# UARPES sample plate rules

1. Please note that the standard Omicron and similar plates may not fit to the UARPES nests. If you plan to use your own sample plates you have to machine their width etc. according to the dimensions given. We do not guarantee that your sample plate will fit into UARPES nests and that transfer locking mechanism works reliably if the dimensions of your plate are different from the ones given below.
2. The bottom of the sample plate must be left smooth.
3. You must leave the stripes 2.6 mm wide (marked orange on the drawing) free and smooth for the holding springs.
4. You should add at least 0.4 mm margin (yellow stripes on the drawing) free and smooth so that your sample and all mounting contraptions should be distant at least 3 mm from the plate sides. See the drawing below for the axes R1 and R2 projected on the plate plane.
5. Think twice about all the materials you use for mounting the sample and the sample material itself. Check their melting temperatures and the vapor pressures vs temperature curves. **It is not allowed to melt the samples or whatever the carrier includes on the process manipulator.** All materials must be UHV compatible at the highest temperatures they will be treated with (in case you plan to go close to the melting point discuss the temperature measurement uncertainty with the beamline staff). The sample plate and mounting clamps should be made of a nonmagnetic metal (pure Mo, Ta, Ti, Cu are acceptable). Avoid soft or fragile materials**. After mounting the sample make sure that your sample is in an electrical contact with the plate.**
6. The plate thickness must be **1 mm.** Samples on plates thinner than that are likely to slip out the holder. Such samples cannot be retrieved back for experimenting.
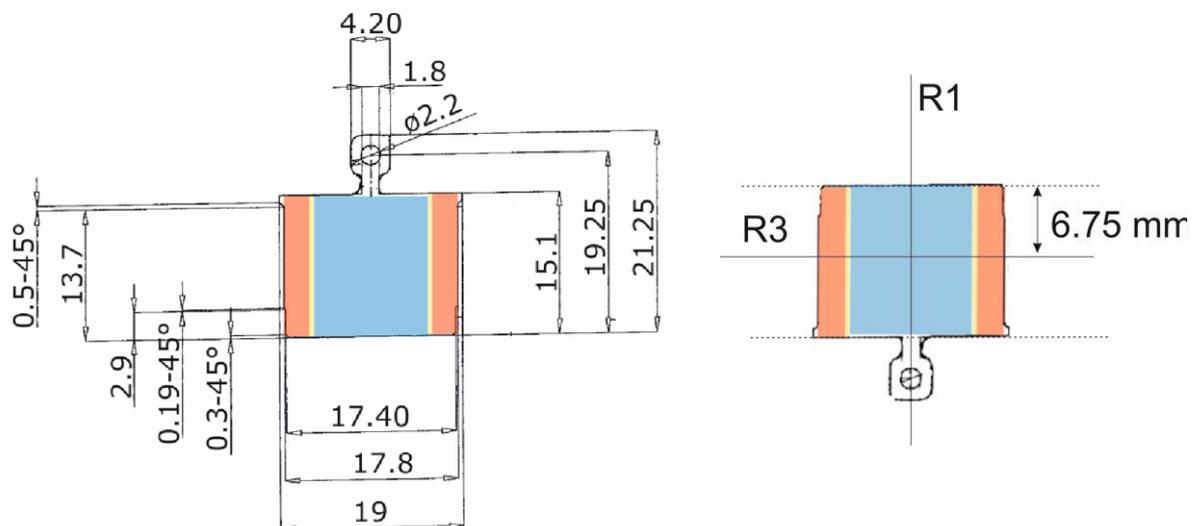
It is advised, for easier and reliable transfer operations, to shape the front edges of the mounting plate as shown below:
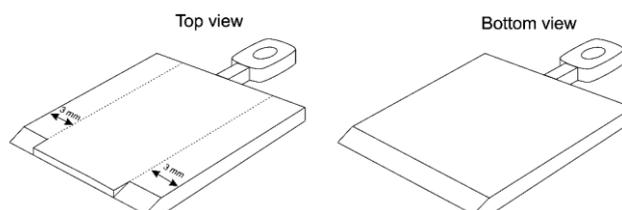
Additionally all sharp edges around the plate and the eye must be blunted/smoothed with a fine abrasive paper