



LES GÉOMÈTRES @CERN

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What we don't do...



<https://www.swr.de/blog/diedurchblicker/2014/10/13/huenenburg-auf-der-suche-nach-einer-versunkenen-grossstadt/>

Content

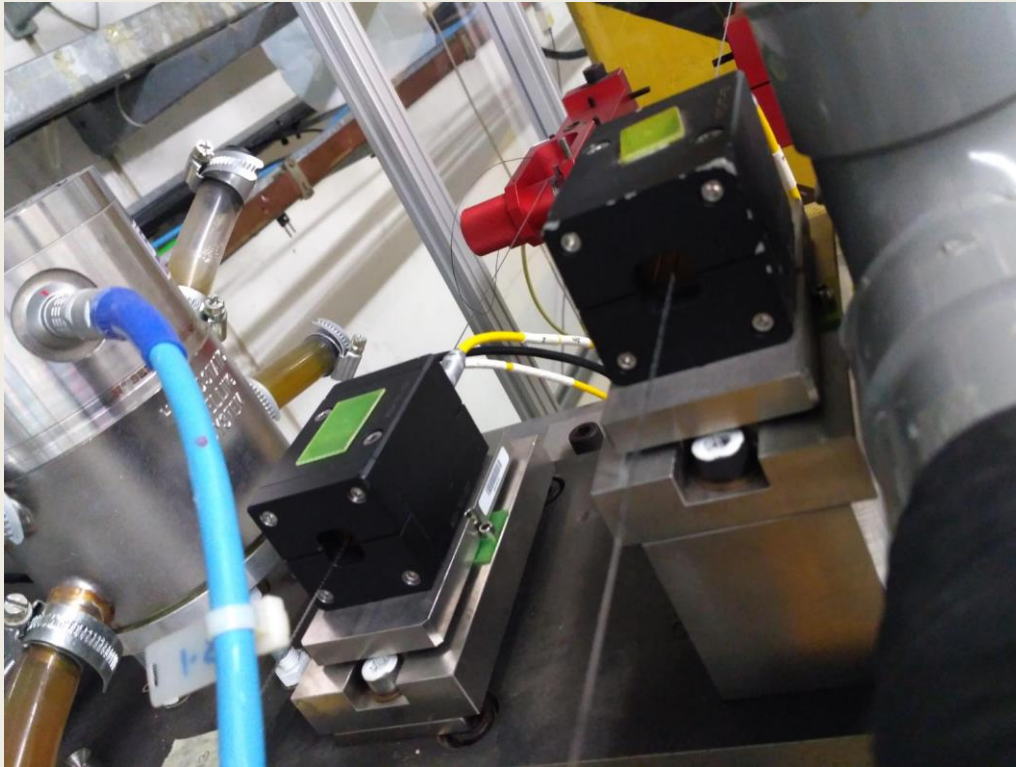
- Area of operations
- Instruments
- Project with Kostas
- What I've been shown

What we actually do

■ The measurement and alignment of objects

- *The position*
- *The orientation*
- *The size*
- *The form*

Instruments



Instruments: Laser



Instruments: Targets

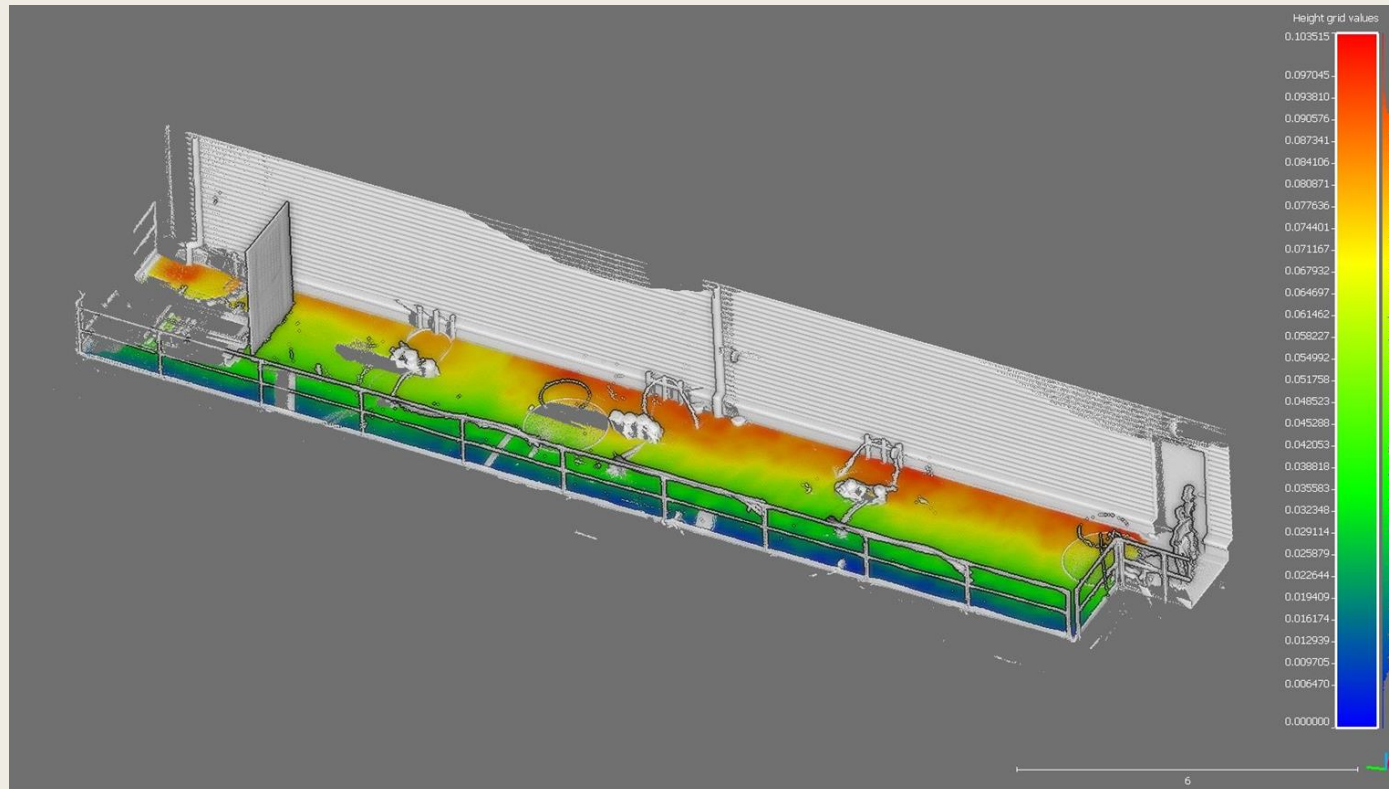


http://www.leica-geosystems.ch/fr/Targets_19143.htm



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Instruments: Software



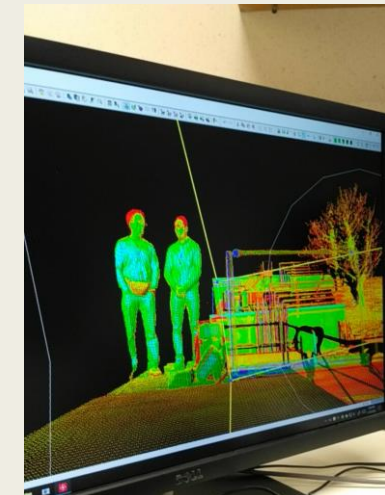
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• Polar 3D scanners integrated in the...
• Range: up to 80 m
• Precision of the point coordinates: 5 mm
• Measures up to 1 000 000 points / sec

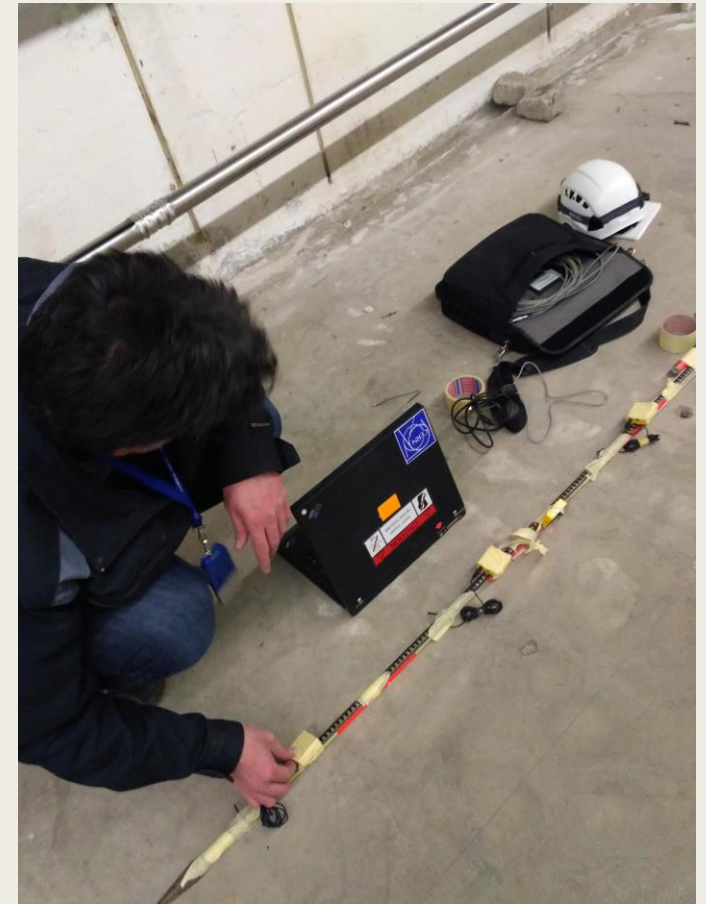
• Used for as built control of buildings and installations.
• Allows quality control for further installations for the integration service.
• Reverse engineering possible starting from Scanner point clouds.
• Trueview allows visualization and measurements on several platform.

• Utilisé pour des contrôles "tel que construit"
• Permet du contrôle qualité pour des installations
• service d'intégration.
• Possibilité de faire l'ingénierie inverse à partir des nuages du scanner.
• Trueview permet de visualiser et de mesurer sur plus

Picture and point cloud from 3D scanner (about 20 m long)
Image of scanner in operation (Trueview scanner 80 m range)



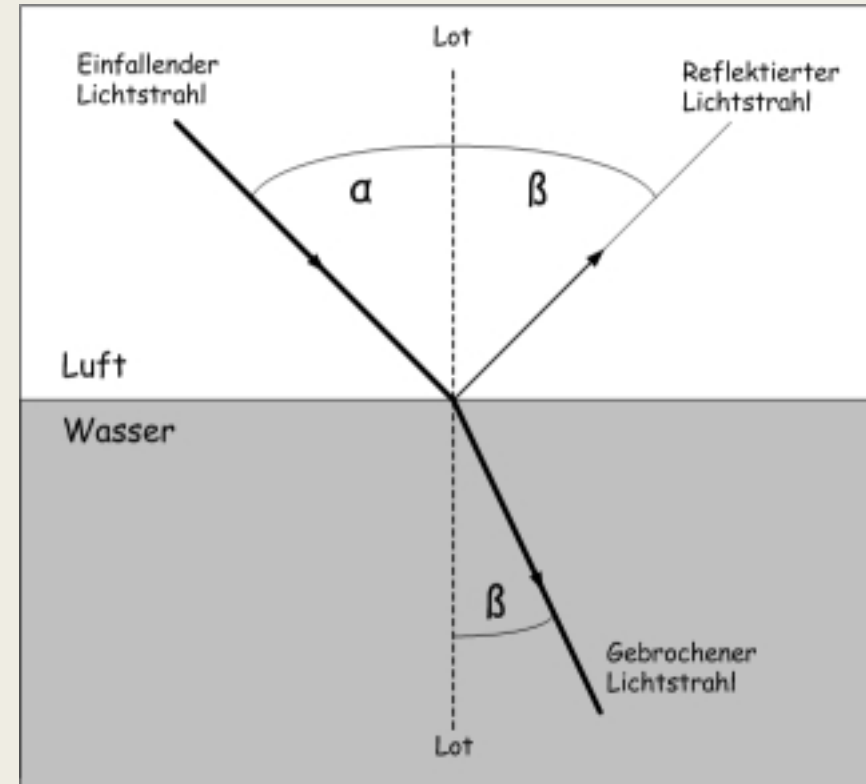
Project with Kostas – Set up



Theory

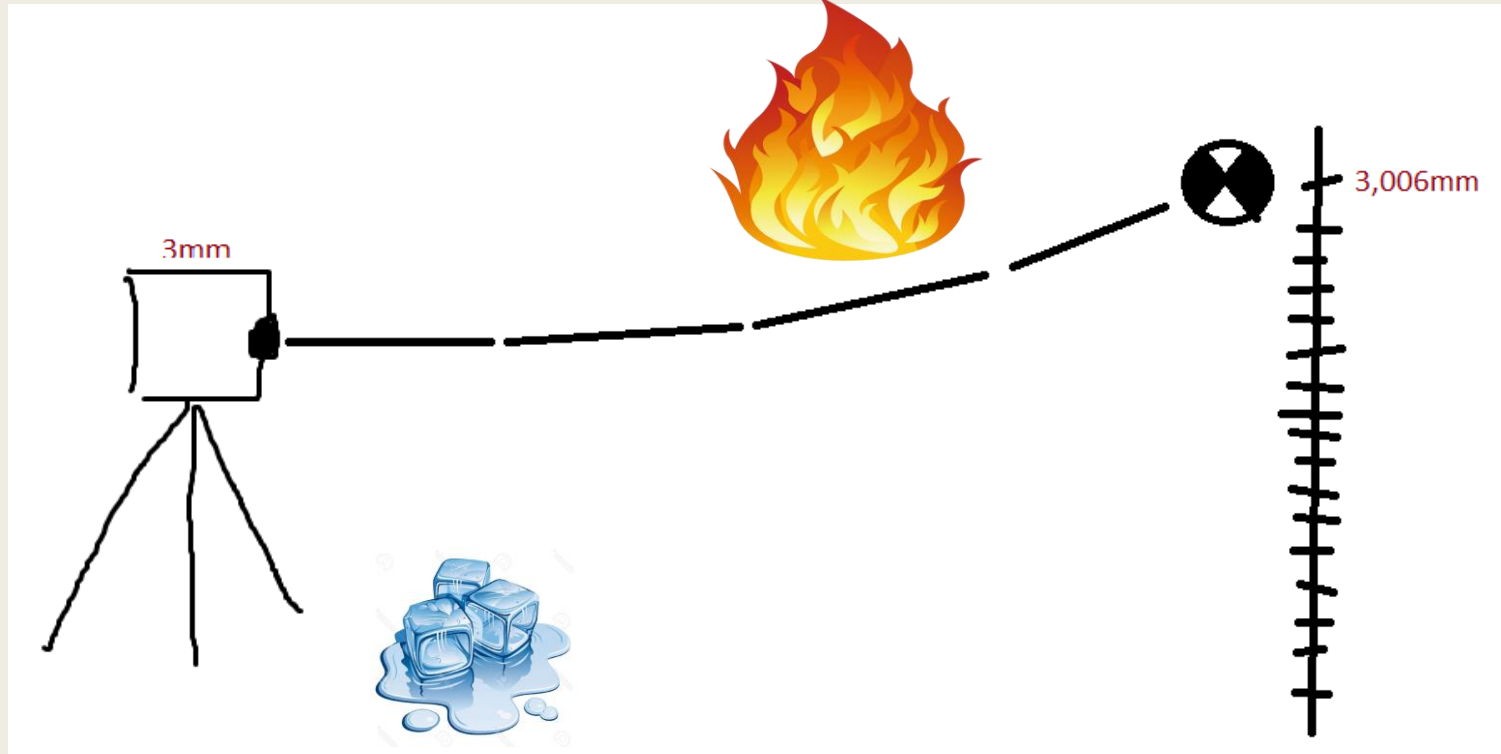


<https://www.leifiphysik.de/optik/lichtbrechung>



<https://macsclassroom53.wordpress.com/tag/lichtbrechung/>

https://gallery.yopriceville.com/Free-Clipart-Pictures/Fire-PNG/Flame_Transparent_PNG_Clip_Art_Image#.WthhPmcUlaQ



<http://lemonize.me/clipart-of-ice.html/clipart-of-ice-many-interesting-cliparts>

Artist: Brook
Tewolde

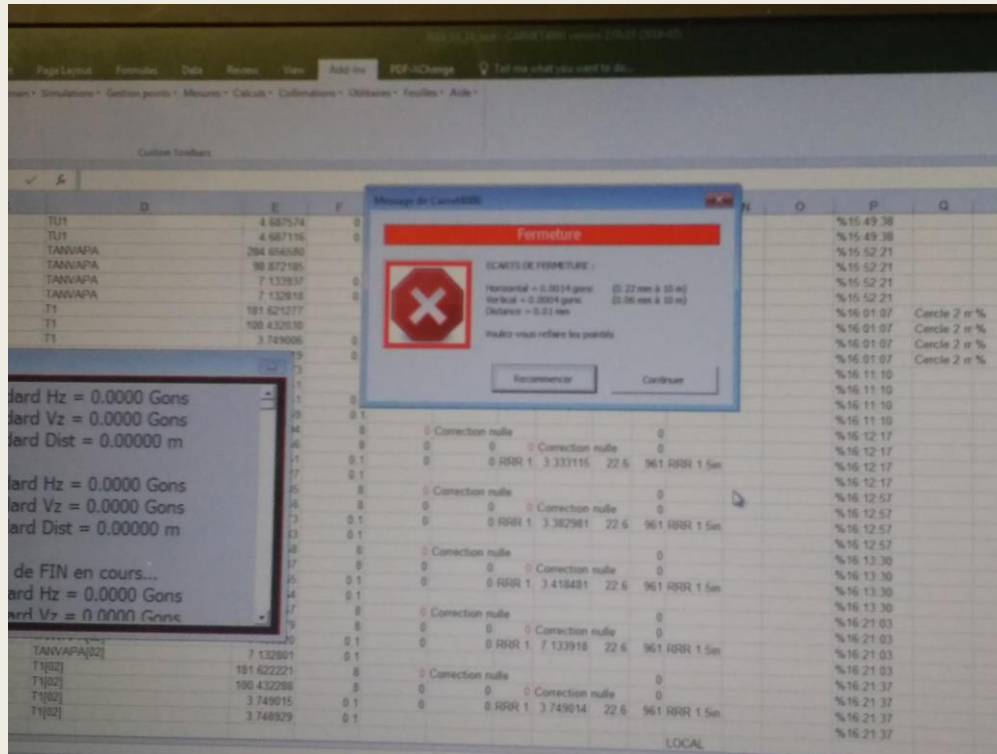
Measurements

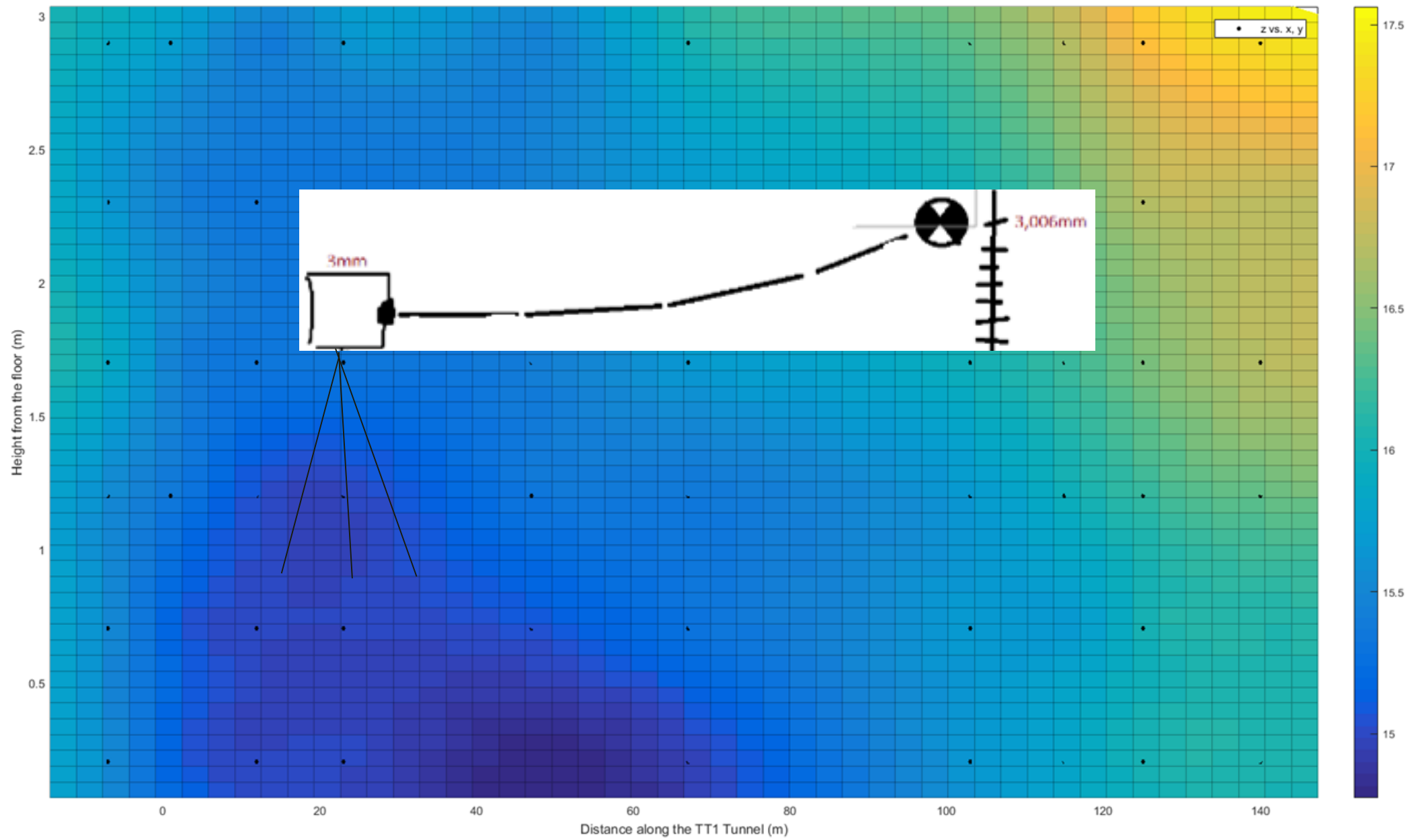


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Troubleshooting





Other experience: LMF



LEIR





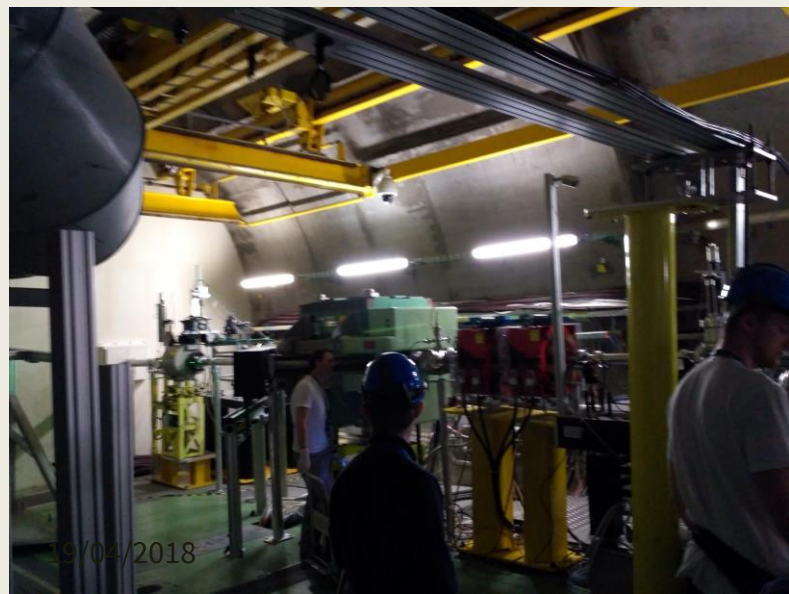
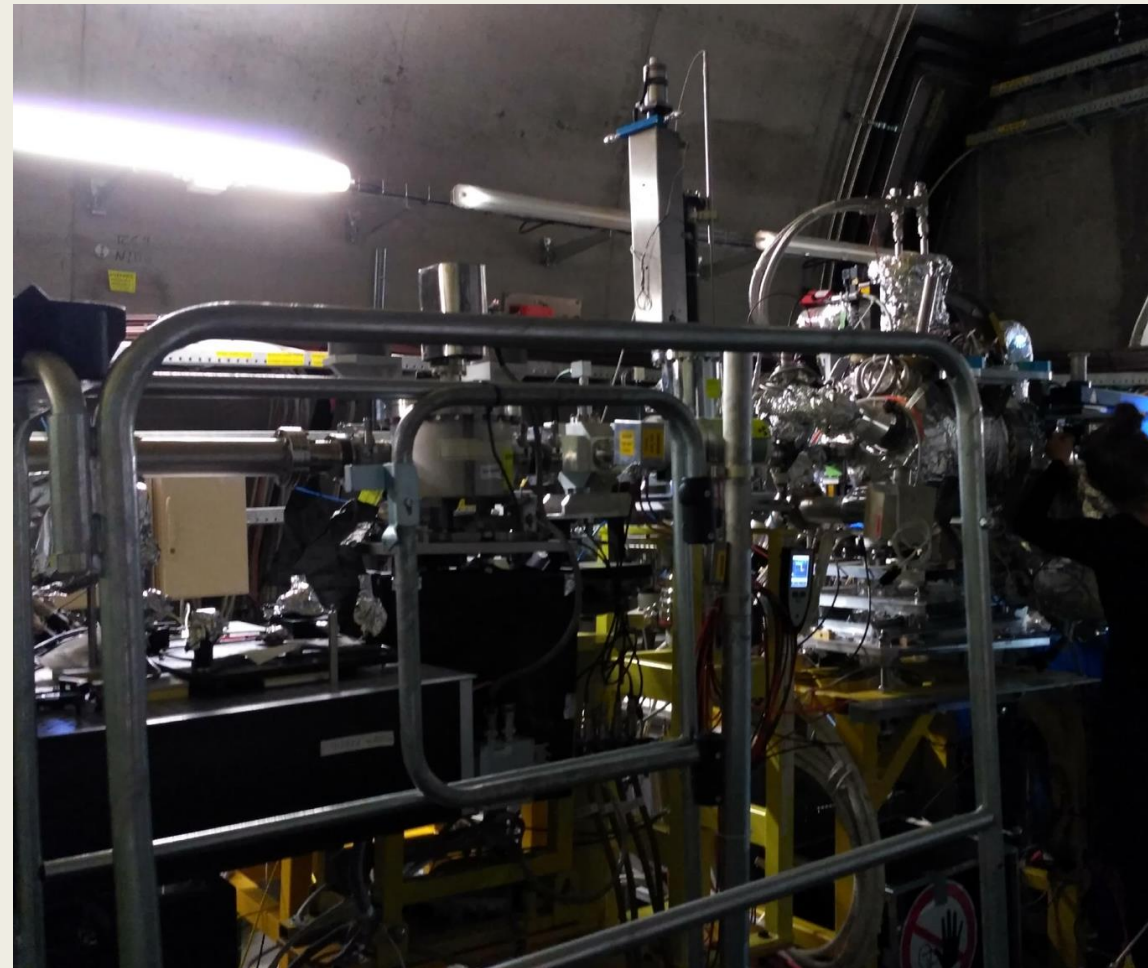
AWAKE



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Thanks for Listening & a big thanks for the great experience

