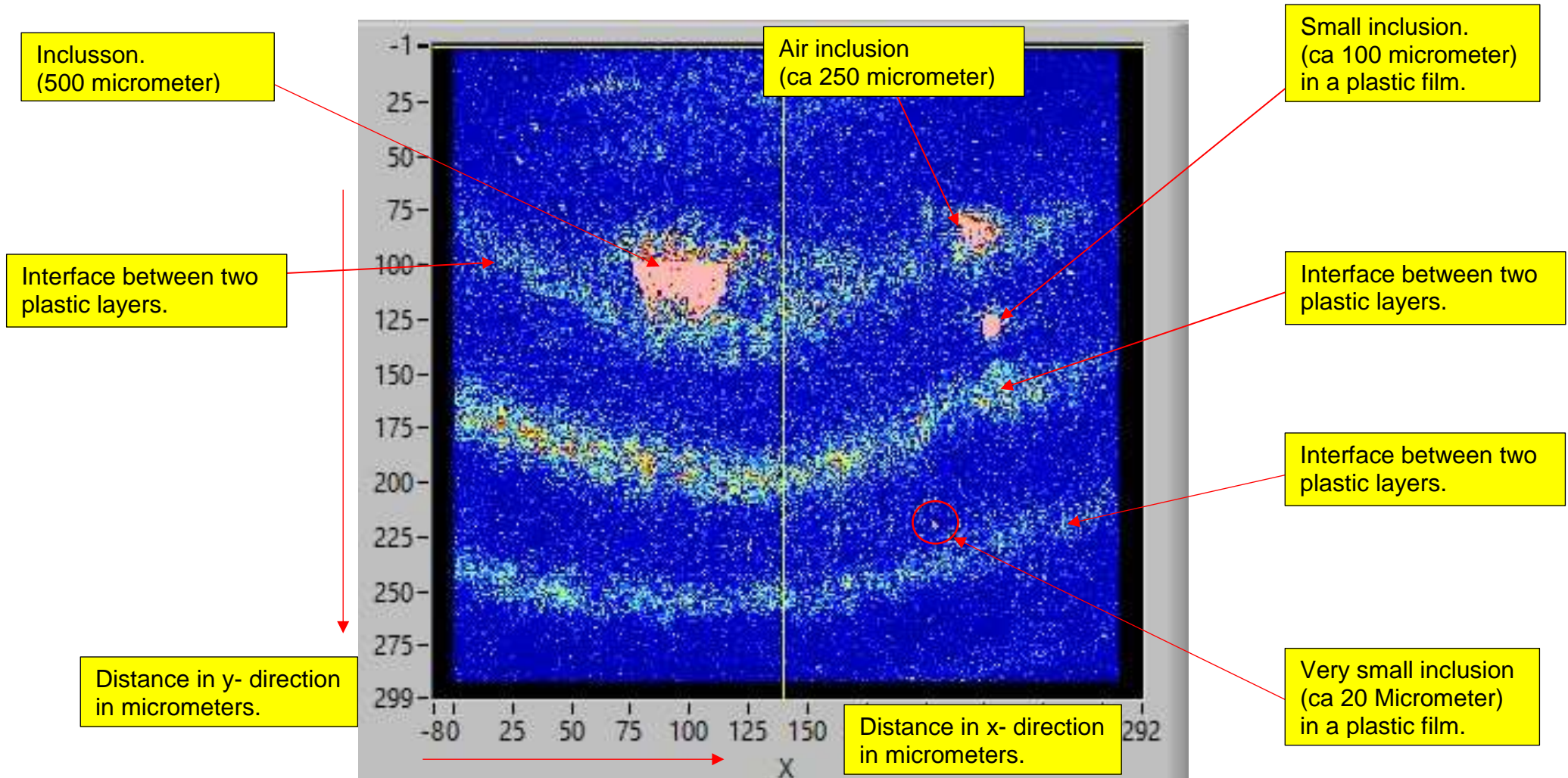


**You have
a task**



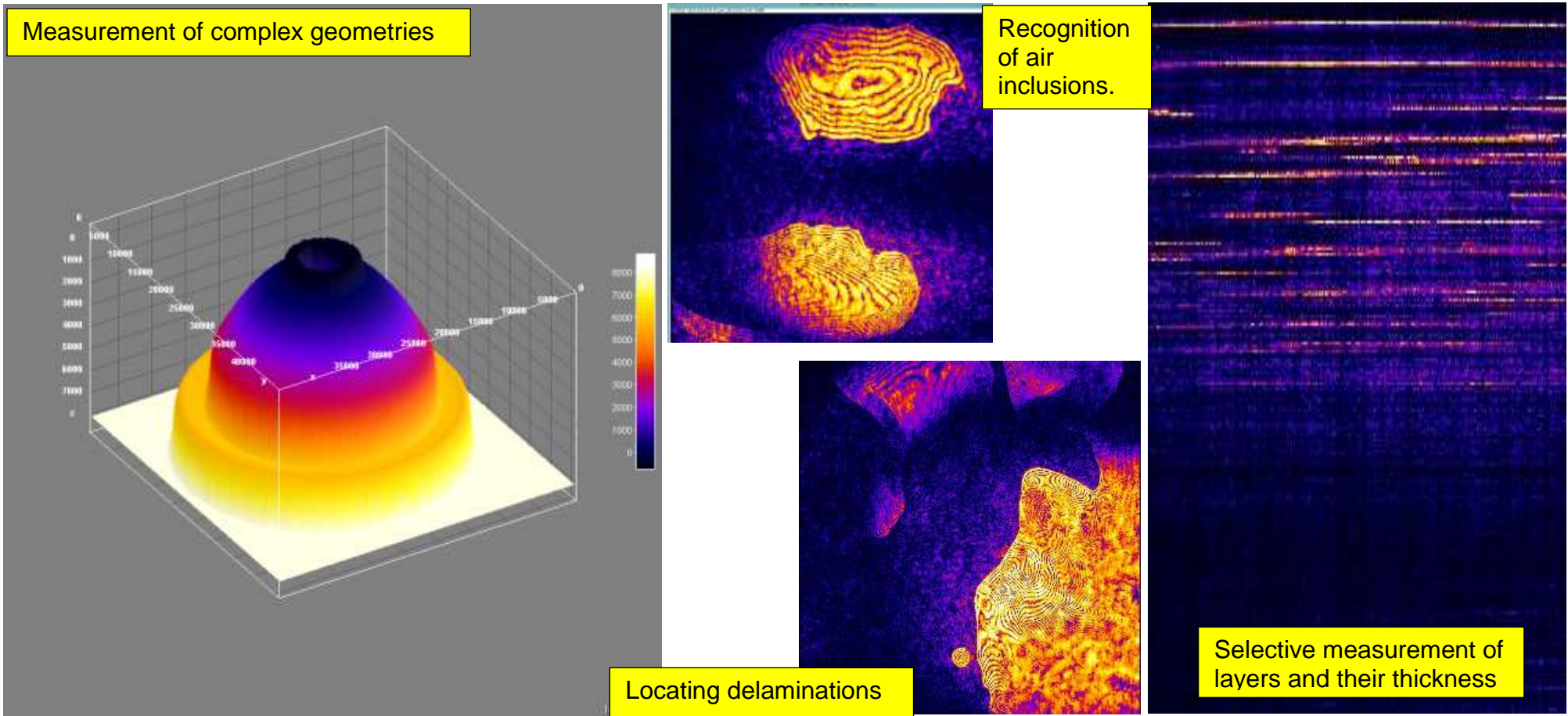
**We have a
solution**

What can be seen in the OCT signal



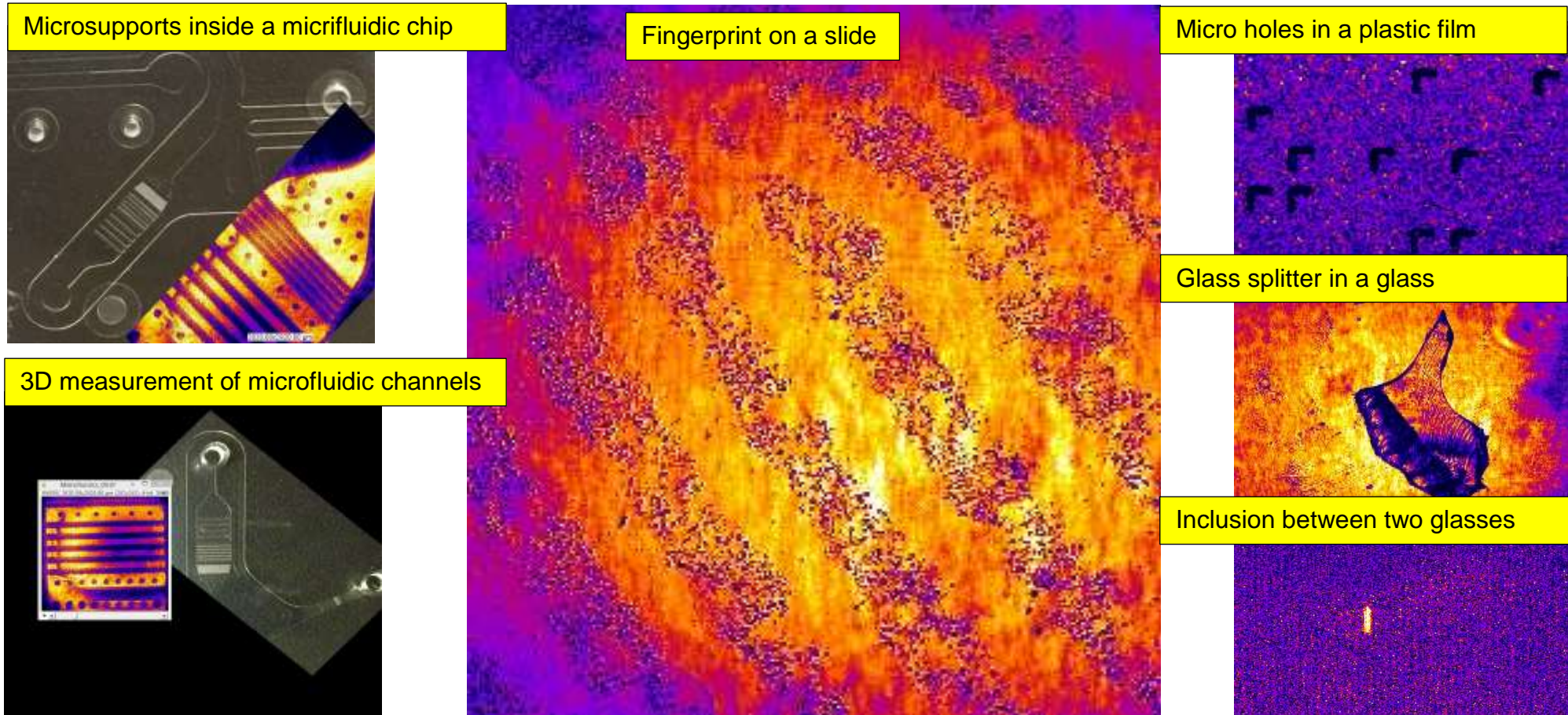
OCT systems differ from conventional camera systems because they show differences in the light propagation time in the form of interference phenomena and do not react to gray-value differences.

Measuring with light - very fast - extremely precise - non-contact



Smallest differences in refractive index are always clearly visible as interference signal!

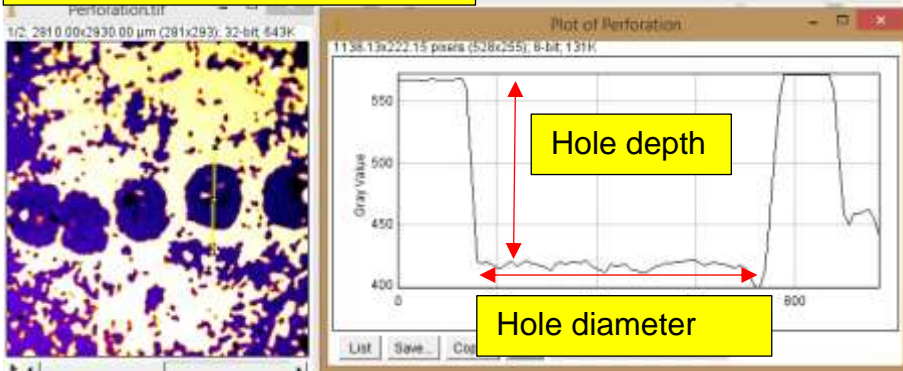
Good visibility - even if it is crystal clear or if it reflects!



Interference signals are produced on thinnest- or highly transparent layers!

Do you already measure with light or still measure tactilely?

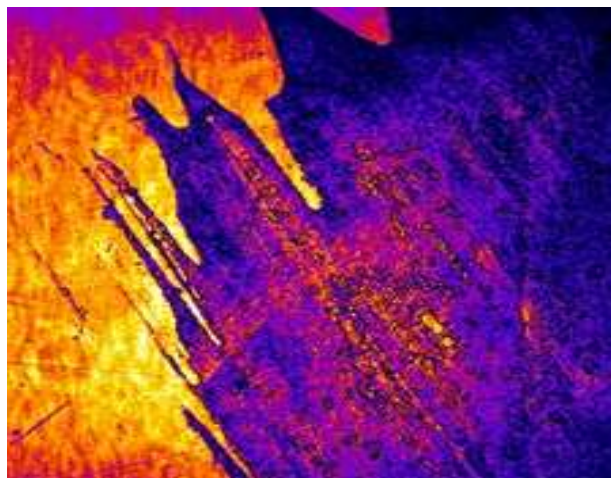
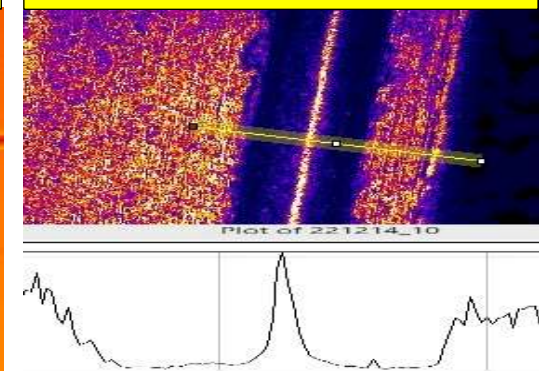
Micro holes measurements



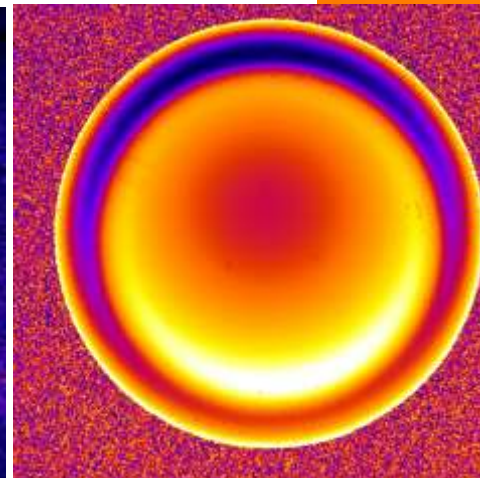
Locating smallest scratches



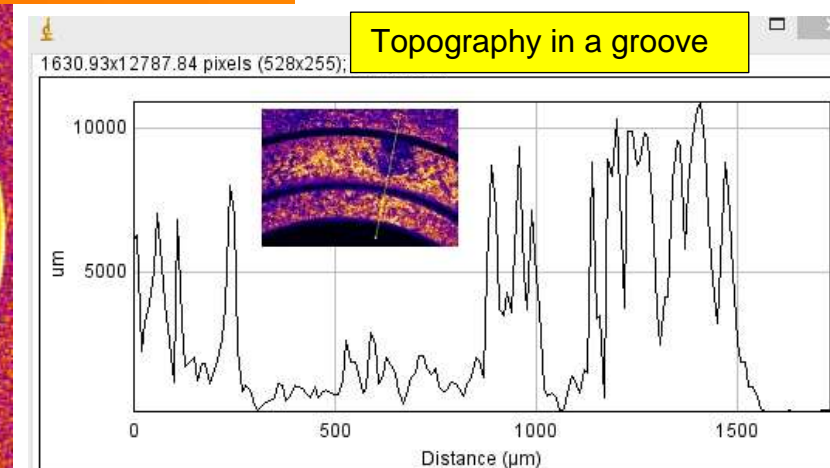
Measuring of finest contours



Measuring of changes on a surface



Visualisation of thickness differences

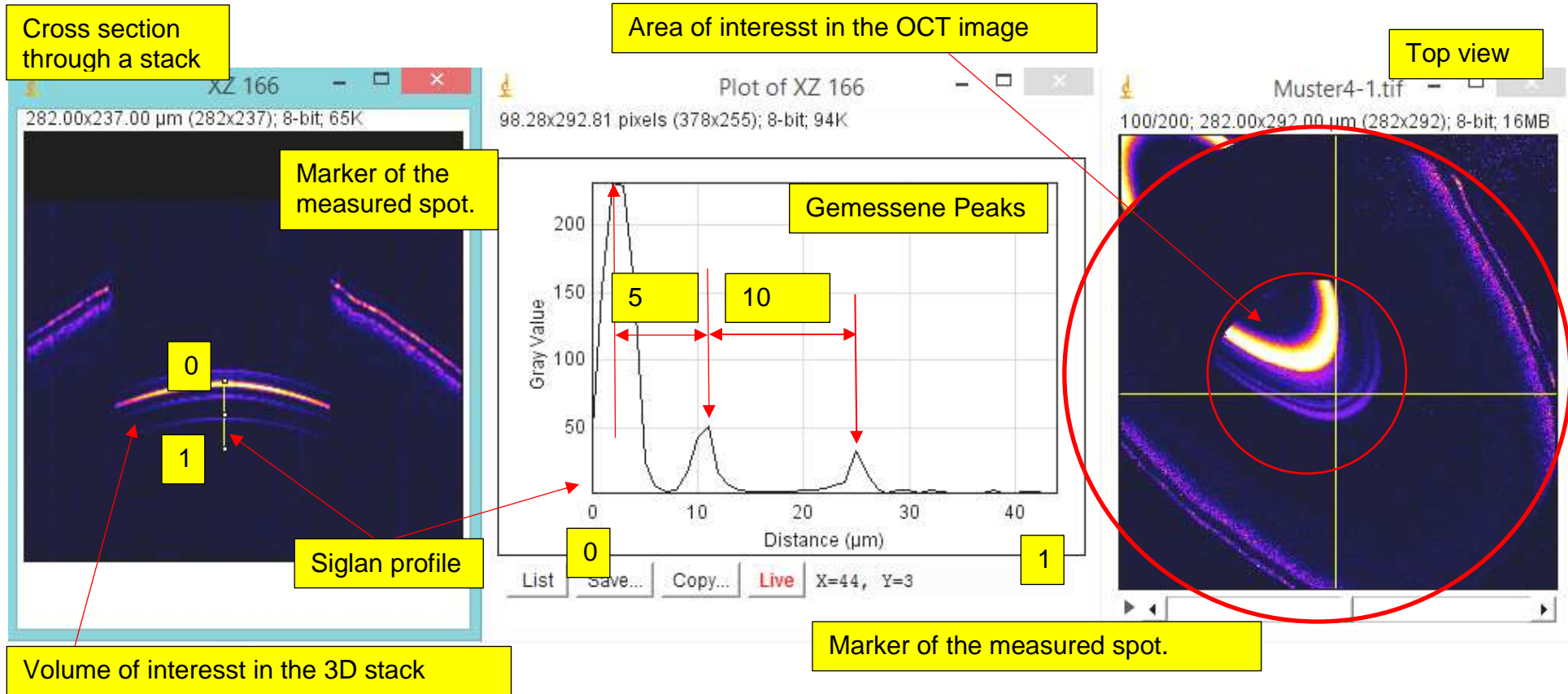


Topography in a groove

Measuring on micro structures

Unlike conventional cameras, OCT systems show differences in refractive index!

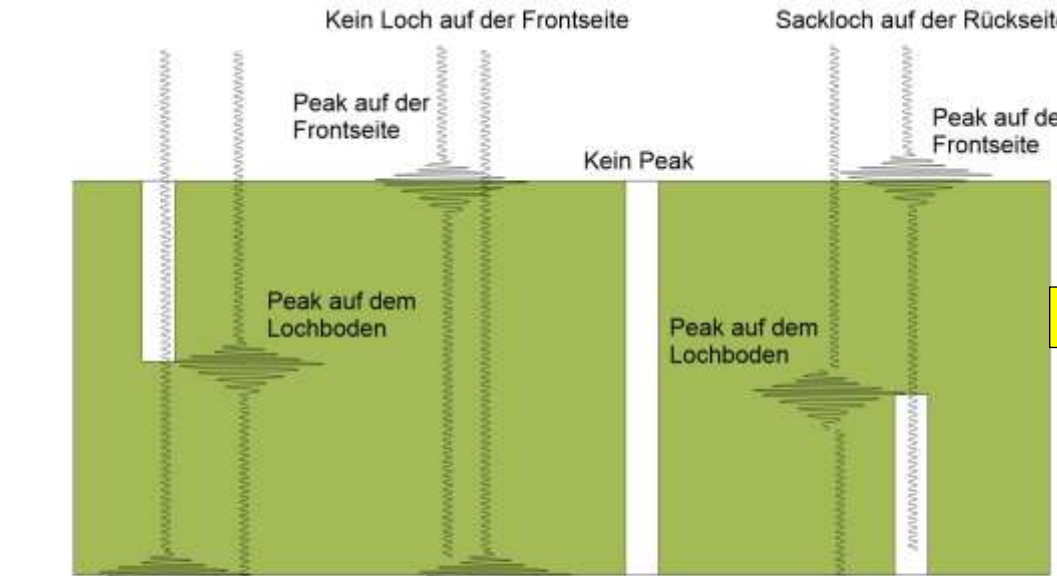
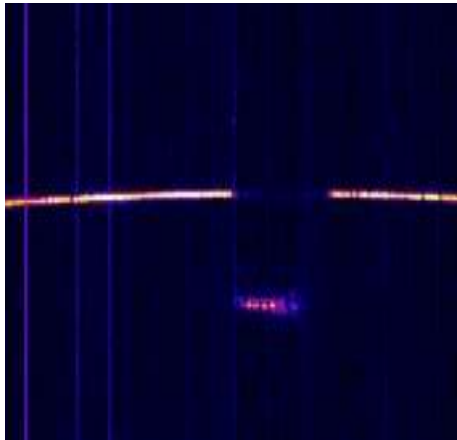
OCT measurement on a coated polycarbonate plate



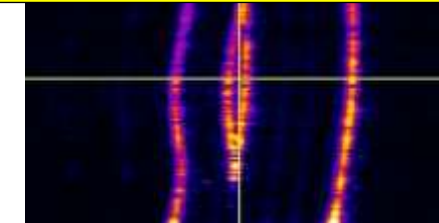
Layer thickness in micrometer = running time of the light / refractive index of the layer penetrated by the light.

OCT systems show more than visualization systems

Micro hole Not continuous



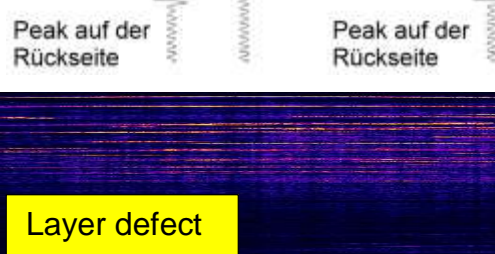
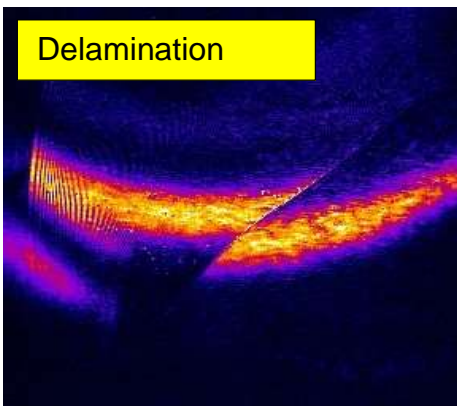
Inclusion



Air inclusion



Delamination



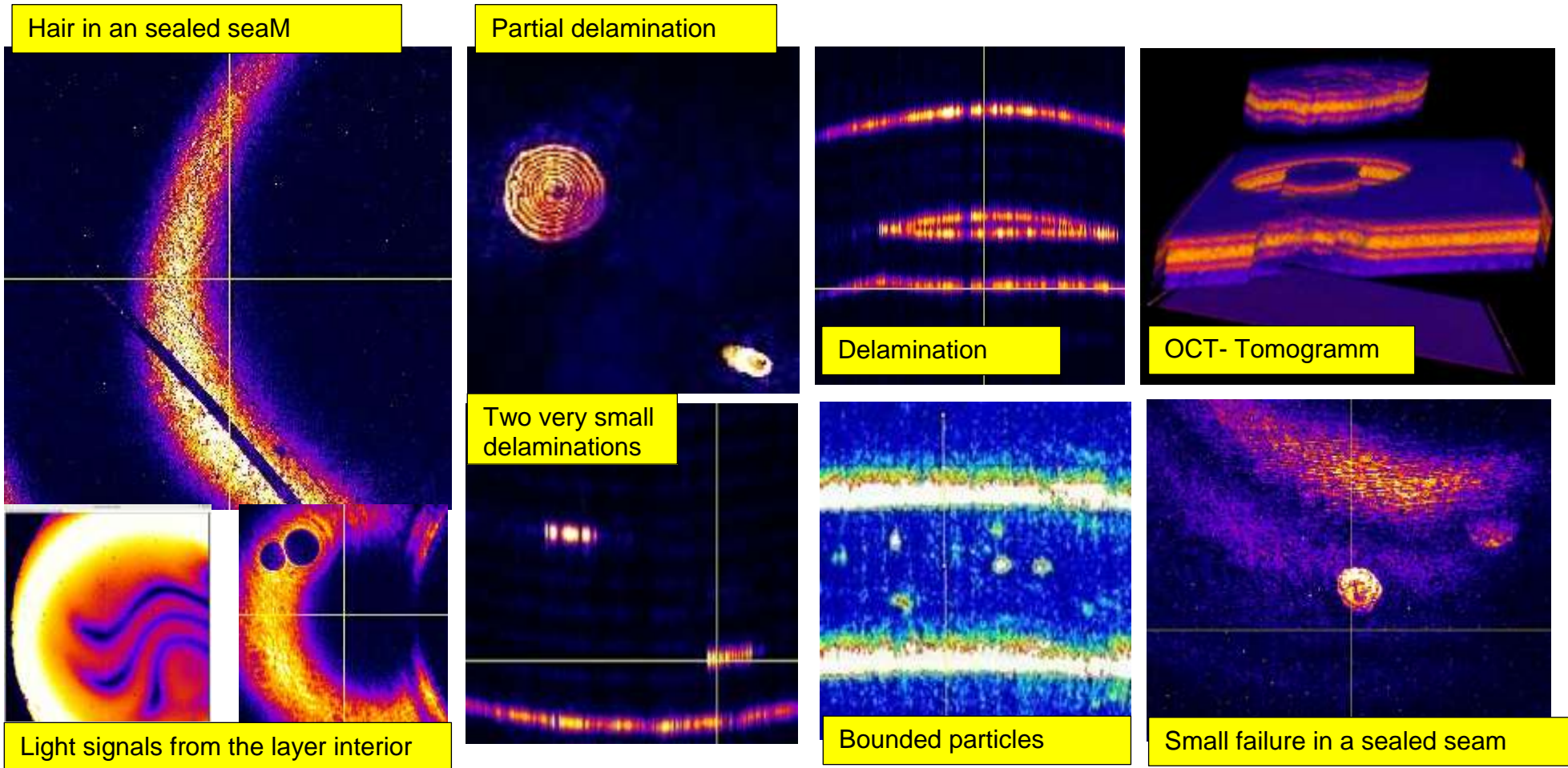
Layer defect



Durchgangsloch

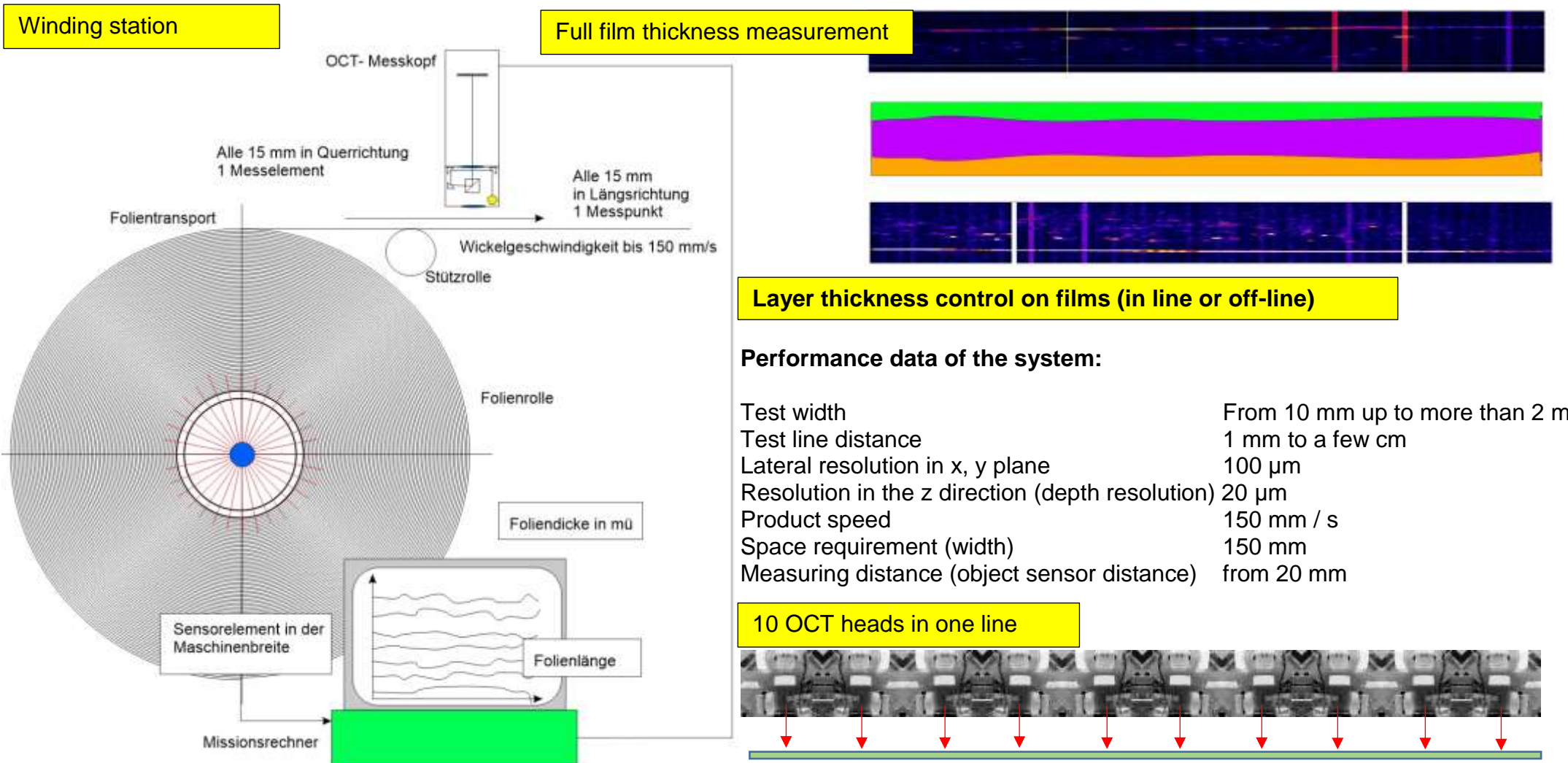
With OCT systems differences in refractive index are determined, not gray value differences!

Measuring with light - very fast - extremely precise - non-contact



OCT systems always show clear signals regardless of the color of the measuring object!

Full film thickness measurement on finished plastic films



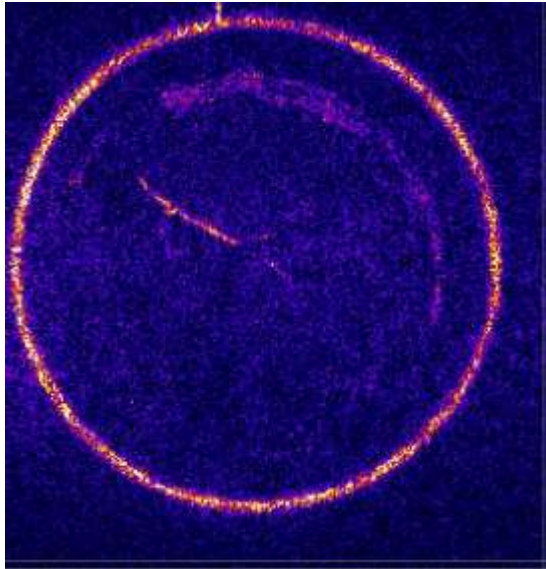
Layer thickness control on films (in line or off-line)

Performance data of the system:

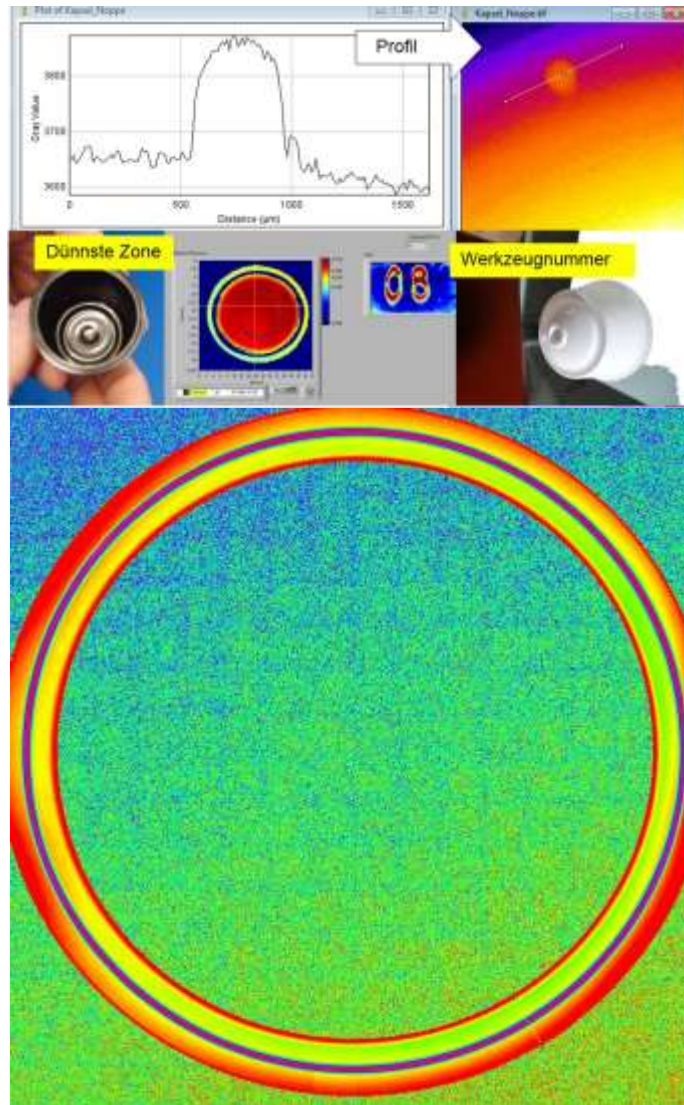
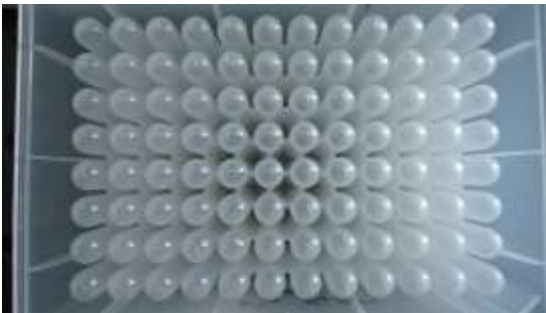
Test width	From 10 mm up to more than 2 m
Test line distance	1 mm to a few cm
Lateral resolution in x, y plane	100 µm
Resolution in the z direction (depth resolution)	20 µm
Product speed	150 mm / s
Space requirement (width)	150 mm
Measuring distance (object sensor distance)	from 20 mm

OCT systems provide significant interference signals at each layer transition in multilayer films.

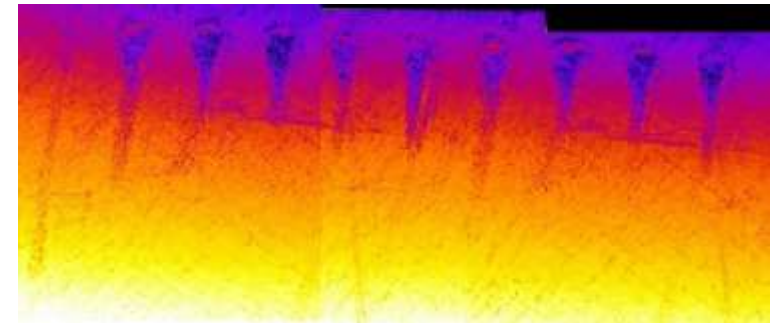
Cracks, bumps and edge defects



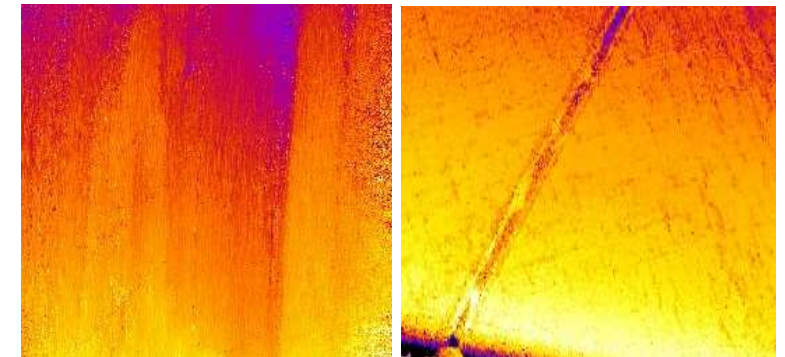
What is not visible with conventional cameras is shown safely and reliably with modern OCT_ systems. The crack in the OCT image above is only 10 micrometers wide.



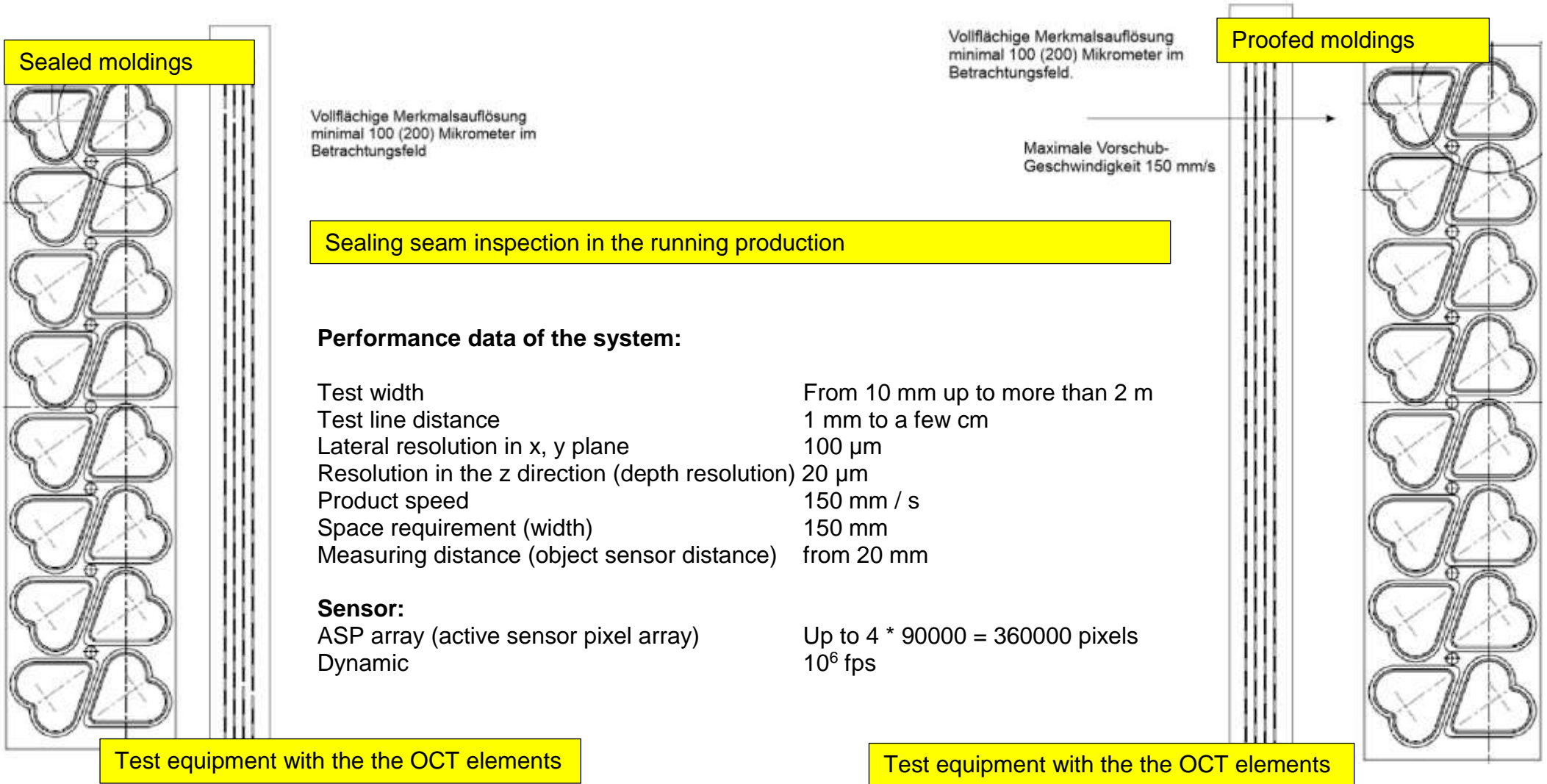
Unevenness on the victorious plane is visible with the OCT method. The OCT image below in the center shows errors in the flatness of the victorian plane. The picture gallery on the left shows differences in the thickness of thermally formed components.



Is it a scratch, a crack or just a discoloration? With the OCT method such questions can be answered exactly. The OCT image above shows a finest unevenness on a surface, the OCT image in the lower left shows thickness deviations in the μm range and the picture in the lower right shows a scratch.

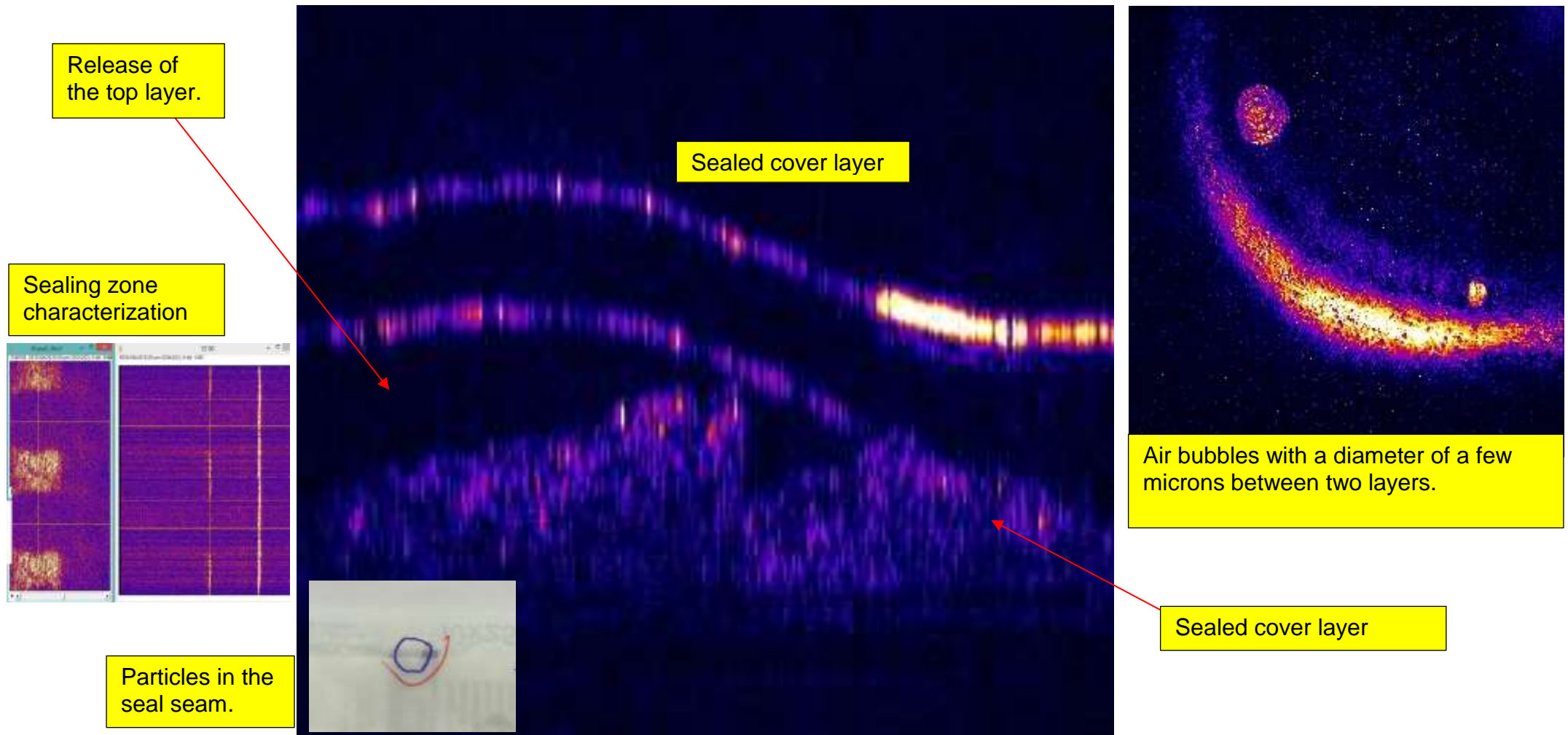


In line testing of sealing seams



OCT systems provide information on the quality of layer systems or peel off films.

Inspection of a seal seam in the running production.



OCT measurements provide extremely accurate results at maximum speed.

\\WDMYCLOUD\Public\Server\flo-ir\Broschüren\Broschüren fertig korrigiert\Anwendungsbeispiele aus der Praxis_korr_nd_E.docx