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## Field-theory approach to ESR in quantum spin chains

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A field-theory approach to ESR in quantum spin chains at low temperature  $T$  is developed; ESR linewidth and shift are evaluated in perturbation theory. In the presence of the staggered field  $h$ , the linewidth grows as  $h^2/T^2$ . This explains the anomalous broadening found experimentally in Cu benzoate at low temperature.

KEYWORDS: ESR, quantum spin chains, field theory