

EPN BAG report
NRSV sample
13-15 February 2023

The aim of this data collection was to analyse the structural polymorphism of a mutant of the Respiratory Syncytial Virus nucleocapsid, designed based on the full-length structures recently solved by the MICA group (doi: <https://doi.org/10.1101/2023.02.14.528440>). Circa 30 000 micrographs were acquired and are currently being processed. In addition to the N10 double-rings which structure was presented in <https://doi.org/10.1101/2023.02.14.528440>, N11 double rings have also been reconstructed and the resolution of both maps is currently about 2 Å, which is already much better than our previous 2.86 Å resolution map of the full-length N10 double ring. While N10 and N11 single rings show a nearly exclusive top view orientation, because of the huge amount of particles in the current data set, some side views could also be found and the reconstructions, currently at ~3.6 Å and 3.8 Å resolution, will hopefully be further improved. Furthermore, new types of spiral structures, non identified in the previous data set, have been revealed and are currently being analysed. A systematic comparison with the full-length data set will be performed once the data analysis is finished, and should bring new insights into the RSV NC assembly principles.