Resonance asymptotics in quantum graphs

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We study the number of resonances of a quantum graph in high-energy limit (more precisely, the number of both resonances and eigenvalues contained in the circle of diameter R in the k-plane for $R \to \infty$). Davies and Pushnitski noticed that for certain graphs the constant by the leading term of Weyl's asymptotics is smaller then expected. We explore this non-Weyl asymptotics for general coupling conditions in the vertices of the graph and also for graphs placed into a magnetic field.