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From the trace formula to the Kuznetsov formula for GL_n .

I will report on ongoing joint work with Chen Wan. We prove a direct comparison between the (non-invariant) Arthur–Selberg trace formula for GL_n and a nonstandard form of the Kuznetsov formula, with “boundary terms”. This answers the question of separating the non-tempered contributions from the trace formula, which was addressed by Frenkel–Langlands–Ngô and Altuğ for GL_2 , and can be seen as a comparison of relative trace formulas within the “beyond endoscopy” paradigm. The comparison is possible via a local “transfer operator” of test measures which, however, is implicitly defined; we explicitly express this operator in terms of additive Fourier transforms when $n \leq 5$.