Local stability for third-order schemes on conical unstructured meshes

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ABSTRACT

We focus on local stability for third-order method dedicated to transport equation in two space dimension. The finite volume method is third-order accurate, both on conservative quantities (using Least-Squares reconstruction [1, 7, 4]) and geometry (using conical meshes) [6] see Figure 1. The stability for transport schemes is obtained by combination and extension of works [3, 4, 2, 5].
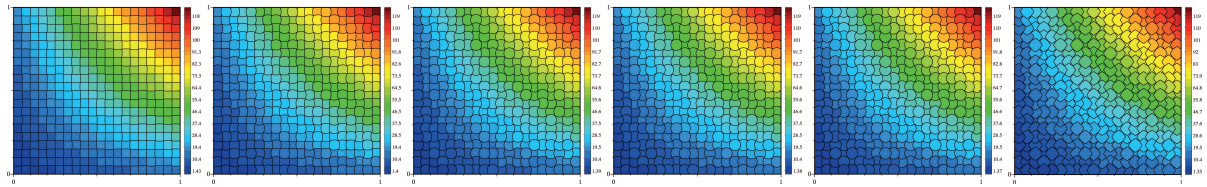
Figure 1: Reconstruction of quadratic polynoms is exact on arbitrary conical cells: a first step for fully third-order schemes (geometry **and** conservative unknowns).

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