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Combinatorial Invariants of Stratified Spaces. Preliminary report.

There is a generalized Euler characteristic for spaces that are stratified by locally compact subspaces. This characteristic can be viewed as an integral ring morphism on a Grothendieck ring that we construct, well suited for this category of spaces. We explain the constructions then provide explicit Euler characteristic computations for a large number of functorial constructions found in the literature, in particular those stratified by configuration spaces. This talk is a mix of topology, combinatorics and geometry, and is accessible to a wide audience. (Received December 29, 2019)