

50 Years of Neutron Backscattering Spectroscopy



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Neutron scattering measurements under pressures beyond ca. 2 GPa (20 kbar) allow sample volumes of not more than 100 mm^3 . This limits severely their applications on high-resolution instruments, in particular backscattering spectrometers. Here we present some feasibility measurements on liquid glycerol under pressure to ca. 2 GPa, carried out at IN16b at the ILL, at ambient temperature. The pressure technique uses highly transparent ceramic anvils with 'panoramic' view on the sample and forces generated by a Paris-Edinburgh-type load frame. The data suggest that under certain conditions, and after some investment, high-pressure measurements in the multi-GPa range may become quite routine in the near future.

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