CT Scanner
CAF Central Analytical Facilities
STELLENBOSCH UNIVERSITY

CT News Issue 4

July/Aug 2013

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Recent interesting scans (clickable links)

Porosity distribution in tensile specimens
http://blogs.sun.ac.za/ctscanner/2013/07/08/porosity-visualization/

Exploration drill cores
http://blogs.sun.ac.za/ctscanner/2013/07/25/drill-core-analysis-using-ct-and-xrf/

Carob Moth Larva – high resolution scan
http://blogs.sun.ac.za/ctscanner/2013/07/26/moth-larva-high-resolution-scan/

Test scans during training event
http://blogs.sun.ac.za/ctscanner/2013/07/26/test-scans-from-ct-training-event/

Pine Cone Analysis
http://blogs.sun.ac.za/ctscanner/2013/07/26/pine-cone-analysis/

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Find us on "Science Exchange" (satisfied customers, please endorse us!):
https://www.scienceexchange.com/facilities/ct-scanner-at-central-analytical-facilities

Welcome

This 4rd edition of the Stellenbosch CT scanner email newsletter of 2013 shows some exciting results and developments at our facility. We hope you enjoy the interesting scans (left column) and the feature examples. This newsletter is aimed at keeping in touch with our clients and stakeholders, please send on to anyone you think might be interested to use our services!

People

We had a very successful CAF training week at the beginning of July, with some of the participants seen here below during the tea break.

CAF training event: trainees take a break from the hectic CT Scan training

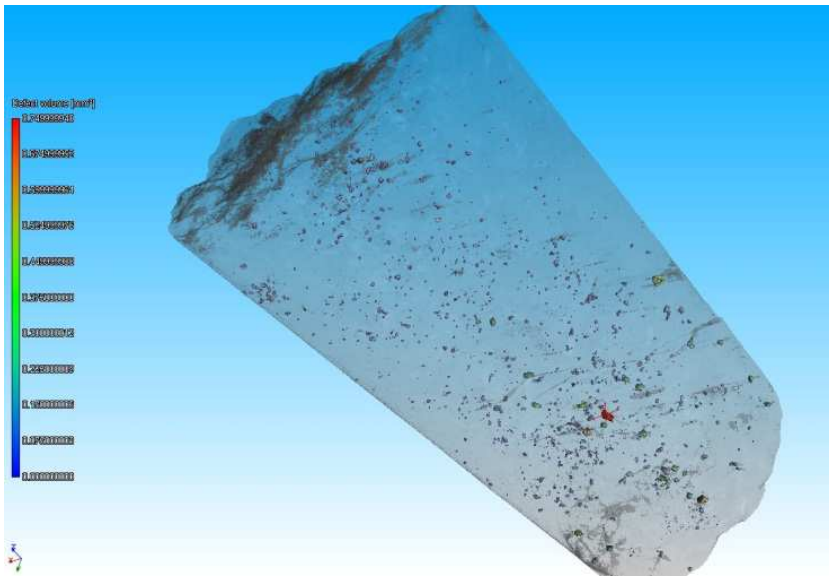
News

Various students have presented their CT work at conferences and a couple of publications have recently been accepted. Since we are a service facility and therefore do not request or expect co-authorship, we ask that you please send us your outputs from CT scan work, for our records.

We have had some downtime on the big x-ray tube, we apologize for the slight delay in some client's work and promise to deliver even better turnaround time and quality now that we are fully operational again.

Application of the month:
Drill core analysis for exploration geology

One of the major requirements for exploration geology is to measure the grade of economic minerals, by taking drill core sections and sending these for analysis. In this new development, we combine microCT scans with portable XRF to quickly generate volumetric information on minerals of interest. In addition to the total volume %, the distribution can also be provided, to see if the particles are small or large, or distributed in layers for example. In the example to the right, the volumetric measurement was 0.4% scheelite mineral, randomly distributed. The major advantage of this method is the speed, with 2 hours turnaround possible at the laboratory.



This image shows the 3D distribution of the minerals in the drill core (30mm diameter), this example had 0.4 % scheelite mineral content. Results available within 2 hours.

Please see our brochure with more details:

http://blogs.sun.ac.za/ctscanner/files/2012/11/Marketing-brochure-drill-cores-2013_final.pdf

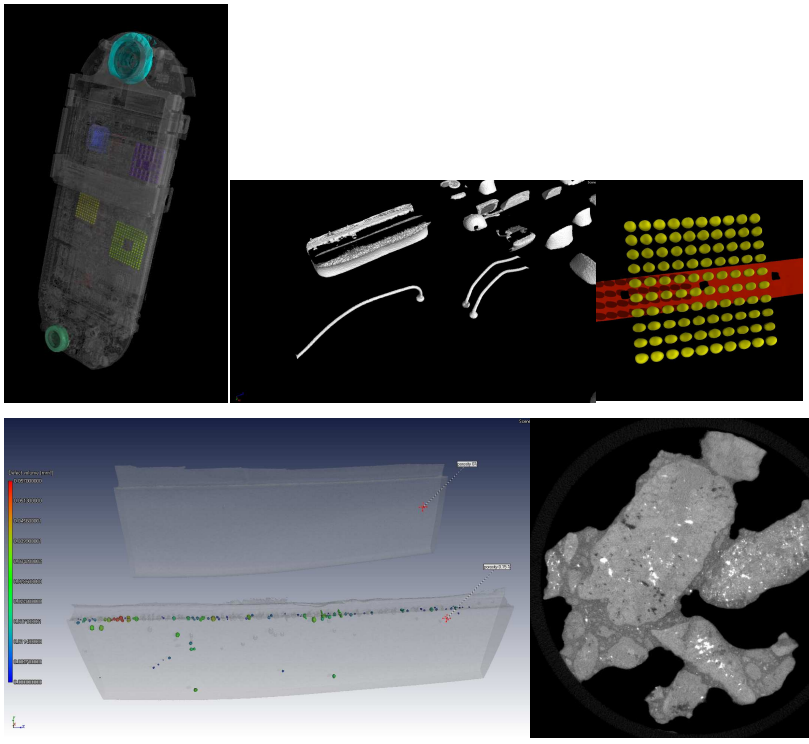
More details of the new portable XRF analyzer service:

http://blogs.sun.ac.za/ctscanner/fastxrf/

Training event scans: Some nice examples

During the training event recently we produced an assortment of interesting images from scans of an old cellphone, different plastics and some leached ore. Without going into the details at all, the images to the right demonstrate nicely the quality that can be produced with no sample preparation and within 1-2 hours, again emphasizing the value for money proposition of CT scan technology for nondestructive analysis of your products or research applications.

See also:
http://blogs.sun.ac.za/ctscanner/2013/07/26/test-scans-from-ct-training-event/



An old cellphone (with some components identified inside), polymers with air bubbles, and leached copper ore

Special offers

Commercial clients: 48 hour turnaround time guaranteed, special rates for batch jobs paid in advance.

CT Scanner Roadshow: we will be travelling to present our technology and services, please contact us if you would like us to present at your department or company. We can also combine presentations with other analytical services and aim the presentation for your specific applications. These efforts are free, all we ask is coffee.

Please support our collaborating partner – see advertisement below

Events

The first local microCT conference will be held in September, we urge clients of our facility to also present your results there, if possible. The link for conference registration and abstract submission is: http://indico.saip.org.za/event/imgrad1

A local workshop will be held for Bruker MicroCT, to showcase their latest technology down to 100 nm resolution. This workshop will be held on 12 August at the Stellenbosch microCT scan facility, please contact us for more info and to book your seat.

Acknowledgements

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