SPA data collection protocol

Please acknowledge the use of UCEM and the Swedish National Cryo-EM facility whenever any data collected is used for publication using the following phrase:

“The data was collected at the Umeå Core Facility for Electron Microscopy, a node of the Cryo-EM Swedish National Facility, funded by the Knut and Alice Wallenberg, Family Erling Persson and Kempe Foundations, SciLifeLab, Stockholm University and Umeå University.”

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| Experiment details |  |
| Project id: | NMI00616 |
| User: | Maria Anastasina |
| Institute: | Helsinki University |
|  |  |
| Start date: | 2020-01-23 |
| Number of days: | 2 |
|  |  |
| Grid type: | Lacey carbon with graphene oxide 300 mesh |
| Sample/Grid ID: | TBE virus particles. Sample W91-grid 1 |
| Data acquisition parameters |  |
| *Hardware* |  |  |  |
| Microscope | Titan Krios |  |  |
| Detector (mode) | K2 (counted) |  |  |
| Accelerating voltage | 300 keV |  |  |
| Spherical aberration | 2.7 |  |  |
|  |  |  |  |
| *Data acquisition parameters* |  |  |  |
| Apertures (C1, C2, C3) | 2000, 70, 2000 | **Defocus range (µm, step size)** | -0.9 to -3.0 (0.3) |
| Objective aperture | 100 | **Dose (e/px/sec)** | 4.007 |
| Energy filter slit (eV) | 20 | **Dose (e/Å2/sec)** | 5.949 |
| Illuminated area (µm) | 1.03 | **Exposure time (sec)** | 5 |
| Spot size | 7 | **Total dose (e/Å2)** | 29.745 |
| Tilt angle (°) | 0 | **Dose fractions (#)** | 30 |
| Nominal magnification | 165 000 x | **Dose per fraction (e/Å2)** | 0.99 |
| Pixel size (Å2) | 0.82 |  |  |
|  |  |  |  |
| Data collection summary |  |  |  |
| Holes |  |  |  |
| Exposures per hole |  |  |  |
| Exposure rate (per hour) |  |  |  |
| Total number of exposures | 5902 |  |  |
|  |  |  |  |
| *Notes* | Spacing between exposure areas was 1 μm day 1 and 0.8 μm day 2. |

**Important!** All data collected will be temporarily stored on a file server at UCEM for a maximum time of 90 days, after which it will be deleted without notice. Please therefore ensure that all raw data is transferred to a different preferred media immediately following data collection.