中国科学院古脊椎所CT应用模板

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# 一、板状化石CT

**Methods：**

The scanning was carried out using a 160KV Micro-**Computed Laminography** system (developed by the Institute of High Energy Physics (IHEP), Chinese Academy of Sciences (CAS)) at the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP), CAS. The specimen was scanned with beam energy of \*\*kV and a flux of \*\*uA at \*\*um isotropic voxel size using a 360° rotation with a step size of 0.5°. A total of 1536 image slices with a size of 2,048\*2,048 were reconstructed using a modified Feldkamp algorithm developed by the Institute of High Energy Physics, CAS.

**References：**

Zenghui Wei, Lulu Yuan, Baodong Liu, et al.,A micro-CL system and its applications. Review of Scientific Instruments, 88, 115107, 2017.

# 二、225kV显微工业CT

**Methods：**

X-ray micro-computerized tomography. The scanning was carried out using the 225 kV micro-computerized tomography (developed by the Institute of High Energy Physics, Chinese Academy of Sciences (CAS)) at the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP), CAS. The specimen was scanned with beam energy of \*\*kV and a flux of \*\*uA at \*\*um isotropic voxel size using a 360° rotation with a step size of 0.5°. A total of 720 projections were reconstructed in a 2,048\*2,048 matrix of 1,536 slices using a two-dimensional reconstruction software developed by the Institute of High Energy Physics, CAS.

**References：**

Wang Y F, Wei C F, Que J M et al., in press. Development and applications of paleontological

computed tomography. Vertebrata PalAsiatica, DOI: 10.19615/j.cnki.1000-3118.170921

# 三、450kV通用性工业CT

**Methods：**

X-ray industry -computerized tomography. The scanning was carried out using the 450 kV industry-computerized tomography (developed by the Institute of High Energy Physics, Chinese Academy of Sciences (CAS)) at the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP), CAS. The specimen was scanned with beam energy of \*\*kV and a flux of \*\*mA at 160 um isotropic voxel size using a 360° rotation with a step size of 0.25°. A total of 1,440 projections were reconstructed in a 2,048\*2,048 matrix of 2,048 slices using a two-dimensional reconstruction software developed by the Institute of High Energy Physics, CAS.

**References：**

Wang Y F, Wei C F, Que J M et al., in press. Development and applications of paleontological

computed tomography. Vertebrata PalAsiatica, DOI: 10.19615/j.cnki.1000-3118.170921

# 四、GE v|tome|x m300&180全尺度快速CT扫描仪

The specimen \*\*\*\* was scanned using a GE v|tome|x m300&180 micro-computed-tomography scanner (GE Measurement & ControlSolutions, Wuntsdorf, Germany), housed at the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP), Chinese Academy of Sciences (CAS). The data set has \*µm isotropic voxel size and the scan was carried out at \*kV and \*µA. \*frames per projection were acquired by a timing of \*ms for a total of \*projections.

# 五、SNCT-800微纳能谱CT

**Methods：**

The scanning was carried out using the Specral Micro-CT (developed by the Institute of High Energy Physics, Chinese Academy of Sciences (CAS)) at the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP), CAS. The specimen was scanned with beam energy of \*\*kV, a flux of \*\*uA and energy thresholds of \*\*keV and \*\*keV at \*\*um isotropic voxel size using a 360° rotation with a step size of \*\*. A total of \*\*projections were reconstructed in a 1,913\*1,913 matrix of 431 slices using a two-dimensional reconstruction software and the effective atomic number images and electron density images were calculated using the energy spectrum analysis software developed by the Institute of High Energy Physics, CAS.

\*需向高精度CT中心技术人员查询后填写，本模板仅供参考。