Contribution ID: **117** Type: **Oral presentation**

Phase contrast imaging of lightweight objects using microfocus X-ray source and high resolution CCD camera

Tuesday, 5 July 2011 14:55 (20 minutes)

Modern laboratory X-ray imaging systems with microfocus source and CCD camera give us the possibility to move some of modern imaging techniques from synchrotrons to laboratories. Spatially coherent X-rays emited from microfocus source traverse a sample with phase shift. Beam deflection induced by the local change of refractive index may be expressed as dark-bright contrast on the edges in final projection. These phenomena lead to increase of spatial resolution of X-ray projections but may also lead to unpleasant artifacts in computerized tomography (CT) unless reconstruction program can separate phase and absorption contributions. In this contribution several results of phase constrast imaging are presented.

Primary author: Mr ZDENKO, Zaprazny (Slovak Academy of Sciences)

Co-authors: Dr VLADIMIR, Ac (Alexander Dubček University of Trenčín); Dr DUSAN, Korytar (Slovak Academy of Sciences)

Presenter: Mr ZDENKO, Zaprazny (Slovak Academy of Sciences)

Session Classification: Imaging

Track Classification: Imaging theory