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Entropy Generation due to the Transient Mixed convection in a Three- Dimensional Right-Angle Triangular Cavity

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Highlights

- When ($Ri = 0.01$), the forced convection and the direction of the moving wall have a significant effect on the flow and thermal fields inside the cavity.
- Under the condition of the mixed convection ($Ri = 1.0$), the center of the rotating vortices begins to diminish and they become more closer to each other for three considered cases.
- Under the condition of the natural convection ($Ri = 10$), the rotating vortices begin to be more extended in the cavity, while they convert into a major and minor vortices for ($-V_p$) case.
- For three considered cases, the direction of the moving wall has a weak effect on the (S_{th}) and (S_{tot}) contours, while (S_{fr}) contours are significantly influenced by the moving wall direction especially for ($V_p = 0$) case.
- When the Richardson number increases, the all kinds of the entropy generation increases.

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