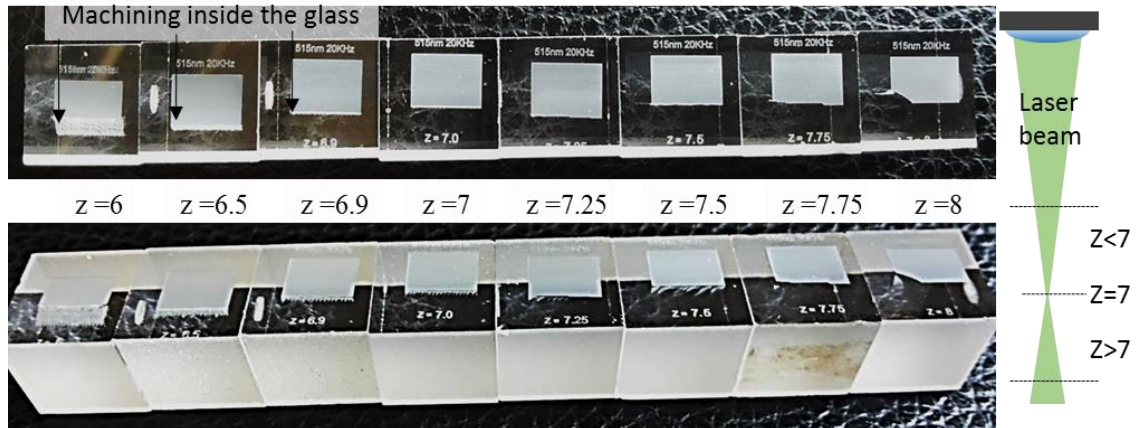


## Appendix A – The effect of laser defocus on ablation characteristics of fused silica



Appendix A.1. Effect of laser defocus on ablation characteristics.  
Ramp structure machined on fused silica cubes of  $10 \times 10 \times 10$  mm with sample placed at different positions on the focal plane.

A  $10 \times 10 \times 10$  mm fused silica cube was machined with a ramp structure to test the effect of focal plane position on the machining characteristics. The clear faces of the glass provide a view into the glass material. It was observed that defocusing the spot with the focal plane inside the glass caused machining inside the glass surface especially below the surface threshold fluence. On the other hand, the use of a defocused spot where the focal plane was above the glass material did not cause machining inside the glass.