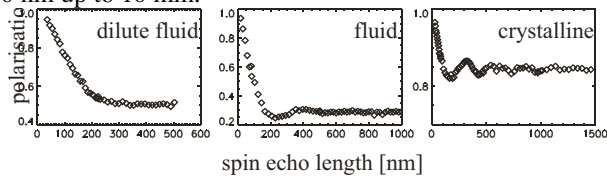


**Application of Spin-Echo Small-Angle Neutron Scattering in Colloidal Systems.** Wim G. Bouwman, Timofei V. Krouglov, Jeroen Plomp, Serguei V. Grigoriev, Wicher H. Kraan, and M.Theo Rekveldt.

Spin-echo small-angle neutron scattering (SESANS) is an efficient method to measure particle sizes in real space [1,2]. In this paper we show some measurements that illustrate the new possibilities of this technique. The phase transition in a colloidal system from gas via liquid to solid is directly identified from SESANS-measurements [3] as shown in the figure. Processes in the preparation of dairy products can be followed directly with the technique. Structures are determined over three orders of magnitude in length scale, from 10 nm up to 10  $\mu\text{m}$ .



[1] Wim G. Bouwman, Oktay Uca, Serguei V. Grigoriev, Wicher H. Kraan, Jeroen Plomp and M. Theo Rekveldt, *Applied Physics A* 74 [Suppl.], S115-S117 (2002)

[2] M.Th. Rekveldt, W.G. Bouwman, W.H. Kraan, O. Uca, S.V. Grigoriev, K. Habicht, T. Keller in *Neutron Spin Echo*, Lecture Notes in Physics 601 87-99 (2003), Ed. by Mezei, Pappas and Gutberlet, Springer, Berlin

[3] T. Krouglov, W.G. Bouwman, J. Plomp, M.Th. Rekveldt, G.J. Vroege, A.V. Petukhov and D.M.E. Thies-Weesie, *J. Appl. Cryst.* 36, 1417-1423 (2003)