

Fig. 26A-2-001. BaMnF₄. Crystal structure [69Kev]. Schematic view showing MnF₆ octahedra in BaMnF₄ structure along the *c* axis (upper) and along the *a* axis (lower). Subscripts attached to names of atoms denote symmetry operations. See Table 26A-2-006 about the nomenclature.

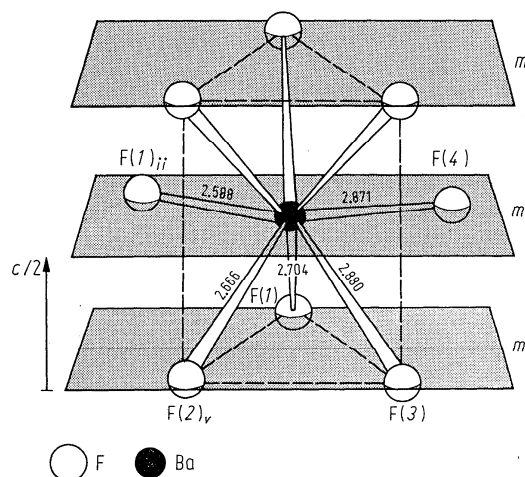


Fig. 26A-2-002. BaMnF₄. Crystal structure [69Kev]. Coordination polyhedron of fluorine atoms around Ba. Distances are in Å units and subscripts attached to names of atoms denote symmetry operations; for the explanation of the nomenclature, see Table 26A-2-006.

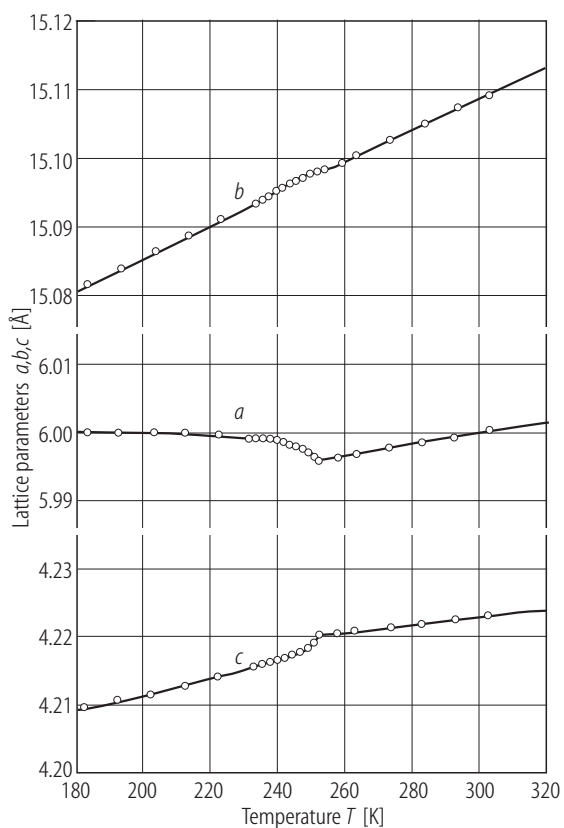


Fig. 26A-2-003. BaMnF₄. a , b , c vs. T [90Oga].

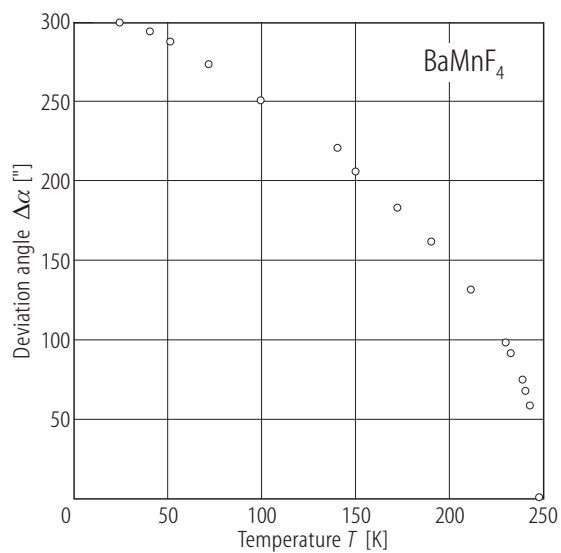


Fig. 26A-2-004. BaMnF₄. $\Delta\alpha$ vs. T [86StG]. $\Delta\alpha$: deviation angle of α from 90° estimated by the use of the splitting of (002) peaks.

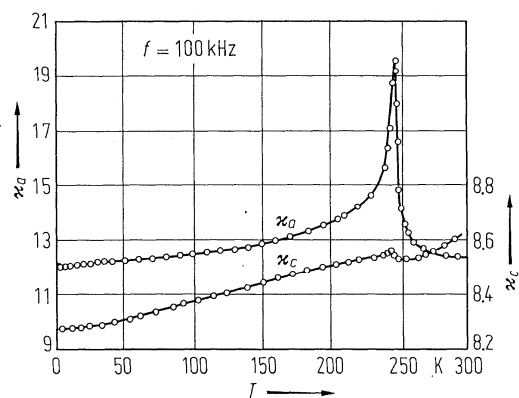


Fig. 26A-2-005. BaMnF₄. κ_a , κ_c vs. T [76Sam].

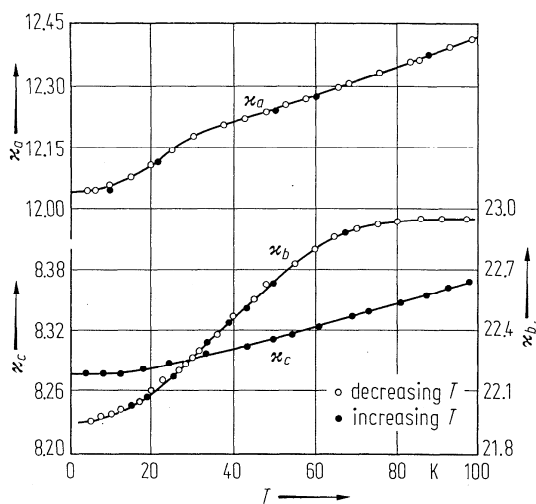


Fig. 26A-2-006. BaMnF₄. κ_a , κ_b , κ_c vs. T in low temperature region [77Sam]. $f = 10 \dots 100$ kHz.

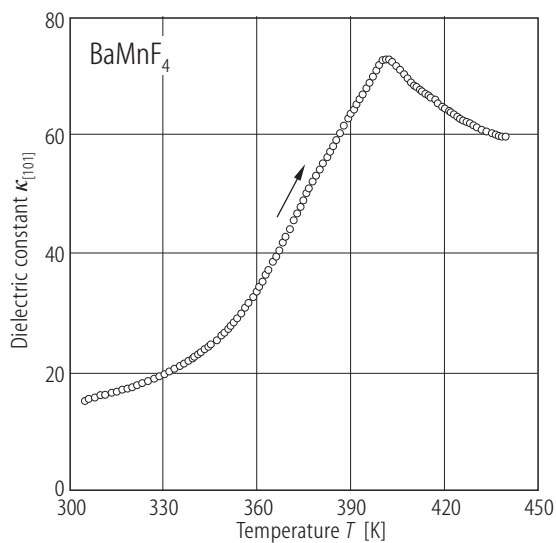


Fig. 26A-2-007. BaMnF₄. $\kappa_{[101]}$ vs. T [83Yos, 89Sco]. $f = 100$ kHz.

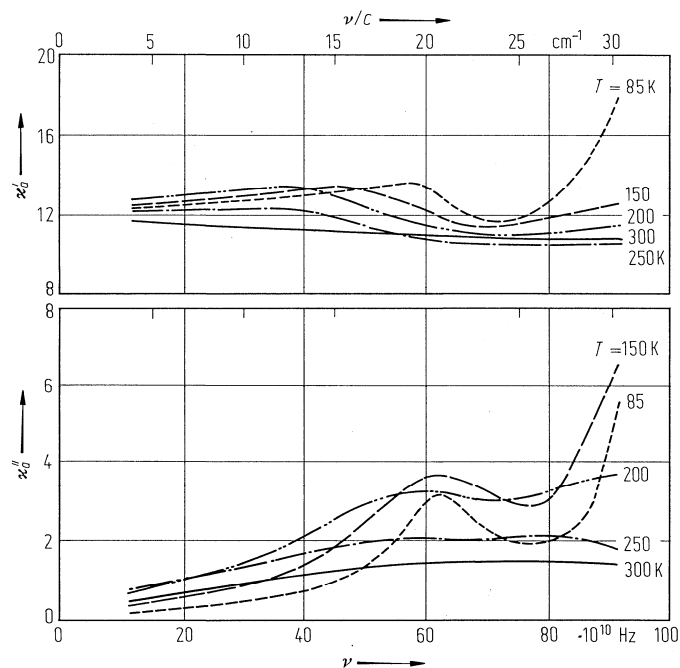


Fig. 26A-2-008. BaMnF₄. κ'_a , κ''_a vs. ν in a submillimeter range [82Vol]. Parameter: T .

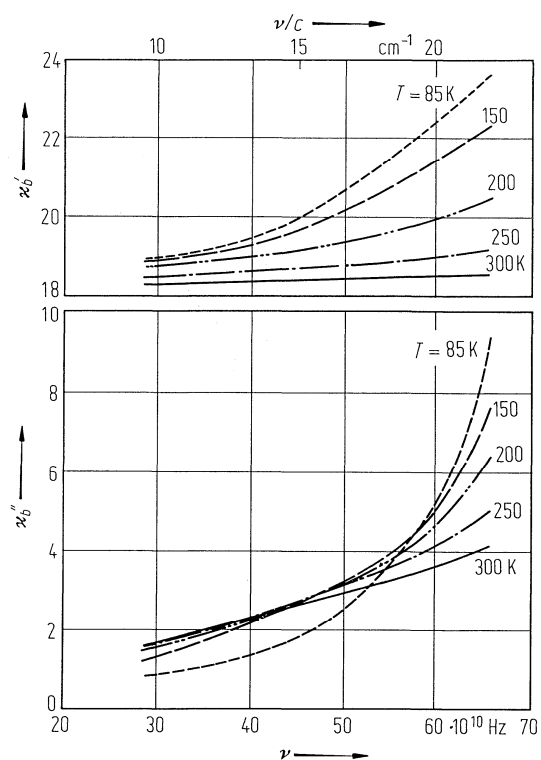


Fig. 26A-2-009. BaMnF₄. κ'_b , κ''_b vs. ν in a submillimeter range [82Vol]. Parameter: T .

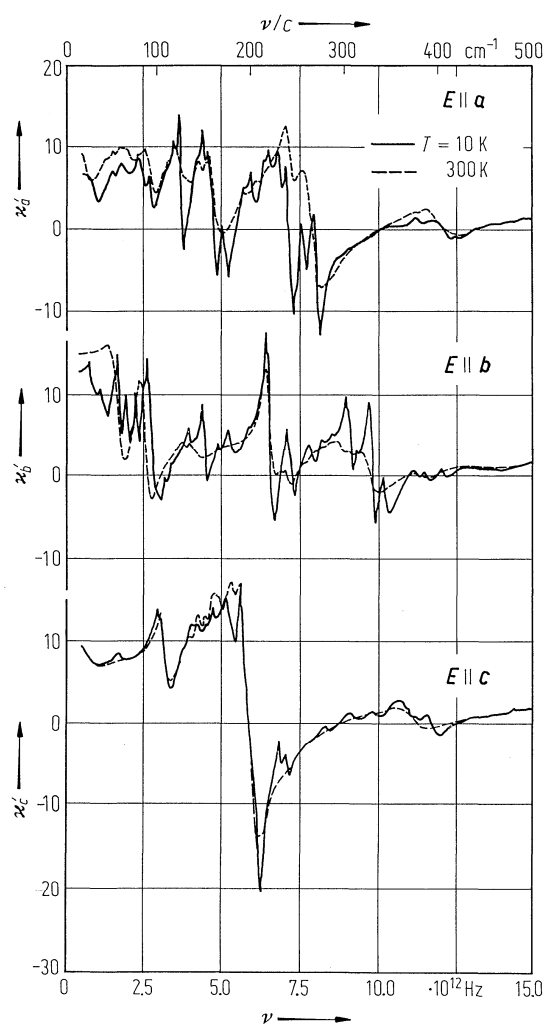


Fig. 26A-2-010. BaMnF₄. κ' vs. ν [86Kam]. Parameter: T . Curves were obtained from the reflectivity data.

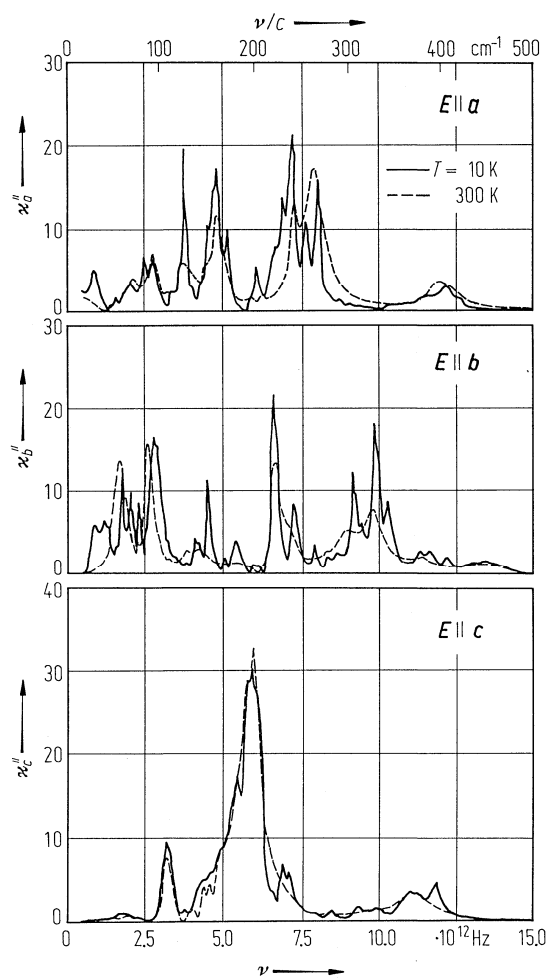


Fig. 26A-2-011. BaMnF₄. κ'' vs. ν [86Kam]. Parameter: T . Kramers-Kronig relation was applied for the reflectivity.

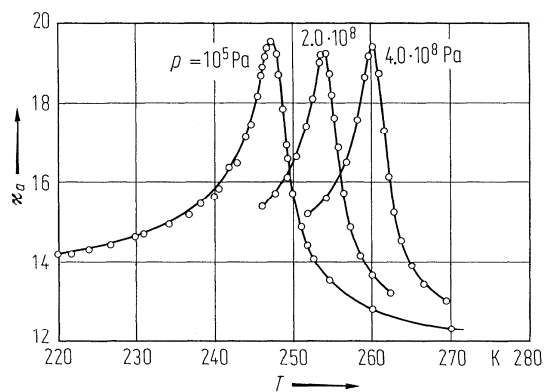


Fig. 26A-2-012. BaMnF₄. κ'_a vs. T [76Sam]. Parameter: p , hydrostatic pressure. $f = 1 \dots 100$ kHz.

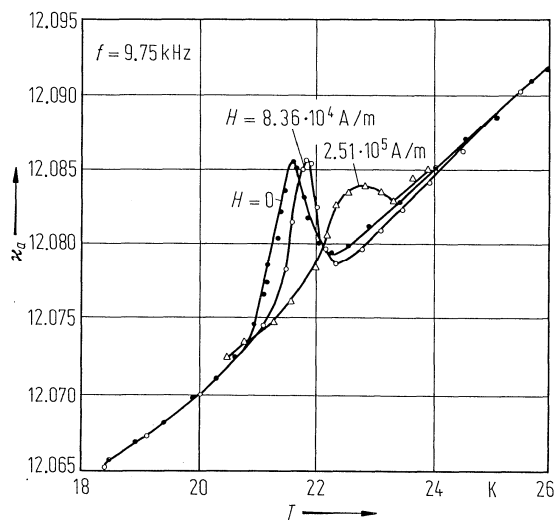


Fig. 26A-2-013. BaMnF₄. κ_a vs. T [84Kiz]. Parameter: magnetic field, H . $H \parallel b$.

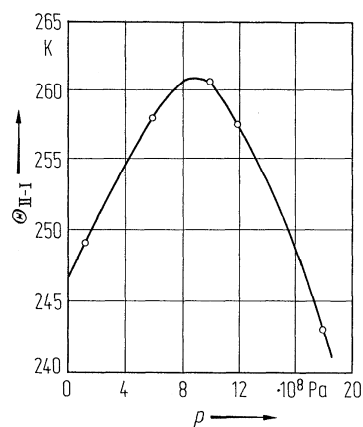


Fig. 26A-2-014. BaMnF₄. Θ_{II-I} vs. p [76Sam]. p : quasi-hydrostatic pressure.

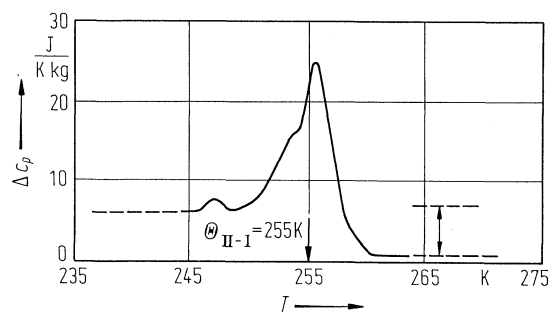


Fig. 26A-2-015. BaMnF₄. Δc_p vs. T [82Sco]. Δc_p : change of the specific heat capacity.

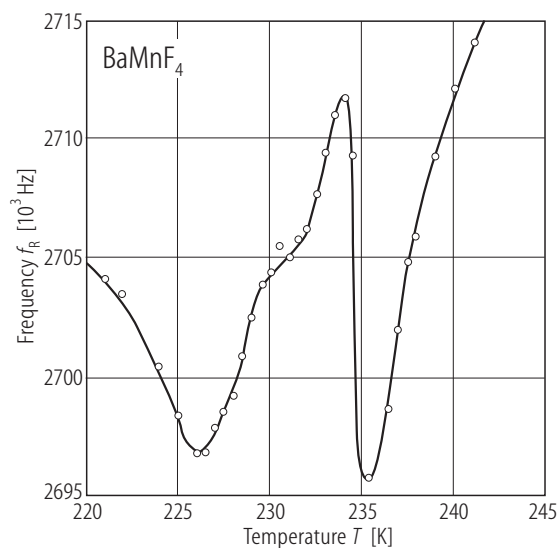


Fig. 26A-2-016. BaMnF₄. f_R vs. T [90Hid]. f_R : piezoelectric resonance frequency measured for b -plate sample.

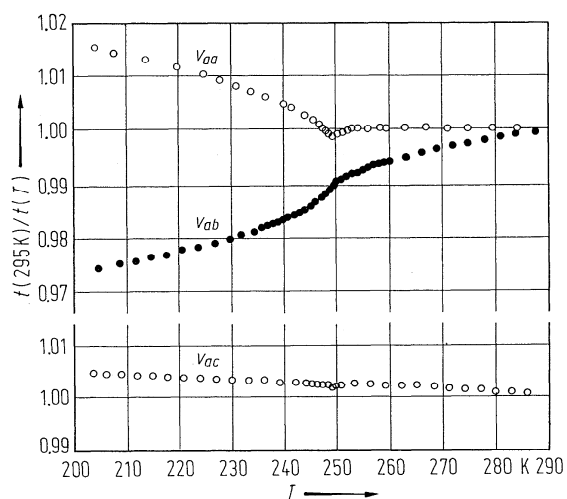


Fig. 26A-2-017. BaMnF₄. $t(295\text{K})/t(T)$ vs. T [75Fri]. t : transit time for modes propagating along the a axis. $f = 30$ MHz. t is inversely proportional to the sound velocity. v_{aa} : longitudinal wave velocity. v_{ab} : velocity of a sound wave polarized along the b axis. v_{ac} : polarized along the c axis.

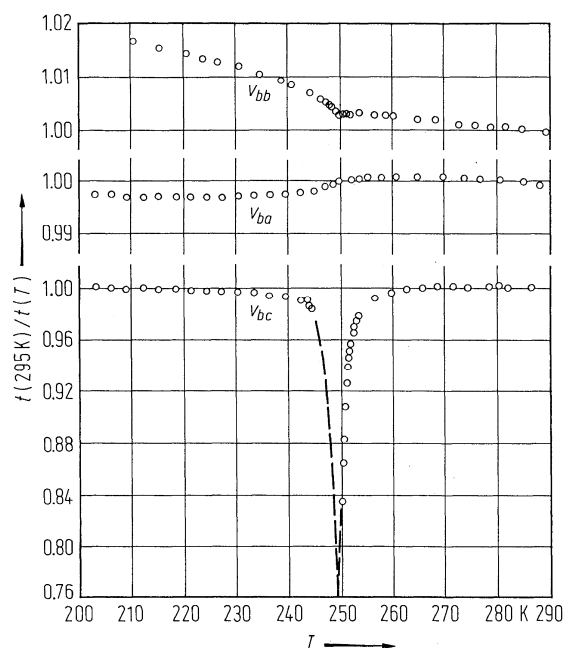


Fig. 26A-2-018. BaMnF₄. $t(295\text{ K})/t(T)$ vs. T [75Fri]. t : transit time for modes propagating along the b axis. t is inversely proportional to the sound velocity. Circles: $f = 30$ MHz. Dashed line: 4 MHz.

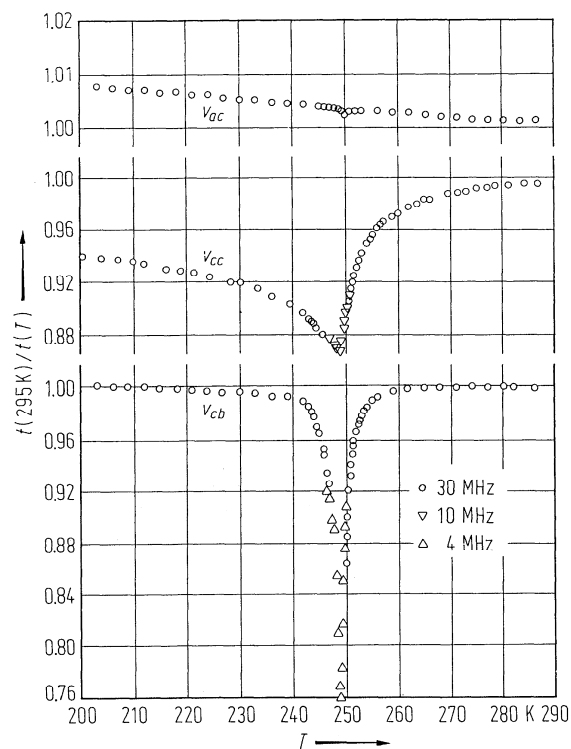


Fig. 26A-2-019. BaMnF₄. $t(295\text{ K})/t(T)$ vs. T [75Fri]. t : transit time for modes propagating along the c axis. t is inversely proportional to the sound velocity. Parameter: f .

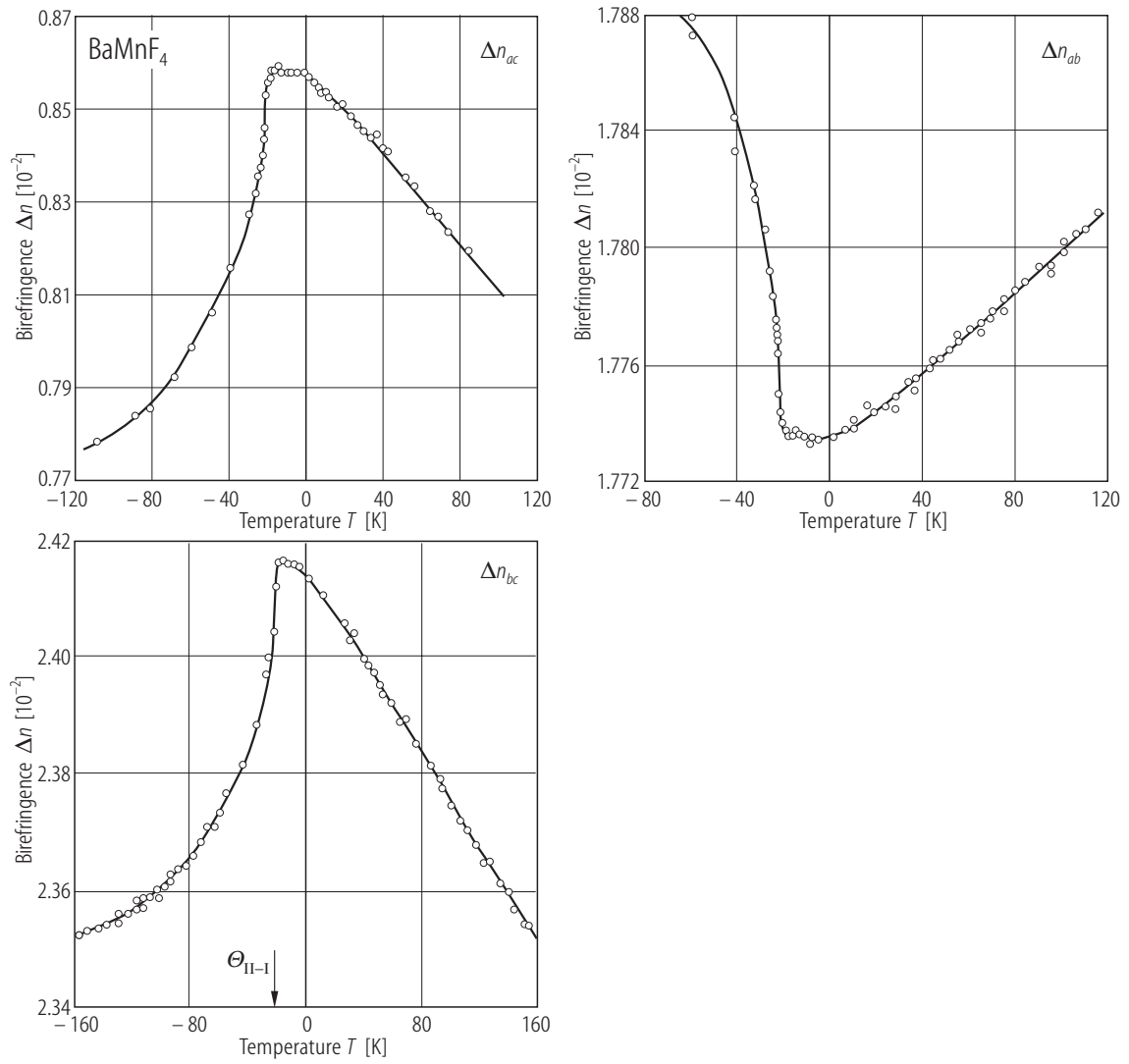


Fig. 26A-2-020. BaMnF₄, Δn vs. T [89Asa]. Δn : birefringence.

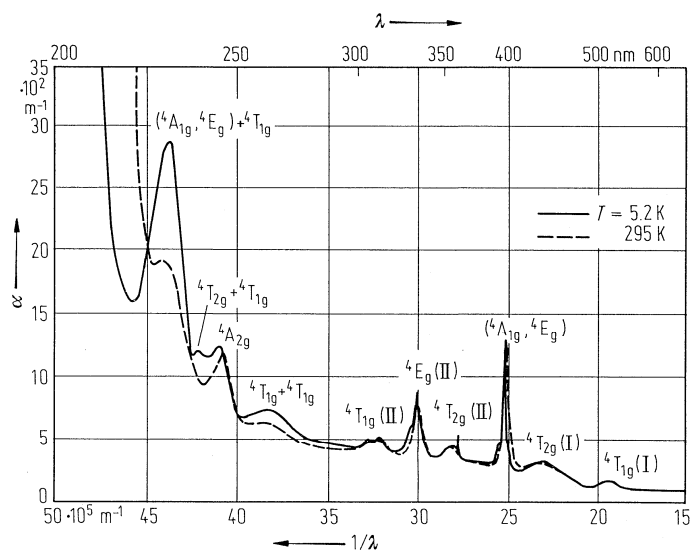


Fig. 26A-2-021. BaMnF₄. α vs. $1/\lambda$ [83Tsu]. Parameter: T . α : optical absorption coefficient of unpolarized light on the (bc) plane.

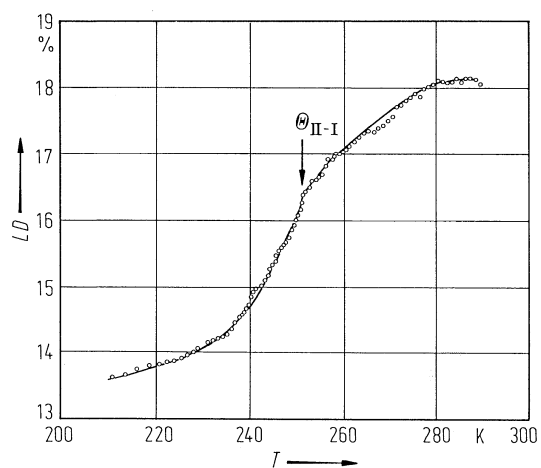


Fig. 26A-2-022. BaMnF₄. LD vs. T [80Reg]. LD: linear dichroism $[(\alpha_c - \alpha_a)/(\alpha_c + \alpha_a)]$ in the foot of the ${}^6A_1({}^6S) \rightarrow {}^4A_{1g}, {}^4E_g({}^4G)$ transition of Mn^{2+} ions. $\lambda = 398.3$ nm.

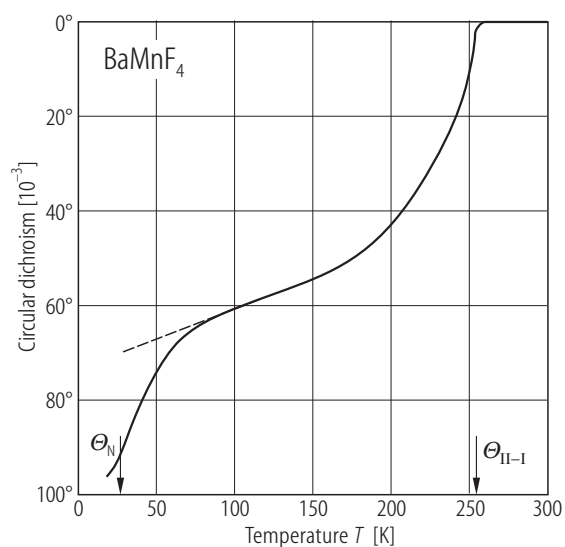


Fig. 26A-2-023. BaMnF₄. Circular dichroism of the (*ab*) plate vs. T [85Tsu]. $\lambda = 680$ nm.

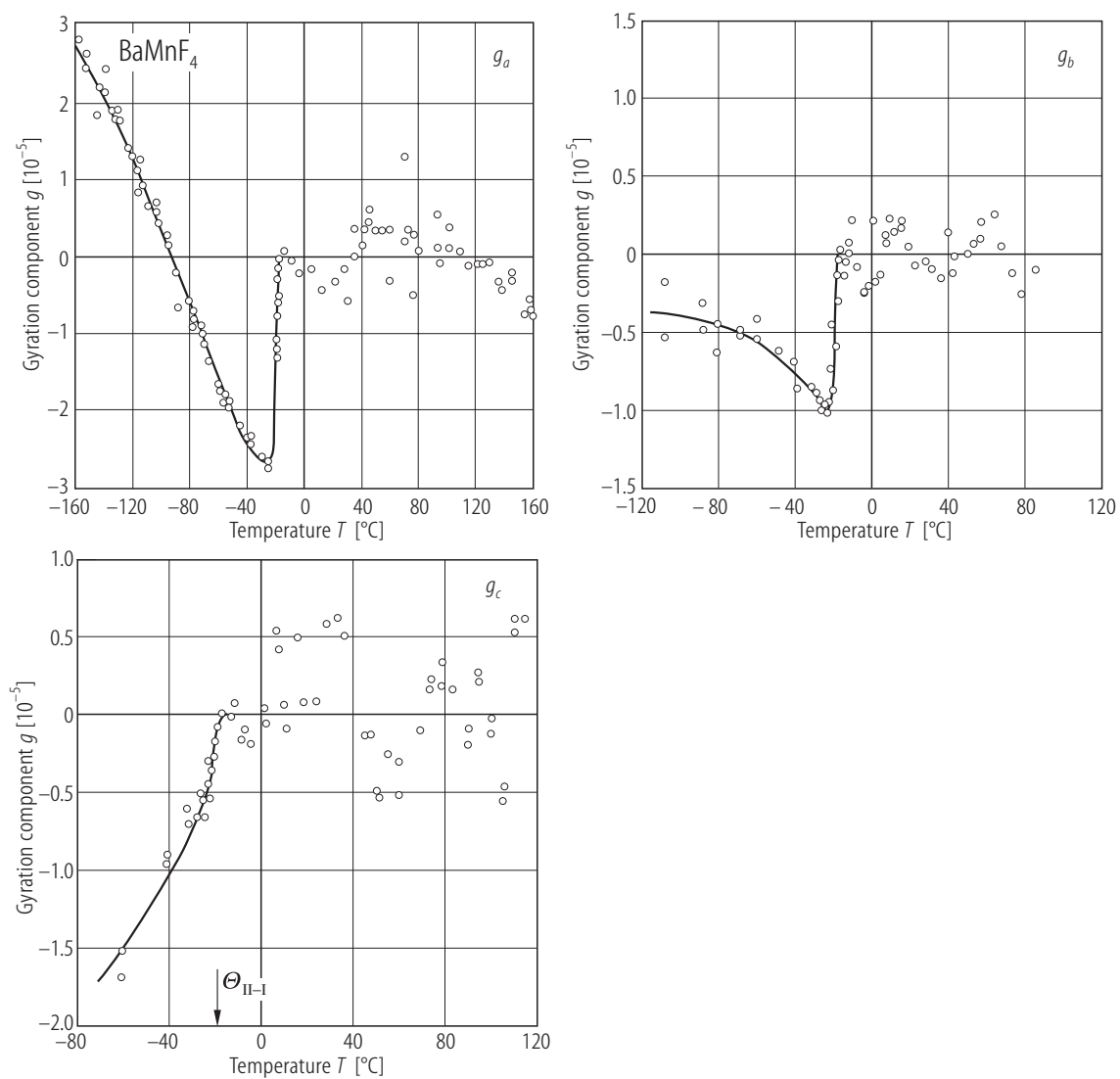


Fig. 26A-2-024. BaMnF₄. g_a , g_b , g_c vs. T [89Asa]. g_a , g_b , g_c : gyration for optical activity along the orthorhombic axes [100], [010], and [001], respectively.

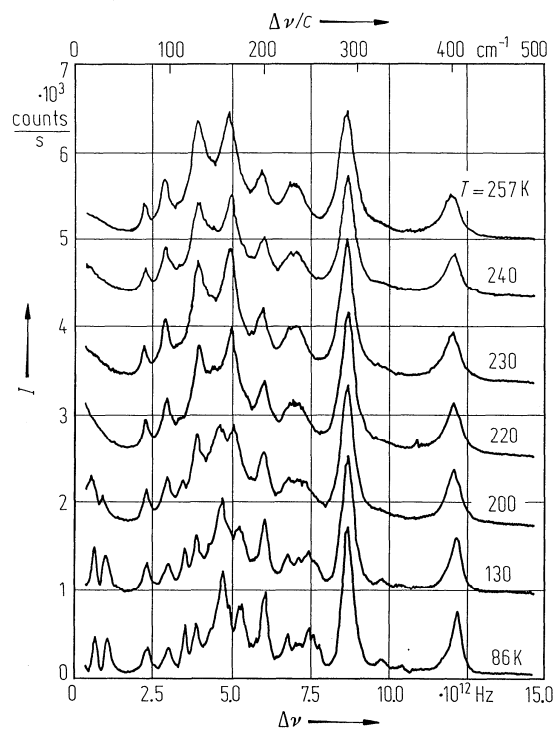


Fig. 26A-2-025. BaMnF₄. I vs. $\Delta\nu$ [81Loc]. I : Raman intensity, $\Delta\nu$: Raman shift in the scattering geometry $c(bb)a$. Parameter: T .

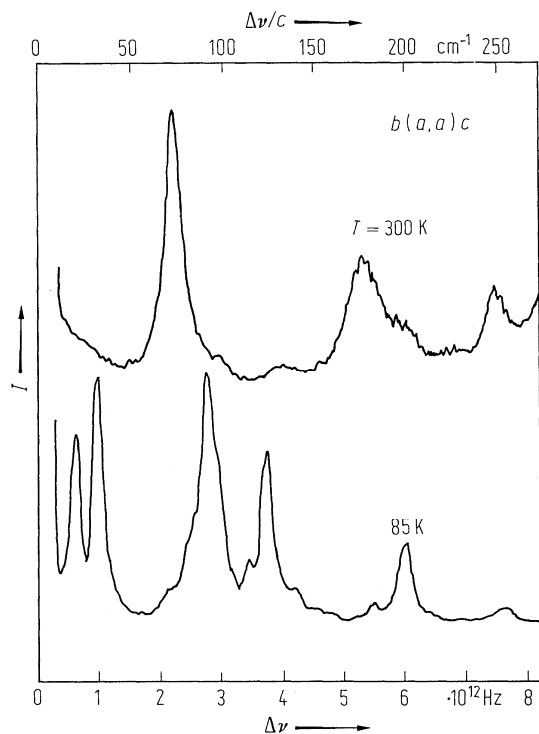


Fig. 26A-2-026. BaMnF₄. I vs. $\Delta\nu$ [76Rya]. I : Raman scattering intensity for the scattering geometry of $b(aa)c$ at 300 K (phase I) and at 80 K (phase II).

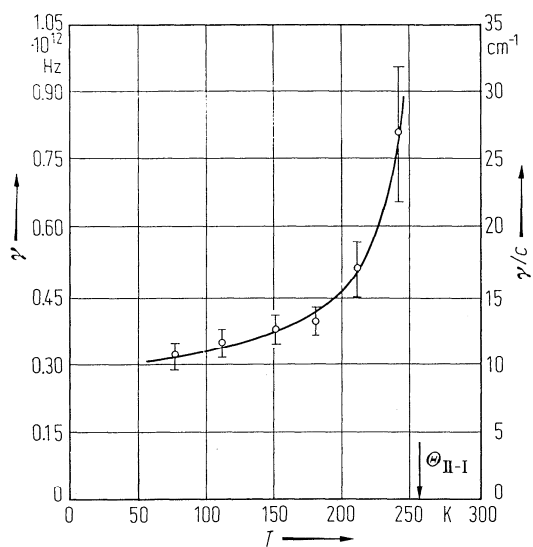


Fig. 26A-2-027. BaMnF₄. γ vs. T [76Rya]. γ : damping constant of the soft mode obtained as the full width at half-maximum of the Raman spectrum.

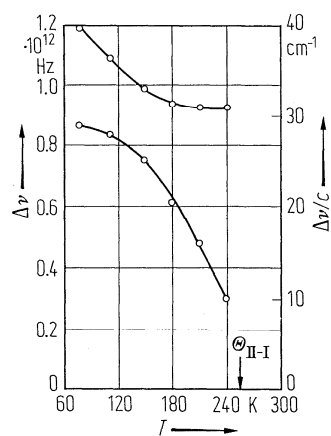


Fig. 26A-2-028. BaMnF₄. $\Delta\nu$ vs. T [76Rya]. $\Delta\nu$: Raman frequency shift of the soft mode below $\Theta_{II-I} = 255$ K. For the temperature range of $210 \text{ K} < T < \Theta_{II-I}$, the mode is over-damped. See also [74Rya].

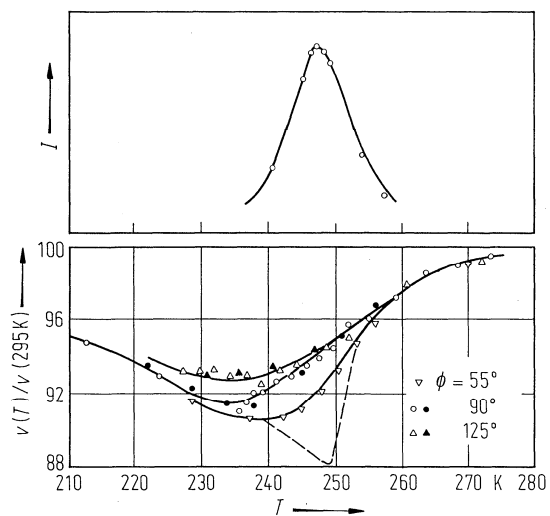


Fig. 26A-2-029. BaMnF₄. I vs. T , $v(T)/v(295\text{ K})$ vs. T [82Lyo]. I : intensity of central peak, $q \parallel c$. $v(T)/v(295\text{ K})$: velocity of the longitudinal acoustic wave propagating along c (normalized by the velocity at 295 K). ϕ : scattering angle. The dashed line shows the ultrasonic results [75Fri].

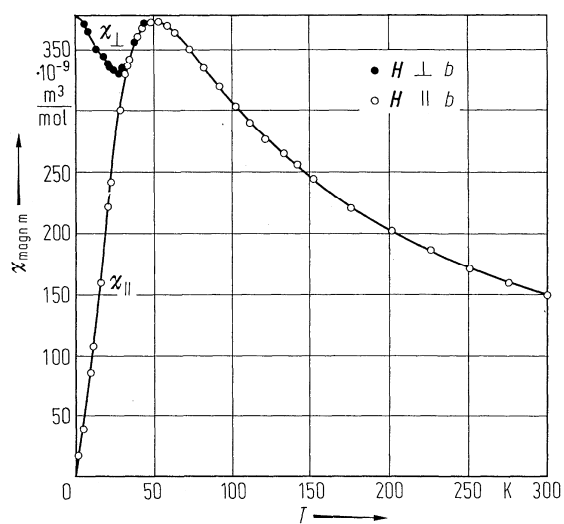


Fig. 26A-2-030. BaMnF₄. $\chi_{\text{magn m}}$ vs. T [69Hol]. χ_{\perp} and χ_{\parallel} are the susceptibilities measured perpendicular and parallel to the b axis, respectively.

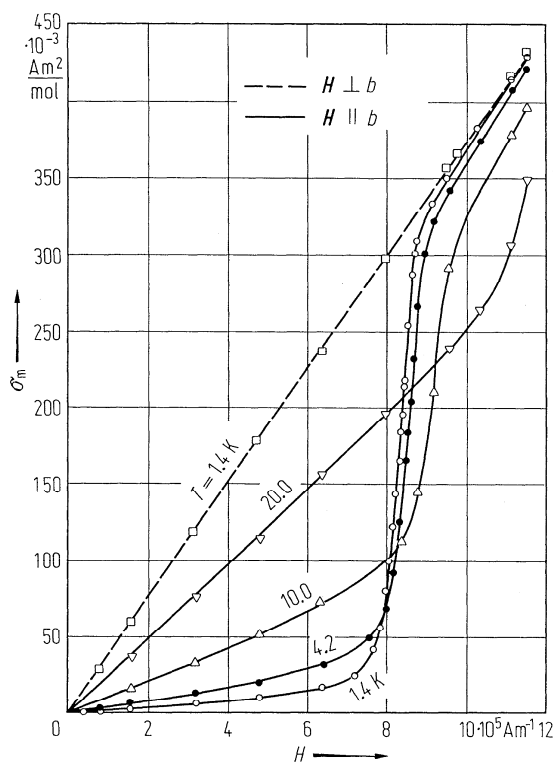


Fig. 26A-2-031. BaMnF₄. σ_m vs. H [69Hol]. Parameter: T and field directions, the field is along the b axis except the case (dashed curve) where the field is perpendicular to b .

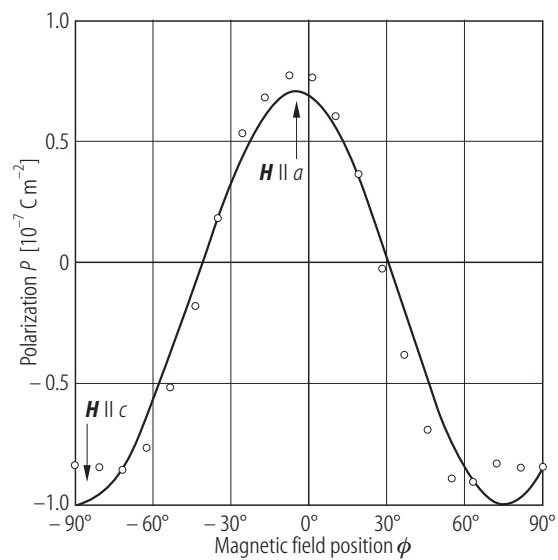


Fig. 26A-2-032. BaMnF₄. P vs. ϕ [90Sci]. P : polarization induced by magnetic field. ϕ : angle between magnetic field and a axis in the ac plane. $H = 8 \cdot 10^5 \text{ A m}^{-1}$. $T = 4 \text{ K}$.

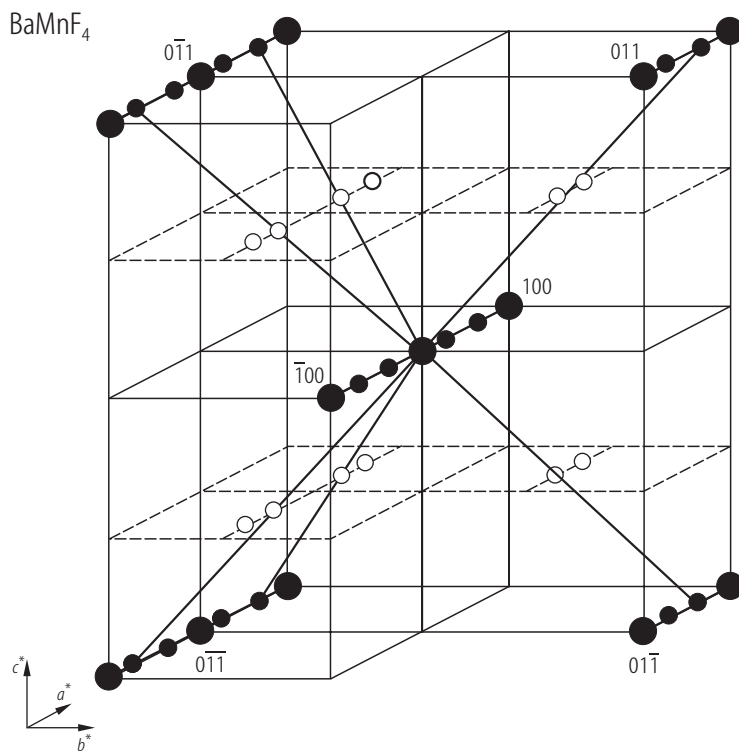


Fig. 26A-2-033. BaMnF₄. Main and satellite reflection pattern in phase II [88Sci]. Large full circle: main reflections, open circle: first-order satellite reflections, small full circle: second-order satellite reflections.

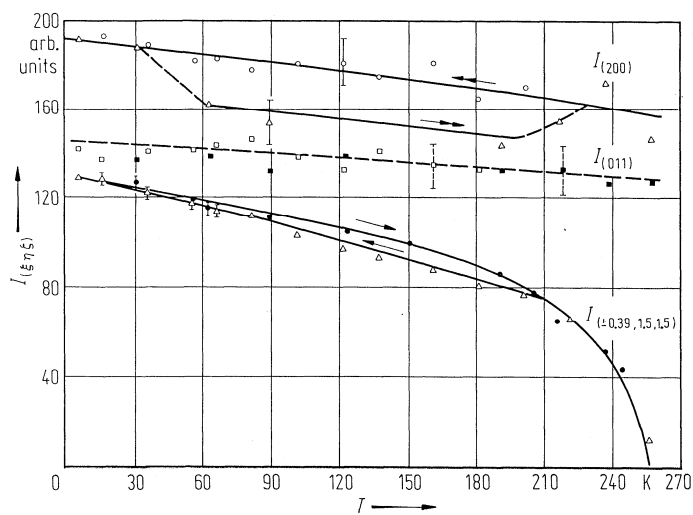


Fig. 26A-2-034. BaMnF₄. $I_{(200)}$, $I_{(011)}$, $I_{(\pm 0.39, 1.5, 1.5)}$ vs. T [83Bar]. $I_{(\xi\eta\zeta)}$: neutron intensity of $(\xi\eta\zeta)$ reflection.

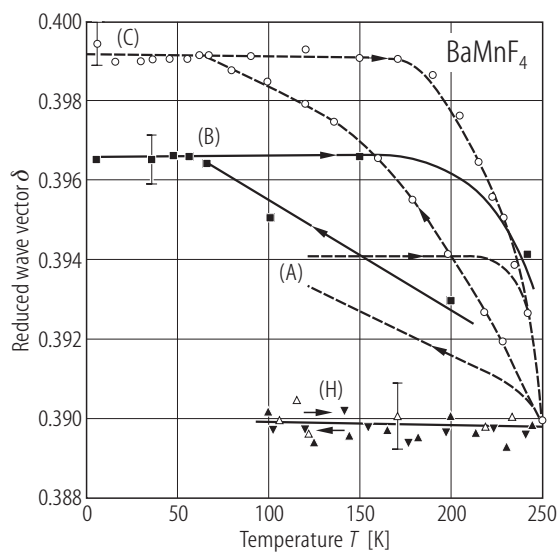


Fig. 26A-2-035. BaMnF₄. δ vs. T for four different samples [88StG]. δ : reduced wave vector of satellite reflection at $(\delta, 1/2, 1/2)$. Crystal (A): zone melt growth [83Cox], (B): Bridgman growth [83Bar], (C): Czochralski growth [83Bar], (H): hydrothermal growth.

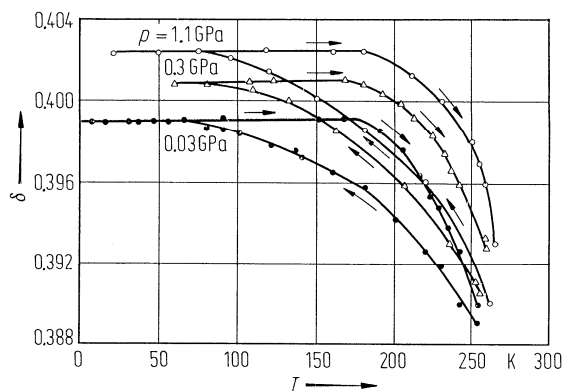


Fig. 26A-2-036. BaMnF₄. δ vs. T [84StG]. δ : reduced wave vector of satellite reflection at $(\delta, 1/2, 1/2)$. Parameter: p . Czochralski growth crystal was used.