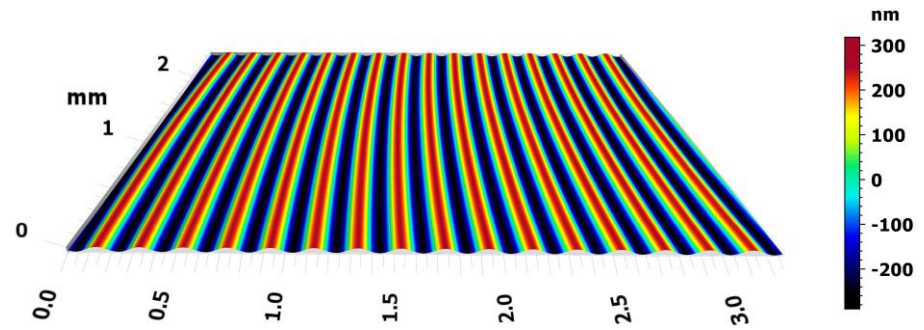
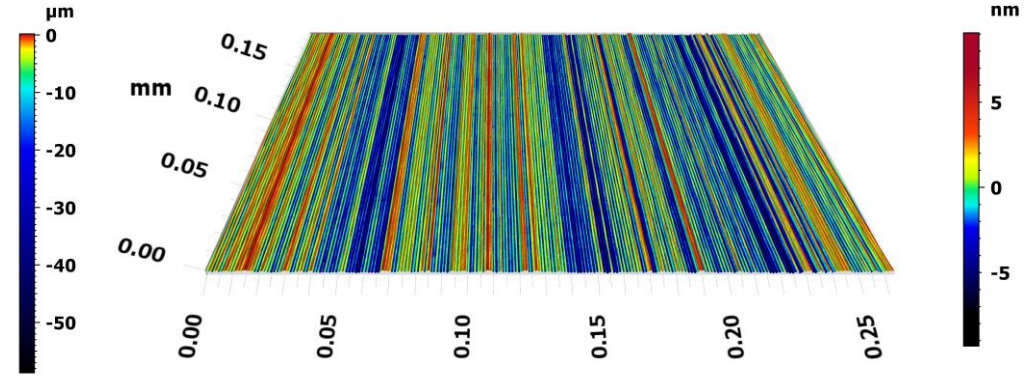
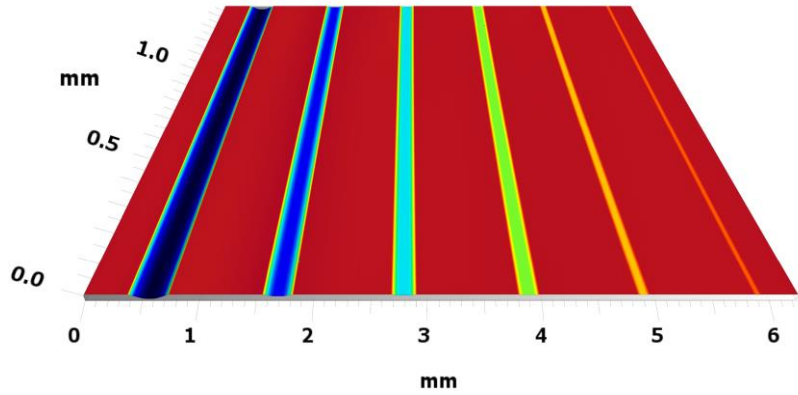


# universal confirmation standard UCS - 1



- features of the UCS – 1:**
- step 1: nominal depth 50  $\mu\text{m}$
  - step 2: nominal depth 20  $\mu\text{m}$
  - step 3: nominal depth 10  $\mu\text{m}$
  - step 4: nominal depth 5  $\mu\text{m}$
  - step 5: nominal depth 2  $\mu\text{m}$
  - step 6: nominal depth 1  $\mu\text{m}$
  - flat area: surface roughness  $R_a < 2 \text{ nm}$
  - sinus area: amplitude 0.5  $\mu\text{m}$ ; wave length 200  $\mu\text{m}$ ;  $R_a 0,16 \mu\text{m}$



## The universal confirmation standard UCS-1:

The UCS-1 is designed to confirm the specified performance parameters of microscopical, optical 3d measuring devices as well as tactile roughness measuring systems. For universal use it combines 8 features for different measuring tasks as step height measurements, tests of the topography reproducibility and roughness measurements.

The diamond turned structures in hardened NiP coating on top of a massive stainless steel block gives a very high wear resistance and form stability. All steps have sloped flanks with a max. angle of app. 20° and are therefore suitable for tactile measurements and traceable certifications.

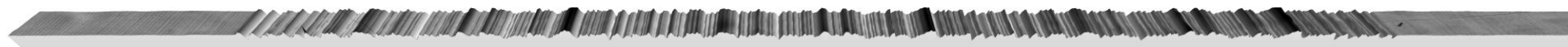
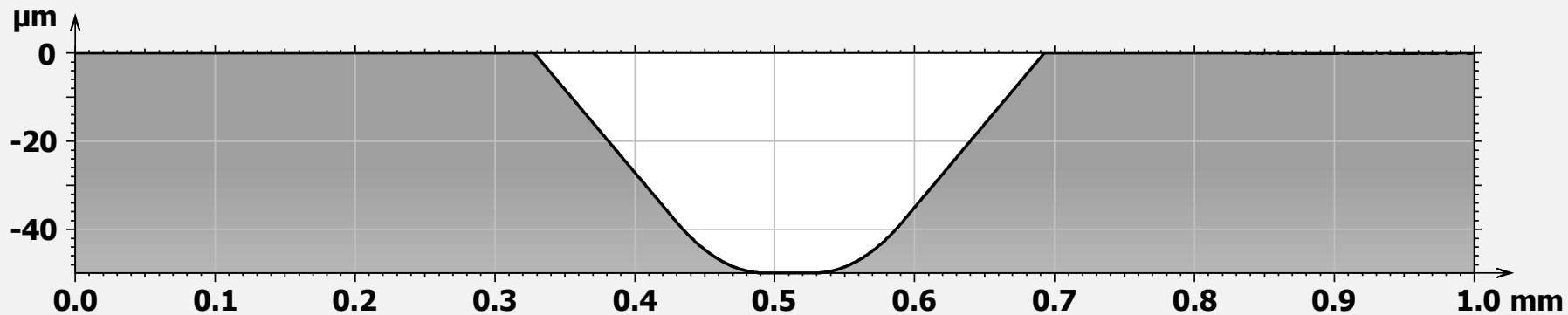
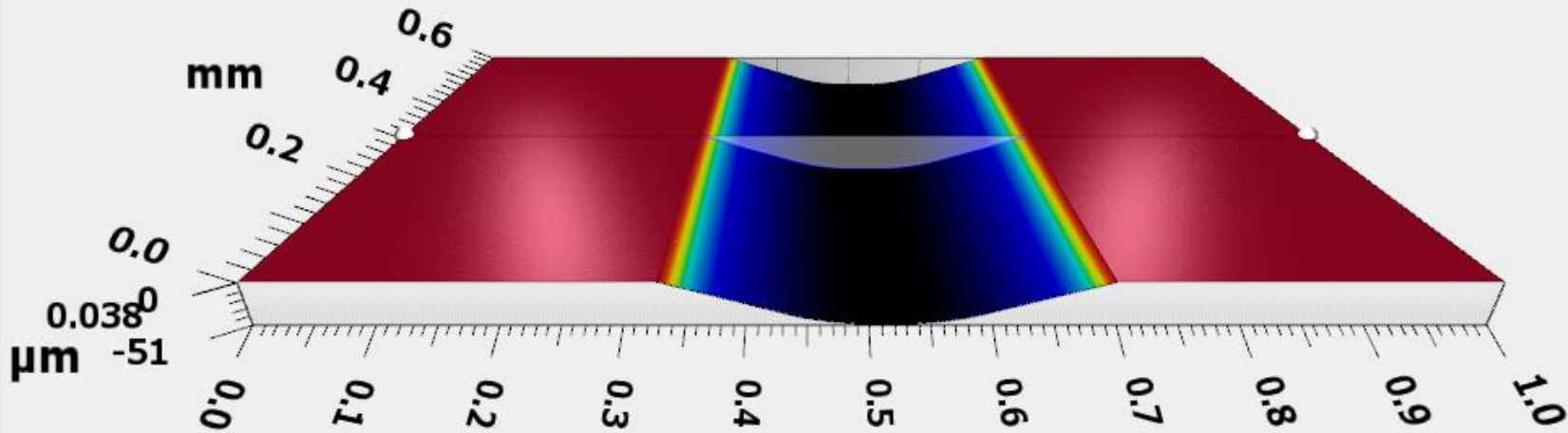
Using diamond turning with a feed of only app. 1 µm the surface has a rough Ra below 2 nm which warrants a low uncertainty for certification and measurements.

6 different steps enables the user to check the measuring results in a range starting from 1 µm up to 50 µm.

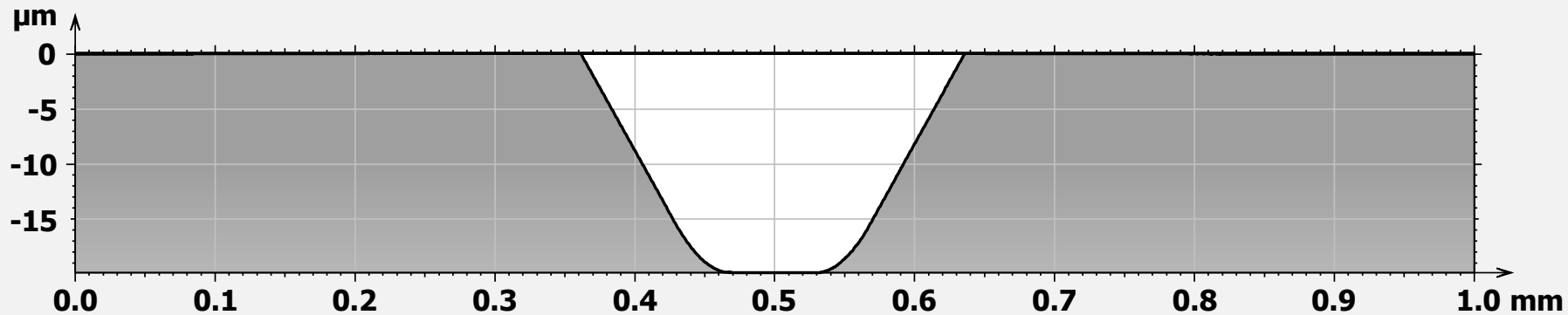
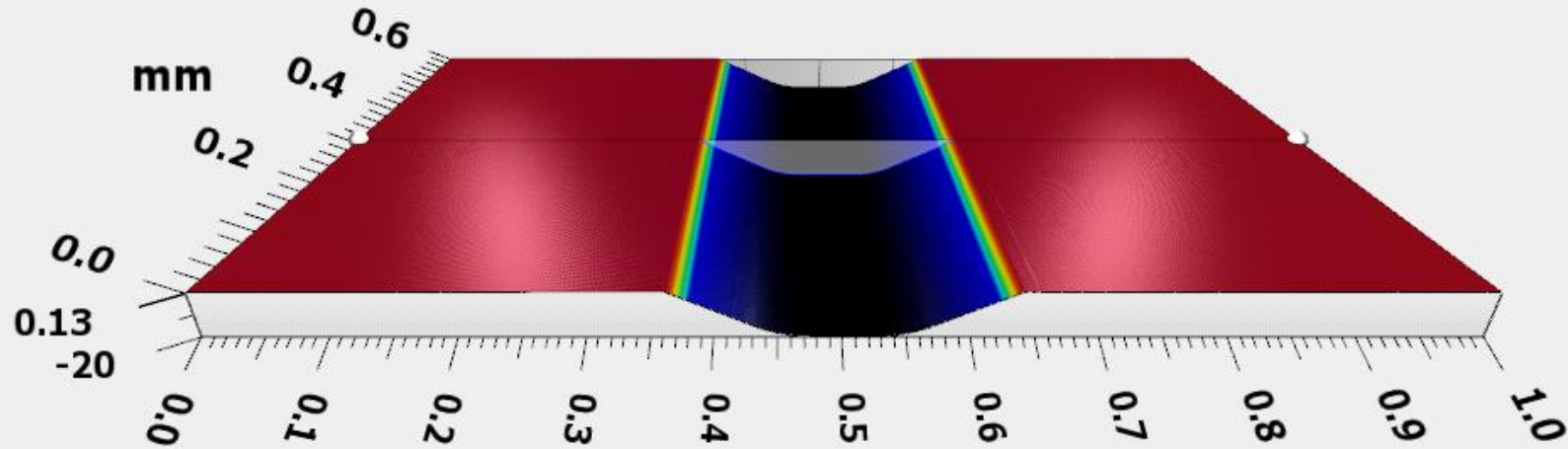
The flat surface area can easily be used for topography reproducibility tests. In contrary to surface mirrors the essential cleaning for best test results is easy on the hardened NiP surface possible. In contrary to available plane glass or SiC targets it provides a very high reflectivity. The surface provides a certain ratio of scattered light which simplifies focus adjustments and makes the standard useable for measuring methods which require a reasonable percentage of diffuse reflected light as triangulation based systems or focus variation.

High stability, a wide range of various features available for a competitive price make the UCS – 1 ideal to use in the daily use of high resolution microscopical, optical 3d measuring systems even in industrial environments.

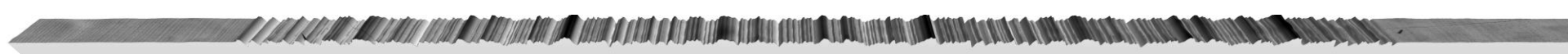
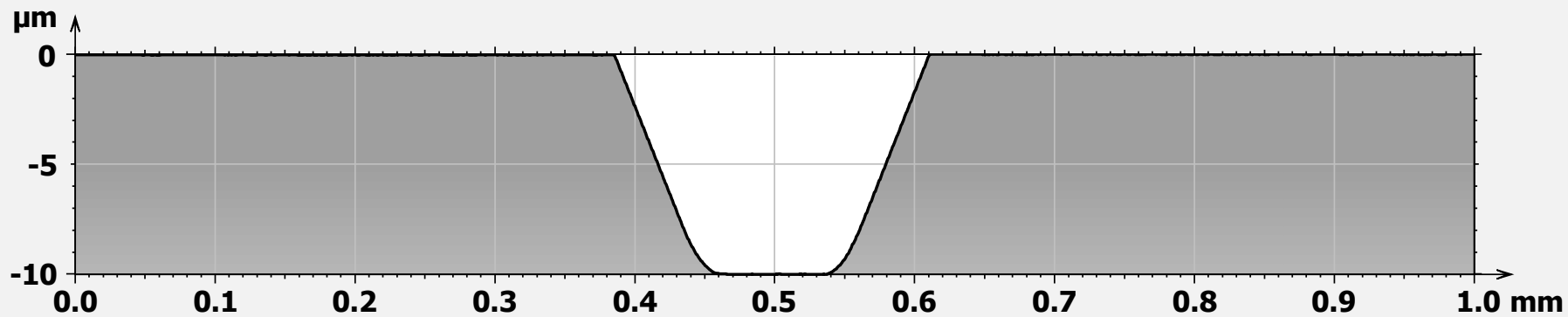
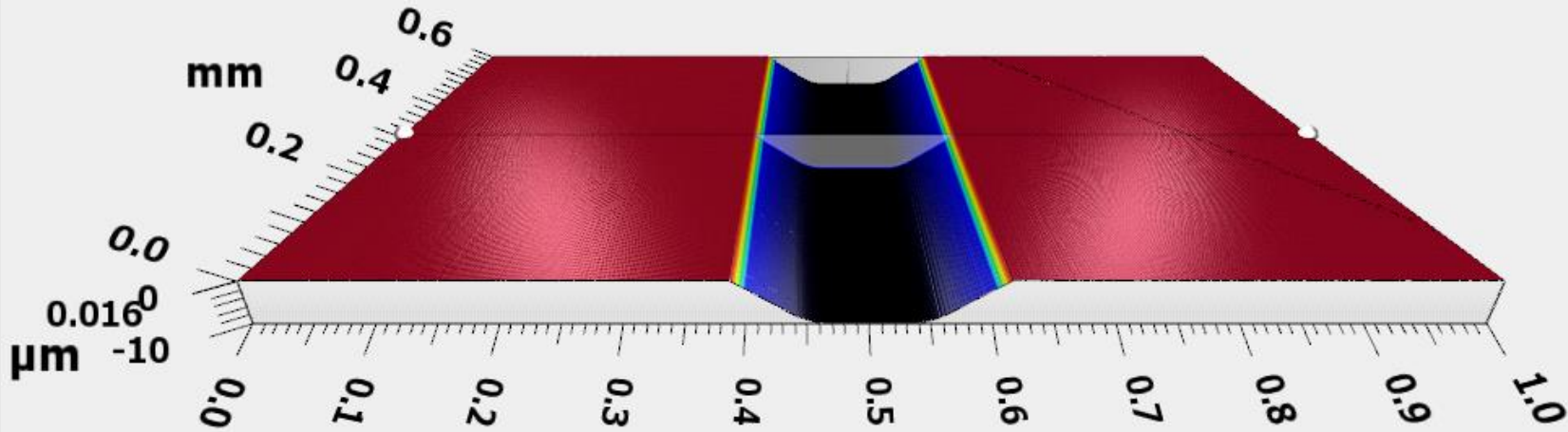
# step 1 – 50 $\mu\text{m}$



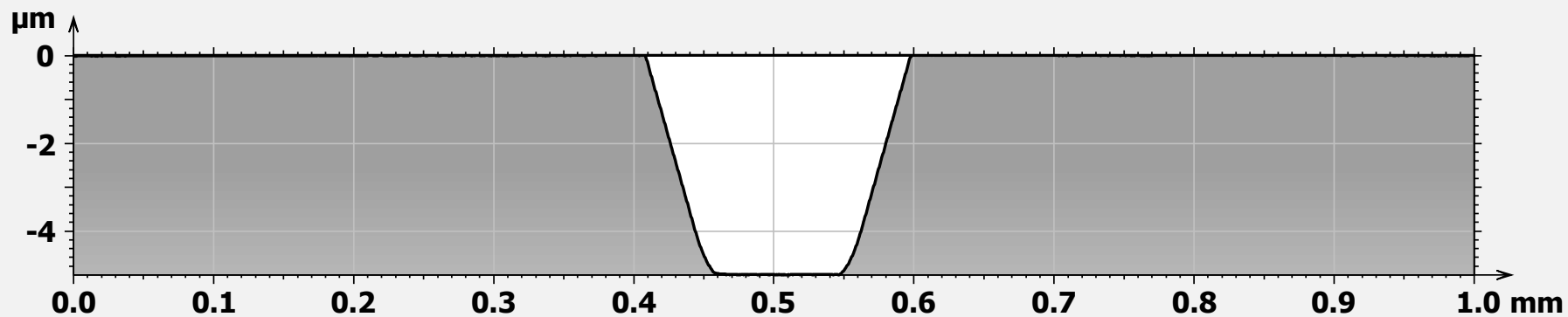
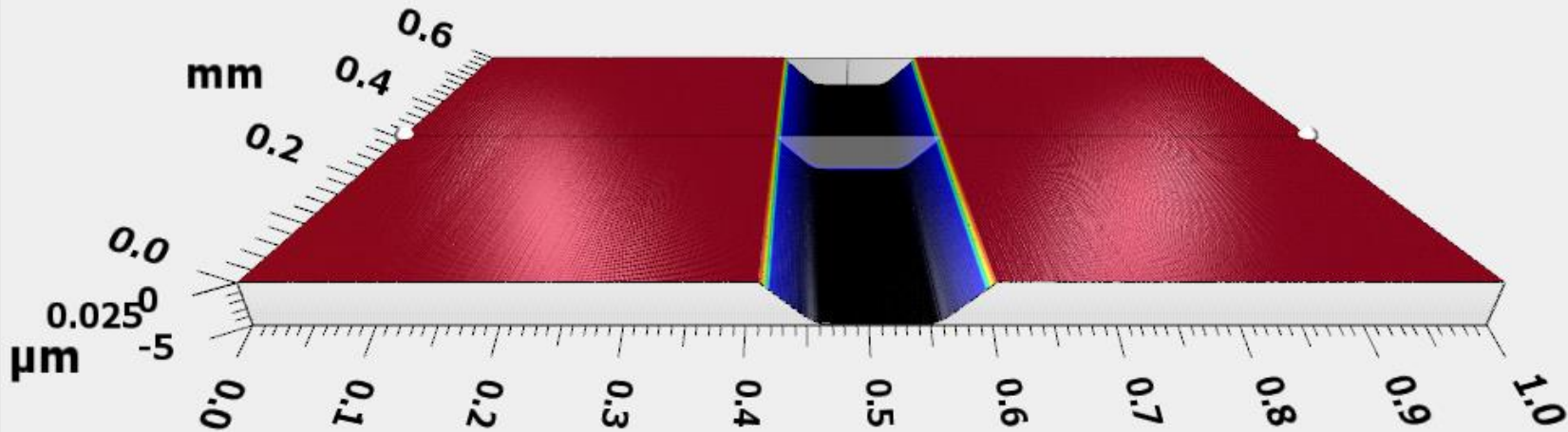
# step 2 – 20 $\mu\text{m}$



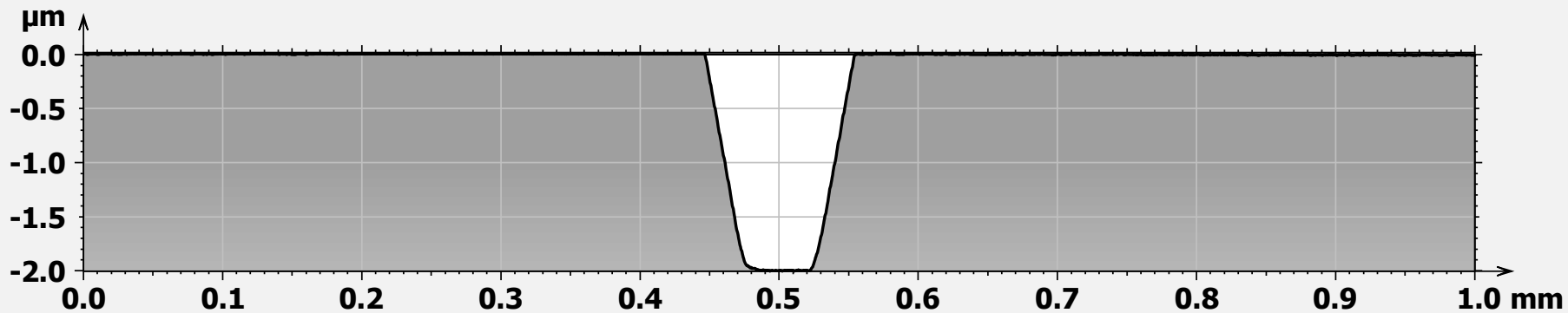
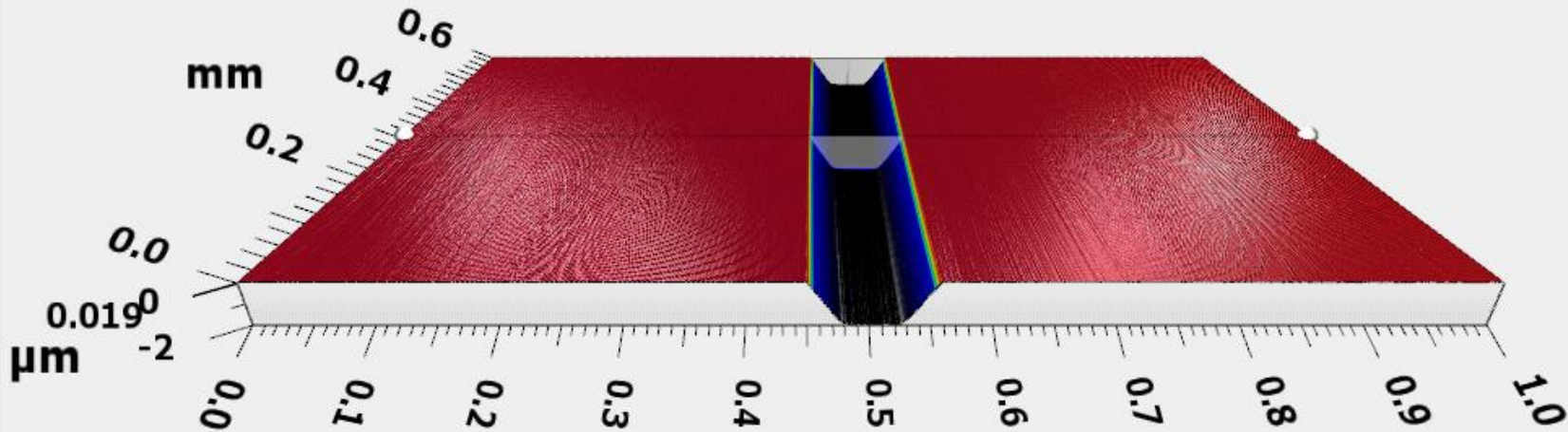
# step 3 – 10 $\mu\text{m}$



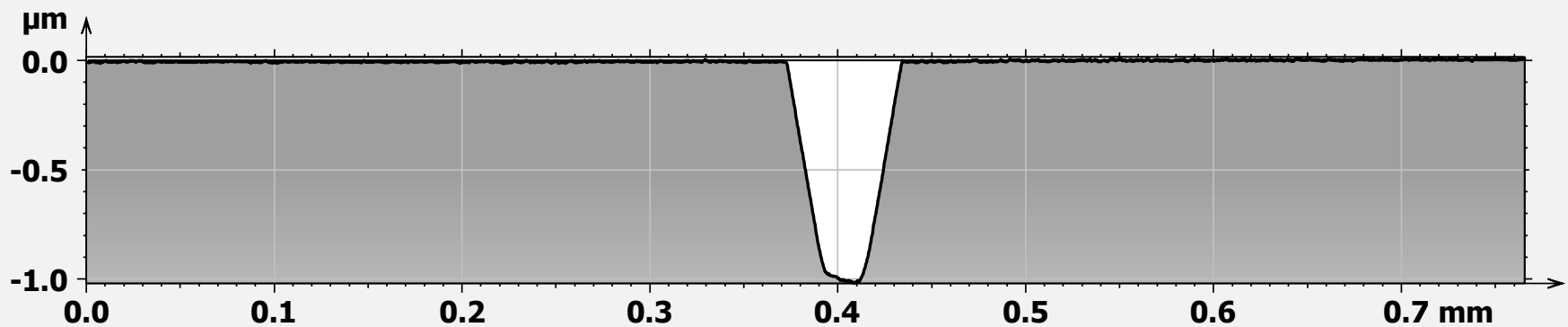
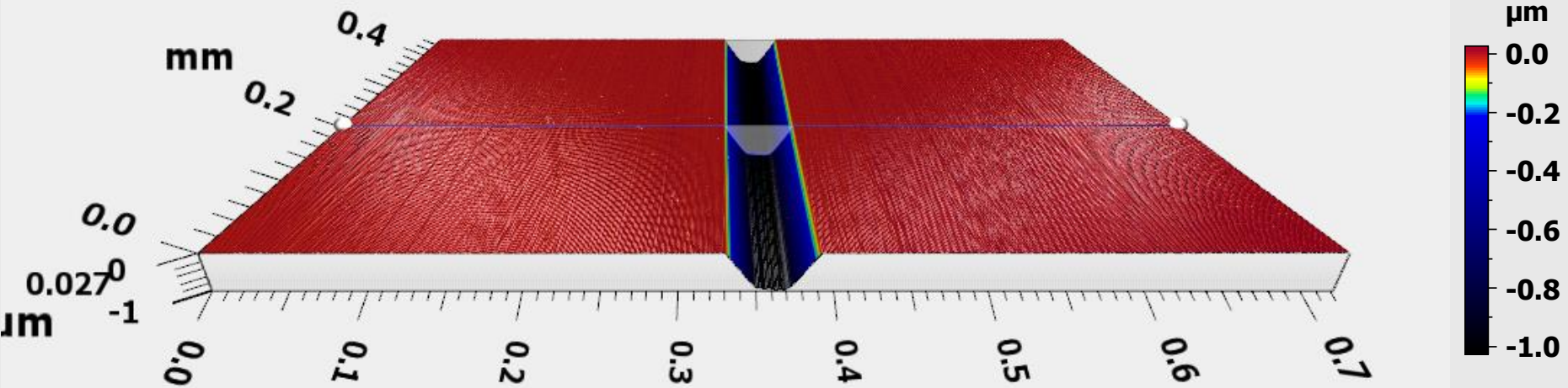
# step 4 – 5 $\mu\text{m}$



# step 5 – 2 $\mu\text{m}$

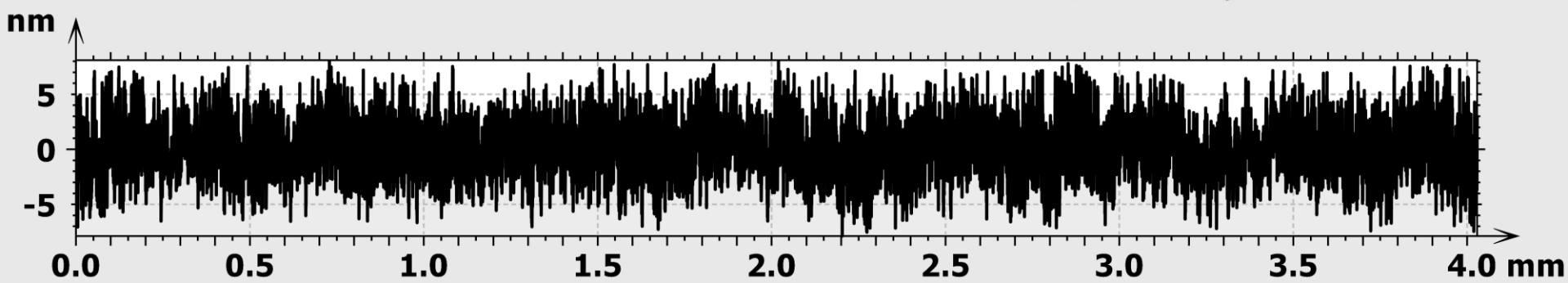
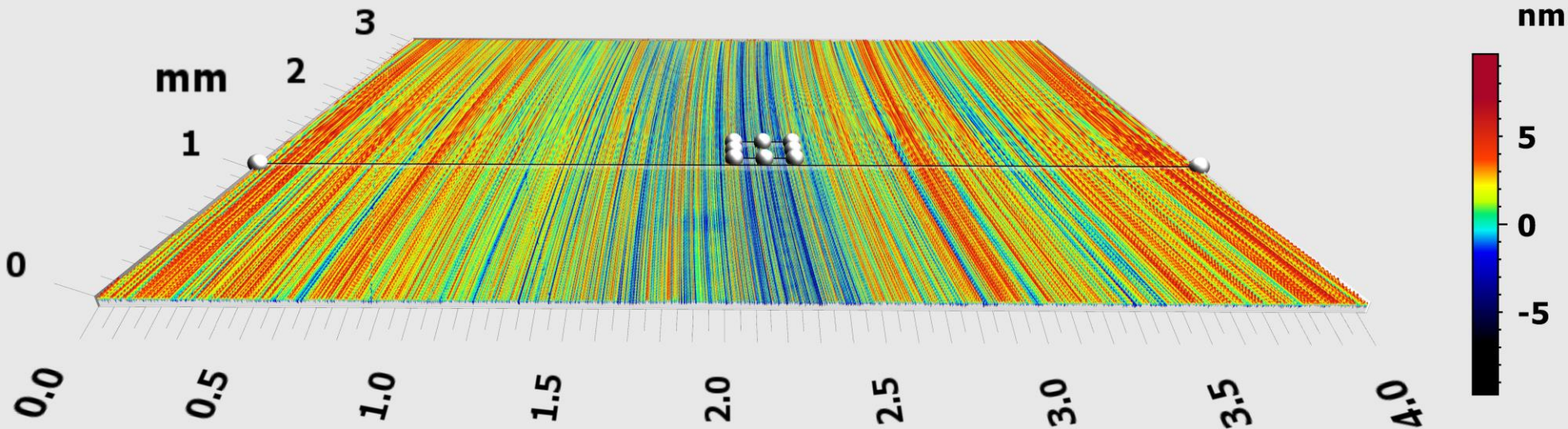


# step 6 – 1 $\mu\text{m}$

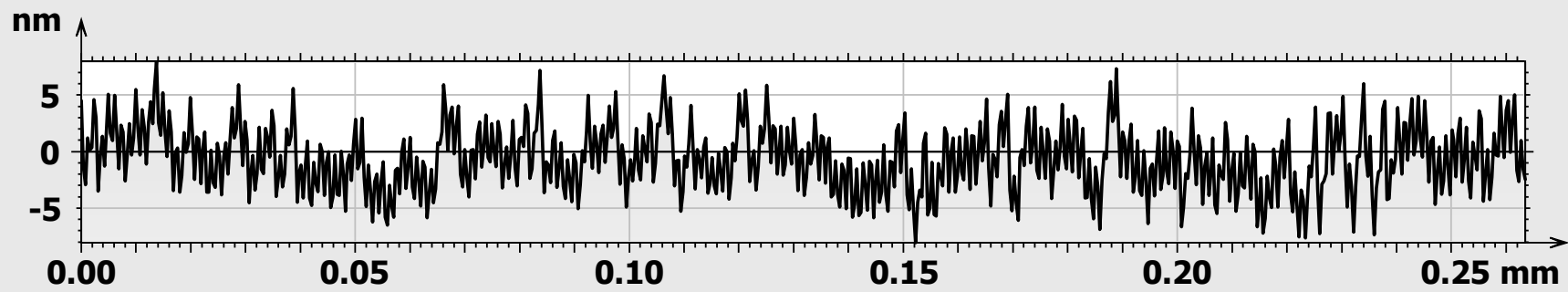
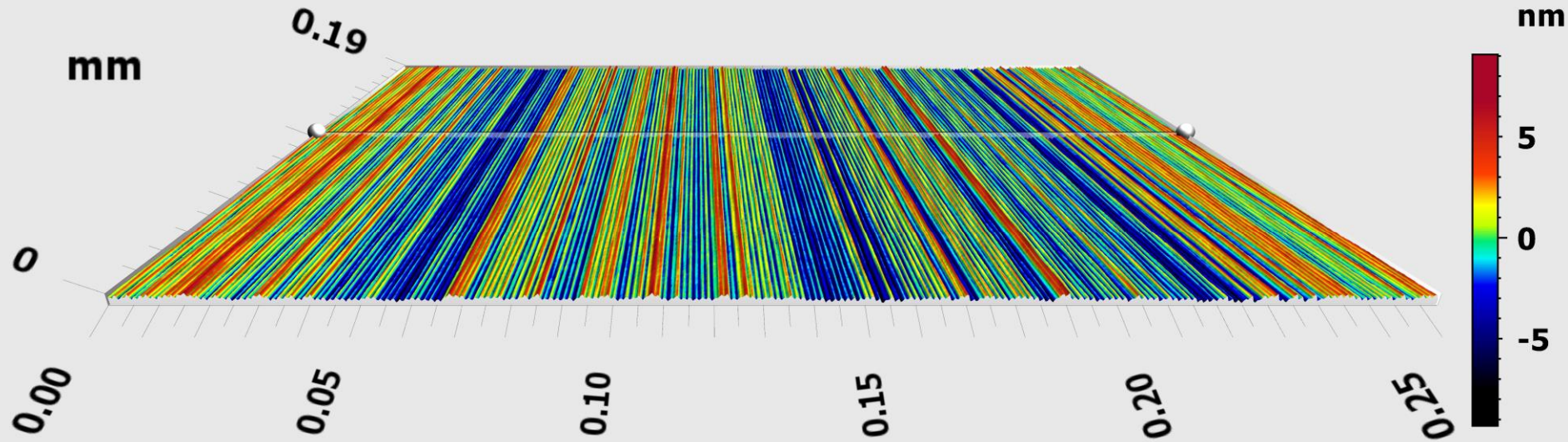




# flat area



# flat area – small subarea



# sinus area

