

## SkyScan 1272

### High resolution micro-CT



X-ray source	20-100 kV, 10 W, <math><5\ \mu\text{m}</math> spot size @ 4W
X-ray detector	16Mp or 11Mp, 14-bit cooled CCD
Maximum object size	75mm in diameter, 70mm high
Detail detectability	0.35 $\mu\text{m}$ (16Mp) or 0.45 $\mu\text{m}$ (11Mp)
Reconstruction	Hierarchical (InstaRecon <sup>®</sup> ) and multithreaded CPU/GPU 3D reconstructions
Dedicated software package for acquisition, reconstruction, dataviewing, 3D modeling and image analysis	

## SkyScan 1275

### High throughput micro-CT



X-ray source	20-100 kV, 10 W, <math><5\ \mu\text{m}</math> spot size @ 4W
X-ray detector	3Mp active pixel CMOS flat panel
Maximum object size	96mm in diameter, 120mm high
Detail detectability	4 $\mu\text{m}$
Reconstruction	Multithreaded CPU/GPU 3D reconstructions
Dedicated software package for acquisition, reconstruction, dataviewing, 3D modeling and image analysis	

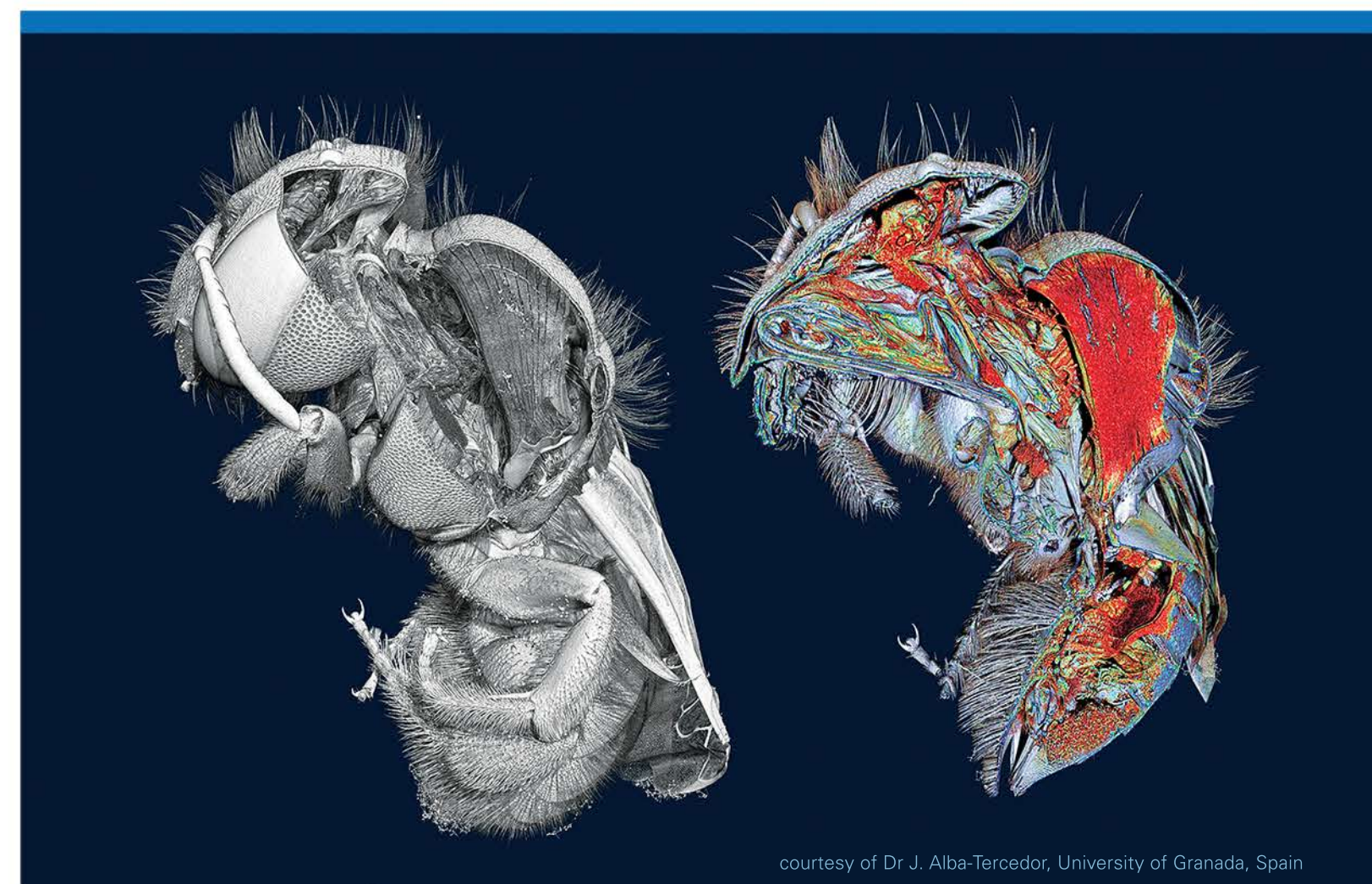
Bruker microCT is continually improving its products and reserves the right to change specifications without notice.

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courtesy of Dr J. Alba-Tercedor, University of Granada, Spain

# • microCT & entomology

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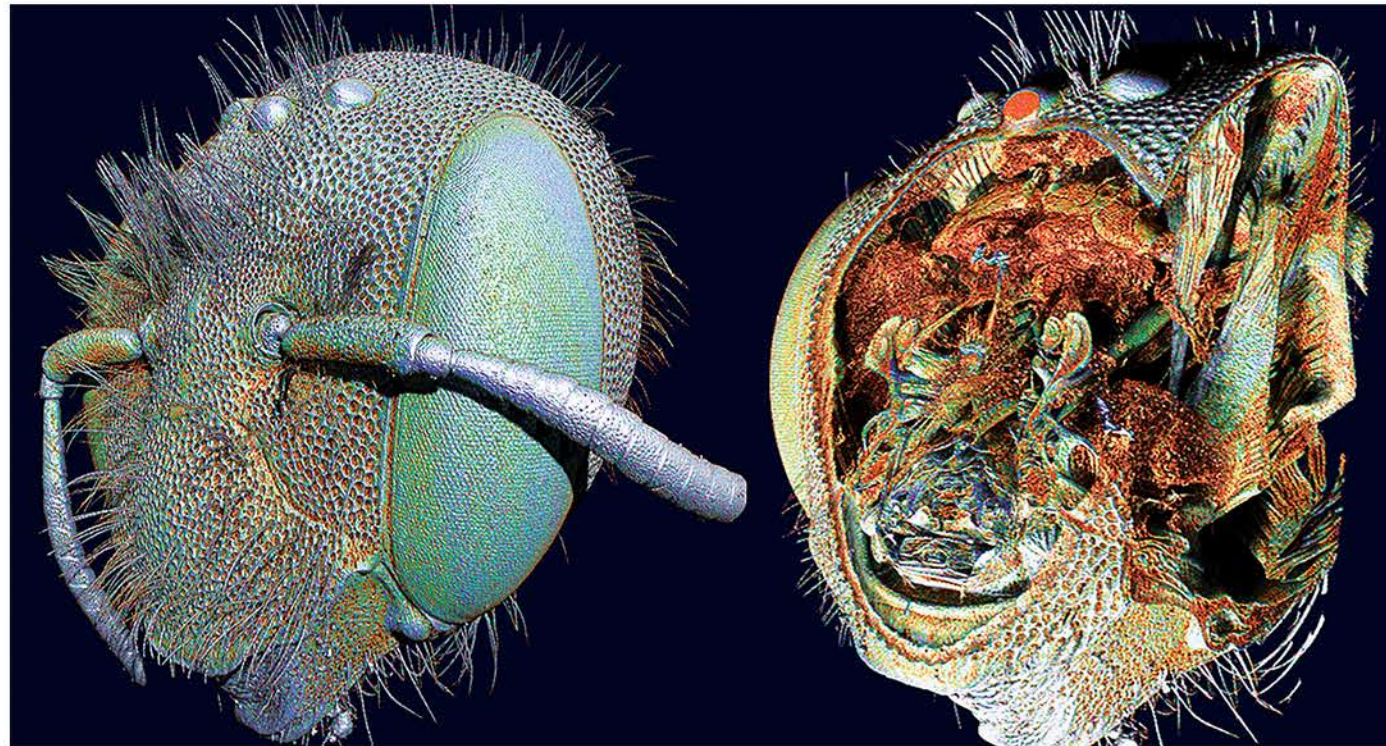
Innovation with Integrity

MICROTOMOGRAPHY



**Cover:** 3D volume rendering of a bee (front part is virtually removed) non-destructively scanned using SkyScan 1172 with following reconstruction and volume rendering by supplied software. *Courtesy: Javier Alba-Tercedor, University of Granada, Spain.*

Volume rendered 3D model of the head of a mason bee, without (left) and with (right) virtual cutting. The bee was scanned in the SkyScan1172 at 1  $\mu\text{m}$  pixel size after iodine staining and chemical drying. *Courtesy: Javier Alba-Tercedor, University of Granada, Spain.*

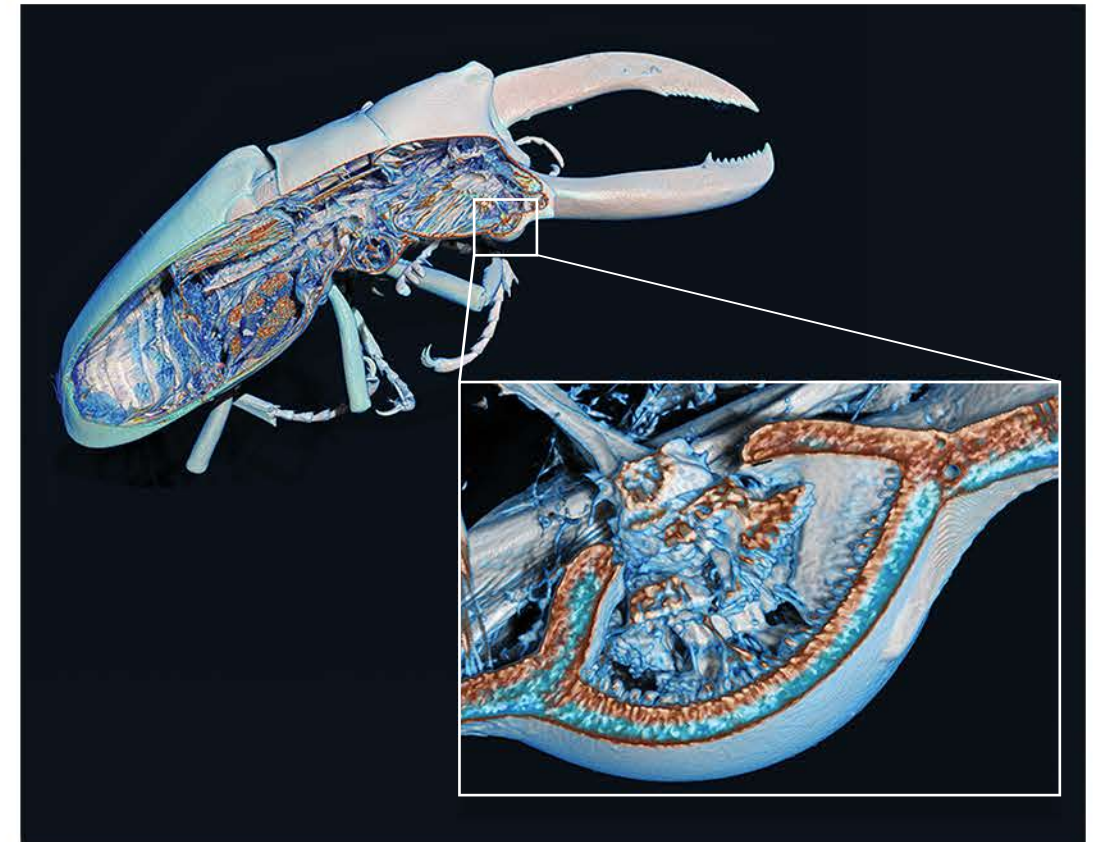


Volume rendered 3D image of the internal structure of a male stag beetle of the *Cyclommatus metallifer* species

The high magnification inset represents a virtual cut through the eye.

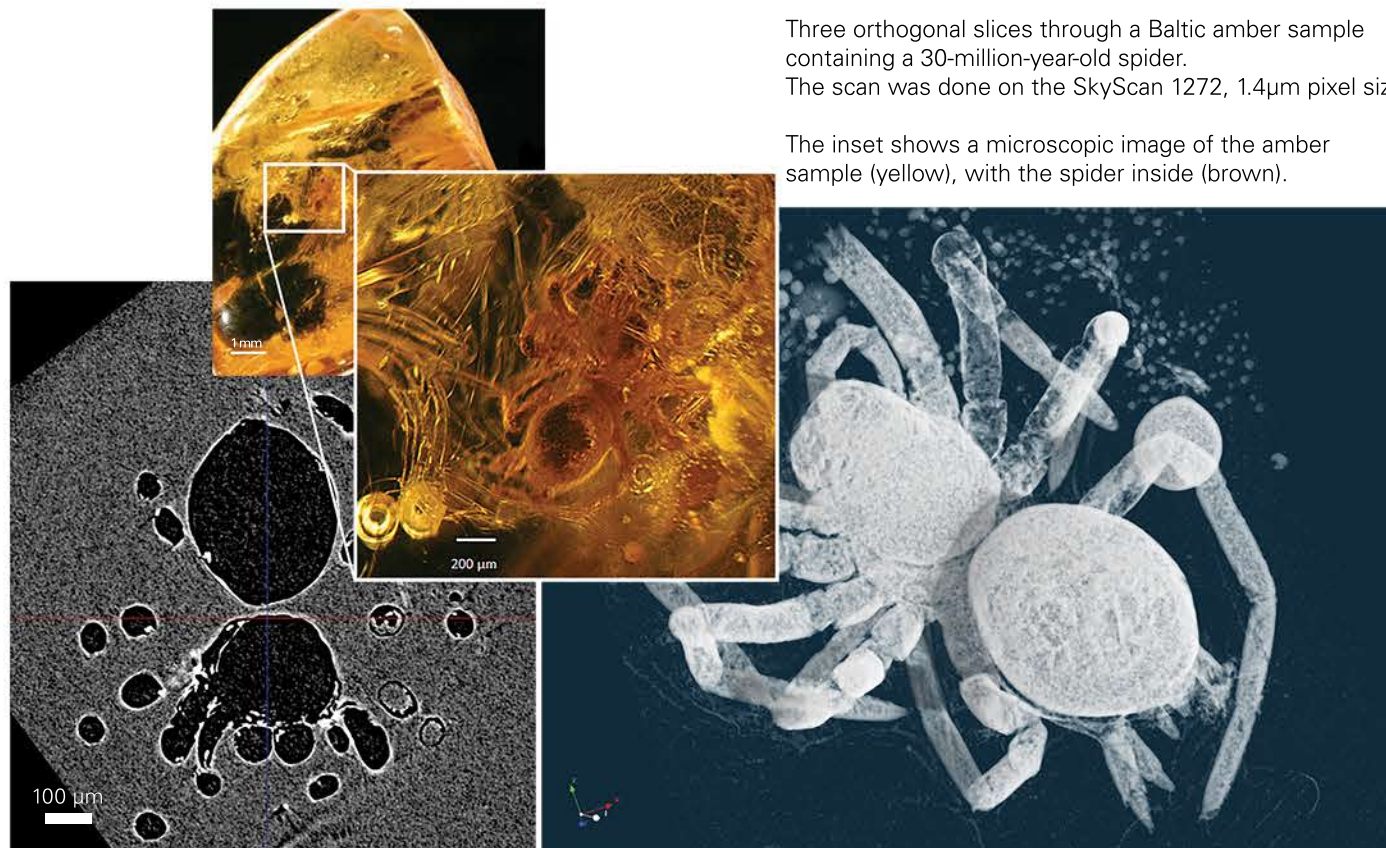
The scans were done with the SkyScan 1275 at 10  $\mu\text{m}$  pixel size, and the SkyScan 1272 at 4  $\mu\text{m}$  pixel size, respectively, after iodine staining and chemical drying.

*Collaboration with Dr. Jana Goyens, University of Antwerp, Belgium.*



Three orthogonal slices through a Baltic amber sample containing a 30-million-year-old spider. The scan was done on the SkyScan 1272, 1.4  $\mu\text{m}$  pixel size.

The inset shows a microscopic image of the amber sample (yellow), with the spider inside (brown).



3D Multi-rendering of the head of a longhorn beetle (*Morimus funereus*) showing the air tubules in blue from a posterior (A), lateral (B) and ventral (C) view.

The beetle was scanned in the SkyScan 1272 at 5.3  $\mu\text{m}$  pixel size after chemical drying.

The inset shows a macroscopic image of the beetle.

*Collaboration with Dr. Dajana Todorovic, University of Belgrade, Serbia.*

