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*An asymptotic expansion for a solution of convection-diffusion problem.* Preliminary report.

We consider a singularly perturbed non-self-adjoint second order boundary value problem (also known as a convection-diffusion problem) in a sector. An asymptotic expansion of the solution is obtained, which displays both corner singularities and the interior layer behaviour when the singular perturbation parameter  $\varepsilon$  is small. The asymptotic expansion can be differentiated to provide an asymptotic expansion for the derivatives of the solution. (Received October 04, 2000)