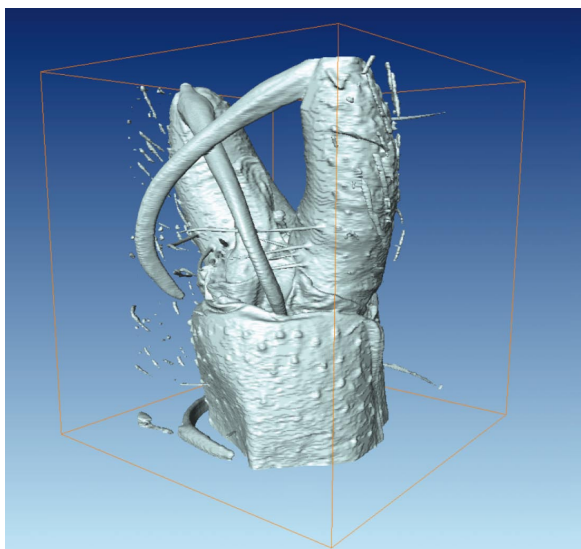


**The struggle against malaria: new perspectives.**

The International Atomic Energy Agency (IAEA) in Vienna is carrying out an assessment of sterile insect technology (SIT) for control of malaria transmitting mosquitoes. The male mosquitoes under study have been irradiated to render them sterile, a treatment with the goal to reduce the transmission of malaria. Dariusz Wegrzynek (IAEA) and co-workers from IAEA and the Atomic Institute of the Austrian Universities (ATI) have, together with Timm Weitkamp from ANKA, examined the insects using phase-contrast computer tomography (CT) to find out whether the male mosquitoes undergo morphological changes with irradiation, or in other words whether they stay otherwise healthy, in order to compete with non-treated males during the mating process.



**Digital white beam X-ray topography**

White beam topography is a non-destructive imaging technique for the analysis of e. g. dislocations in real single crystals where usually a complete Laue pattern is collected during one exposure on a X-ray film. Every reflection contains one topograph which is magnified and digitalized with a light microscope to analyse number and type of dislocations. In order to overcome the limitations of X-ray films, Andreas Danilewsky (University Freiburg) and Alexander Rack (ANKA) used for the first time at ANKA a high resolution digital X-ray camera for topography. The 111 topograph from a highly sulphur doped InP shows that all the details are visible: strong dopant inhomogeneities in the center of the crystal and V-shaped straight lines which are 60° dislocations. Even single curved dislocations at the border of the crystal with very high dislocation density are resolved.

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