

Abstract Submitted
for the mar99 Meeting of
The American Physical Society

Sorting Category: 8.6 (experimental)

Subharmonic Cascade to Möbius Defect Turbulence¹

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MUT R. BRAND, Theoretische Physik III, Universität Bayreuth, D-
95440, Germany² — A novel subharmonic cascade is observed in elec-
trohydrodynamic convection in liquid crystals when there is no flow
alignment. Built on a highly nonlinear base state, the first instability
is oscillatory. The second instability, a novel Standing Stripe Pattern,
transforms to an unusual curved roll pattern (Zvingers). These observa-
tions provide important complementary information for theories based
on small amplitude perturbations of a highly nonlinear base state.

¹C. Fradin et al., Phys. Rev. Lett. **81**, 2902 (1998)

²PEC thanks the Alexander von Humboldt Foundation for the award of
an AvH Research Prize and the University of Bayreuth for hospitality.
CF thanks theENS (Paris) for financial support.

Prefer Oral Session
 Prefer Poster Session

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Date submitted: November 13, 1998

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