

Publication**Improved diffraction of antithrombin crystals grown in microgravity****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 4531110**Author(s)** Wardell, M. R.; Skinner, R.; Carter, D. C.; Twigg, P. D.; Abrahams, J. P.**Author(s) at UniBasel** [Abrahams, Jan Pieter](#) ;**Year** 1997**Title** Improved diffraction of antithrombin crystals grown in microgravity**Journal** Acta Crystallographica. Section D, Biological Crystallography**Volume** 53**Number** Pt 5**Pages / Article-Number** 622-5**Mesh terms** Science & TechnologyLife Sciences & BiomedicinePhysical SciencesBiochemical Research
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Crystals of antithrombin were grown both on earth and in microgravity aboard US Space Shuttle Flight STS-67. The quality of crystals grown in both environments was highly variable and many could not be indexed. The microgravity crystals, however, generally diffracted better, as demonstrated by a novel procedure that estimates the resolution of the Bragg scatter from single diffraction images, without requiring knowledge of the cell dimensions of the crystal. Whereas the best earth-grown crystals never diffracted beyond 3 Angstrom resolution, the best microgravity crystal diffracted to 2.6 Angstrom. The improvement, demonstrated here by a comparison of 23 microgravity and 12 earth-grown crystals, is attributed to better ordered crystal growth in microgravity, although other factors may have contributed also.

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