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**Title** *Multi-Disciplinary Computational Aerospace Sciences (MCAS): Preliminary Studies on Source Panel Method*

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**Abstract:**

*Panel methods are one of the popular numerical techniques for handling the fluid flows around complicated configurations like airplanes. Panel methods comprise of source panel and vortex panel methods. In the present report, source panel method is studied for the estimation of pressure distribution over a circular and elliptical cylinder by dividing the surface of the body into panels. Both the cases of inscribed and circumscribed panels are considered. The software code is developed for eight panels and the computed results are validated against those in open literature. The generalized version of the code was further developed increasing the number of panels to an optimum number.*