

update on BRTF measurements

pab gonio-photometer II



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www.pab.eu

www.brtf.info

pab gonio-photometer II

measurement of light scattering (BRDF) and lamps



pab photo-goniometer II

advantages:

- servo drives & control

**increased speed
higher precision**

- arbitrary scan paths

faster measurements

- 15 years BRTF experience

optimized design

- Linux controlled

**direct coupling of
signal and position**

- modular design

adaptable to special needs

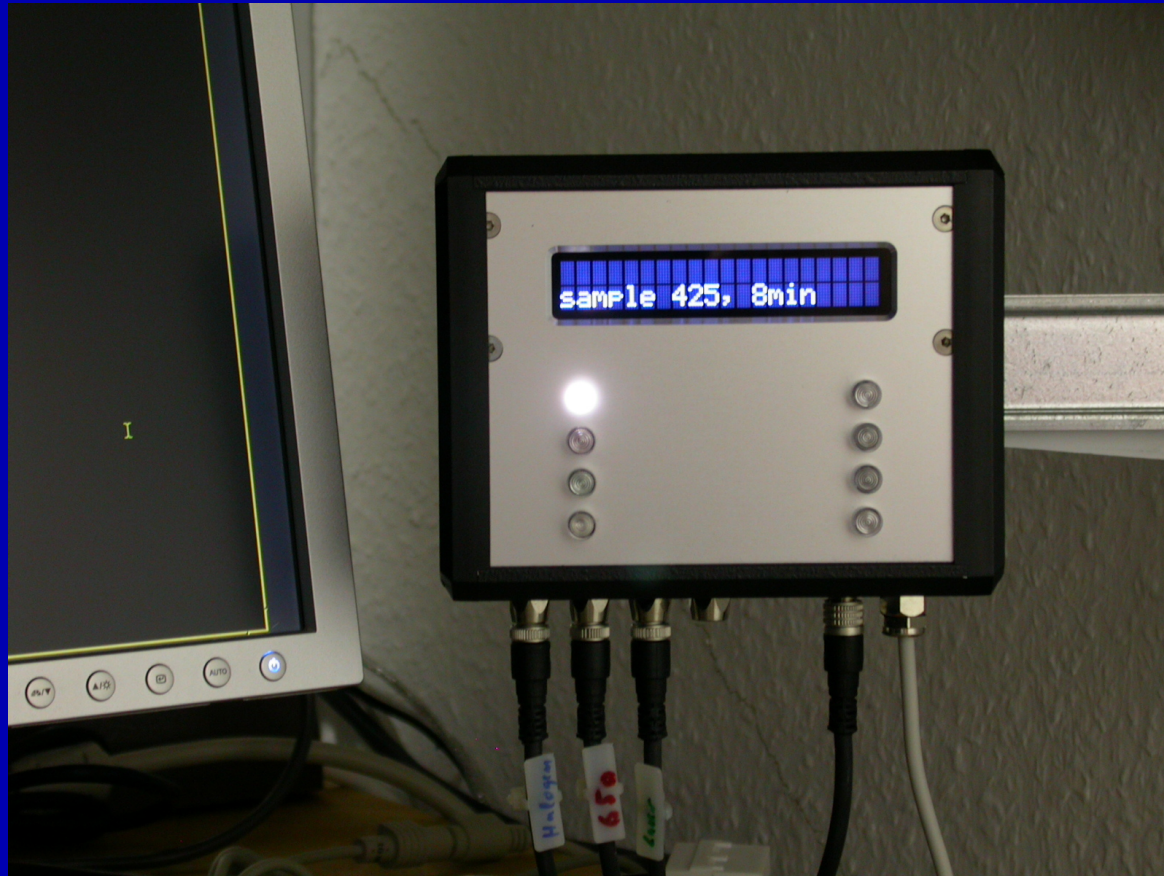
please find more information at <http://www.pab-opto.de/gonio-photometer>

pab-goniometer II news 2006

- **enhanced signal/noise ratio of detector, higher dynamic range**
- **design of sample changer completed, incl sample RFID reader**
- **control of multiple light sources fully integrated**
- **switched from filesystem to database for BRDF data storage**

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minor technical detail: prototype lamp control unit (USB interface)



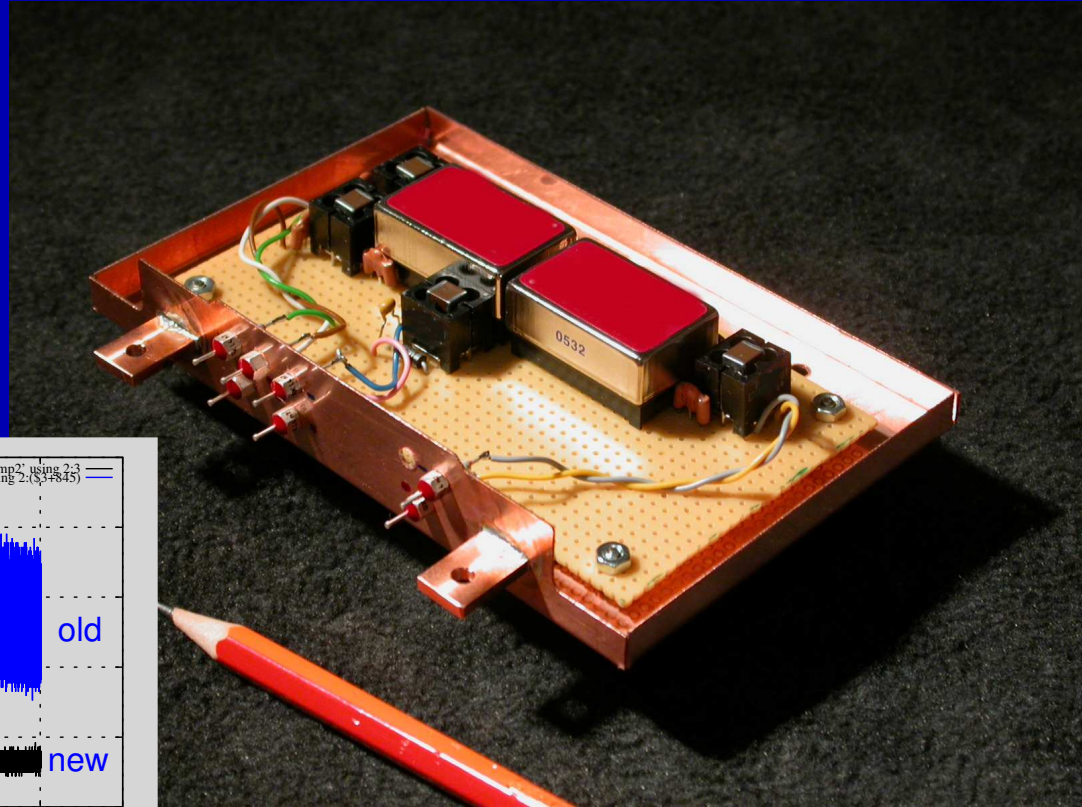
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standard detector head (shielded, max 5 sensors)

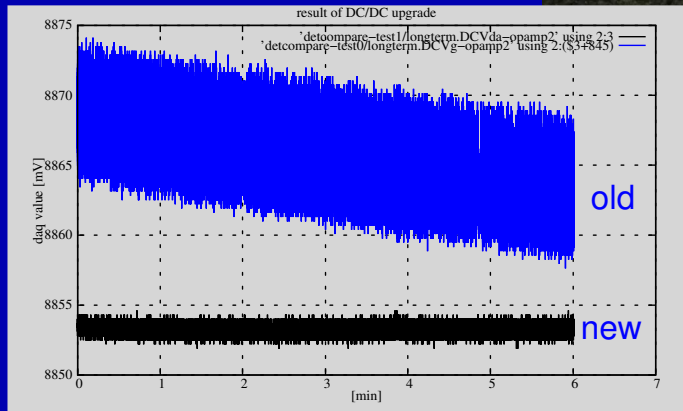


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new minor technical detail: DC power without peaks

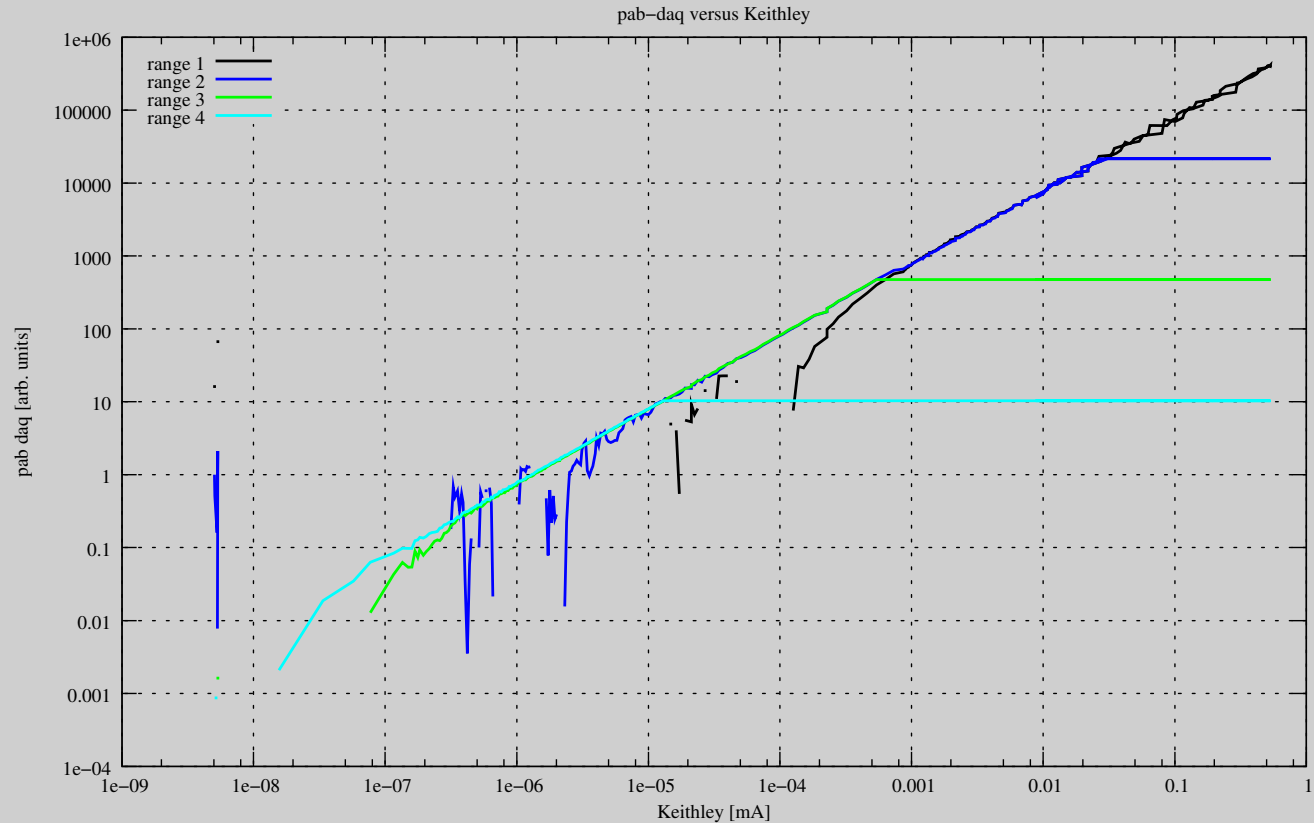


sensor signal:



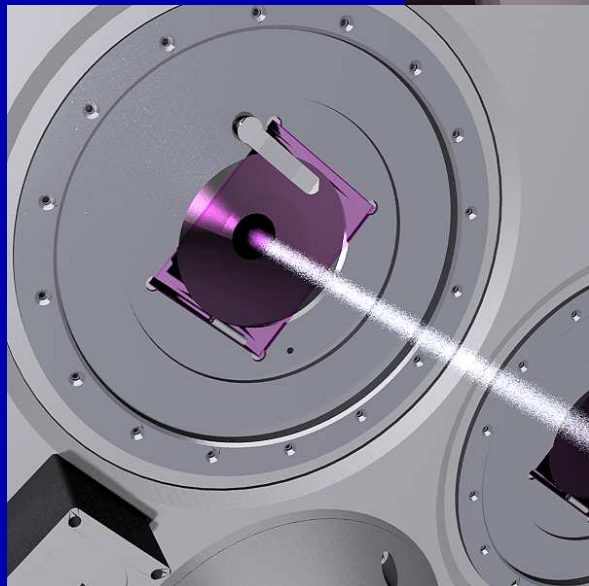
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comparison with Keithley 6485 picoammeter



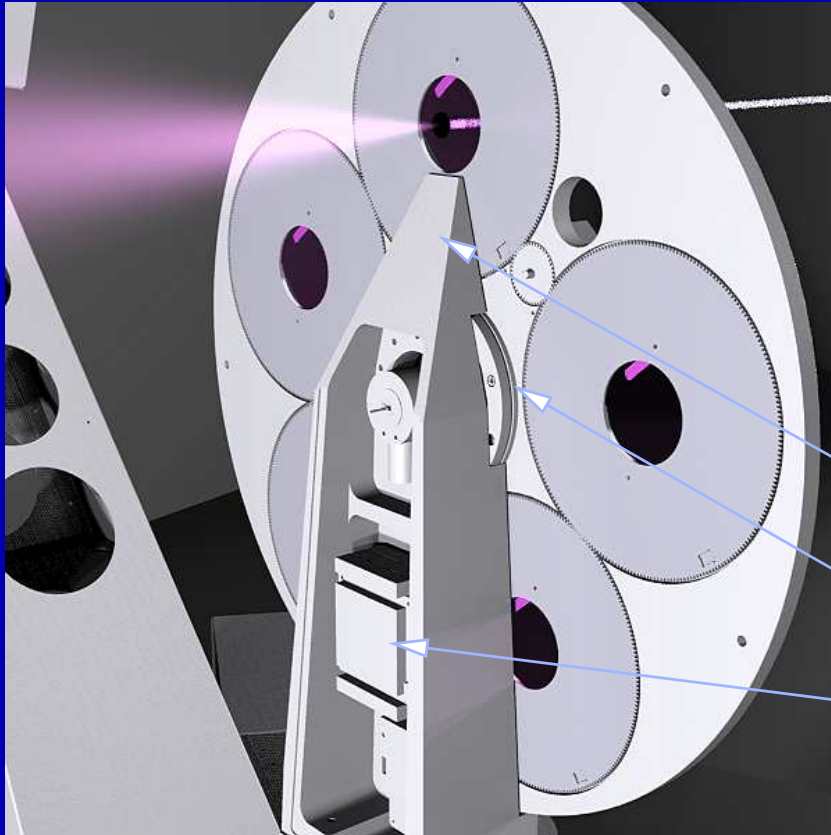
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new: sample changer



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new: sample RFID, less self shadowing, larger samples



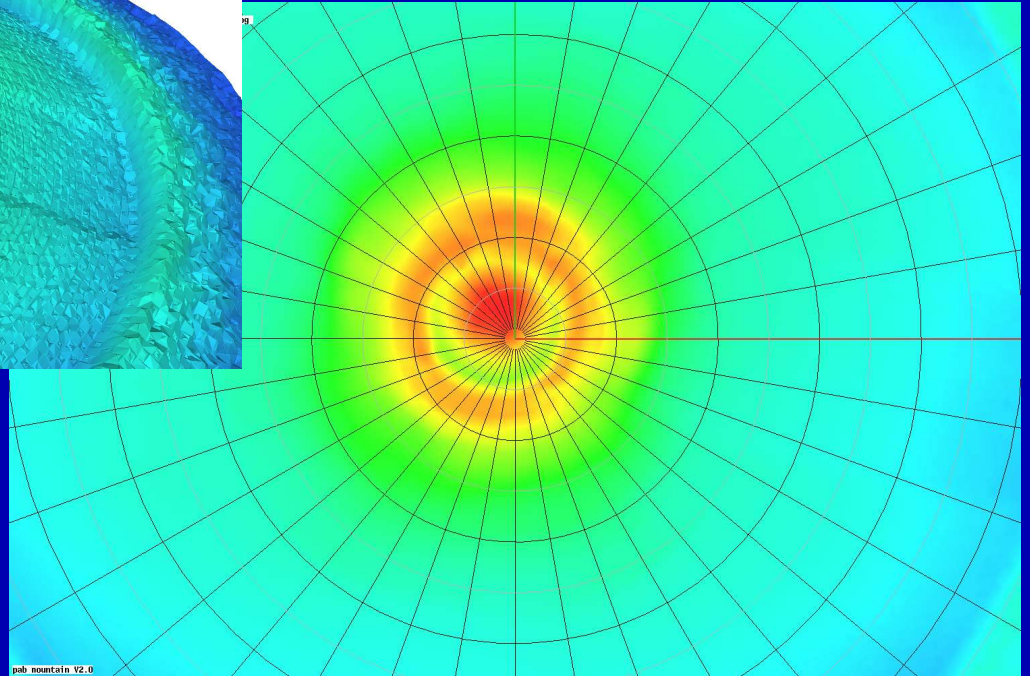
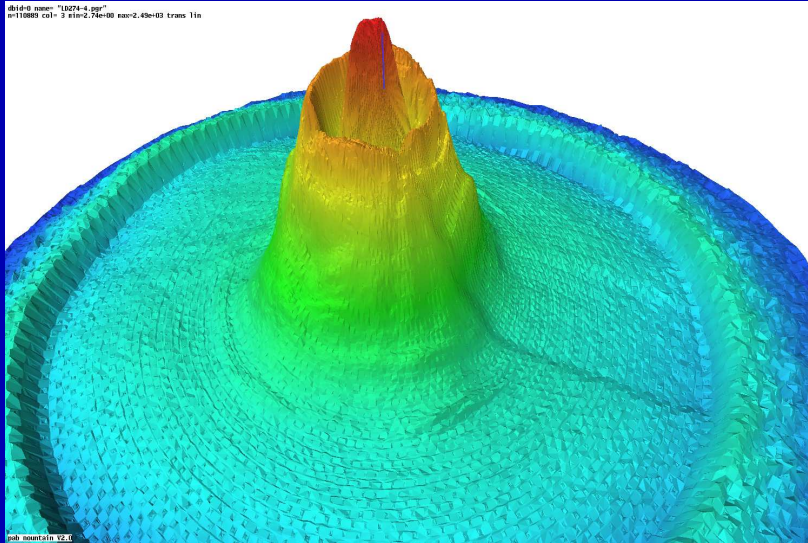
RFID antenna

main bearing

control (embedded PC)

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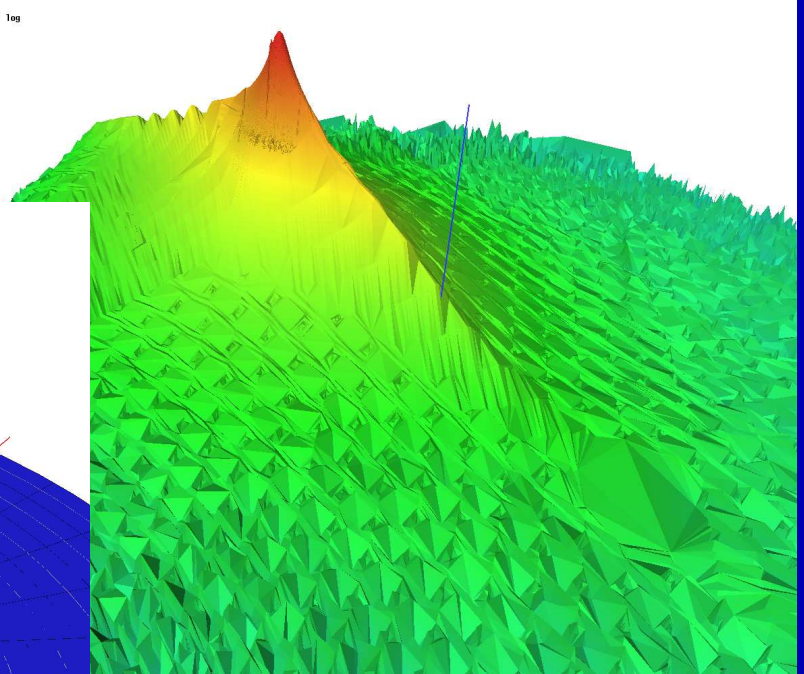
LED data (LD274)



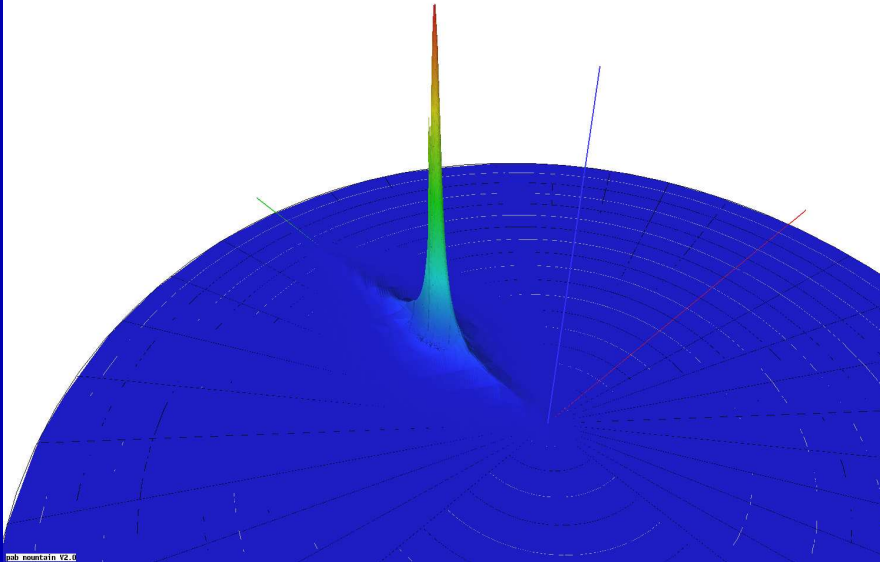
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Aluminium data (Alanod 157062)

dbid=180 name="alanod157062"
n=63051 col=3 sin=2.44e-04 sac=1.33e04 ref1 log

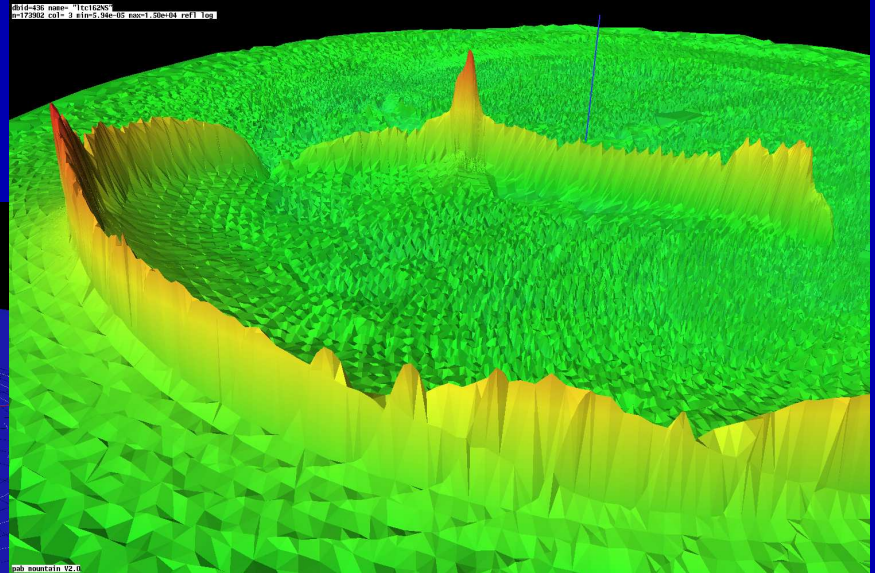
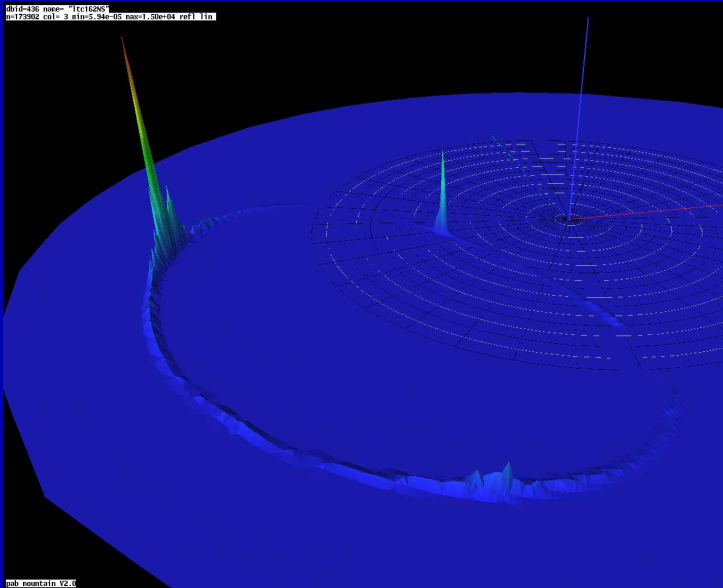


dbid=180 name="alanod157062"
n=63051 col=3 sin=2.44e-04 sac=1.33e04 ref1 lin



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roof material (Lexan Thermoclear)



minor thoughts on Radiance *

- funding of current caretaking:

 - crossfunding (freetime funded by Radiance-based projects)

 - young enthusiasts (aka students)

 - add-ons funded in context of project



- no todo-list, no road map

minor thoughts on Radiance

- number of developers ?

- quality assurance & test-releases (technically no problem, but socially ?)
 - we may need software branches – will they mess up the release process ?
 - serious software contributors must be prepared to maintain their work (for years)
 - this is especially relevant to university projects (tutors, please take note)
 - funding (!)

- road map & transparent SW development

- funding scheme needed for implementation of new features deemed 'urgent'

- documentation

- community of primary writers/compiler estimated at 5–10 folks (per planet)
 - hierachical structure needed to insert and retrieve information
 - configurable responsibility for contents (for a branch of the doc tree)
 - comments open to all (but clearly marked as such)

target: ease use, put Radiance on broader base



■ many thanks for your attention

■ happy rendering

■ <http://www.pab.eu> <http://www.pab-opto.de> <http://www.brtf.info>