For IMEX Adams schemes, letting $x = \omega_L \Delta t$ and $y = \omega_H \Delta t$, and setting $A = e^{\mathrm{i}\theta}$, the solution for x and y can be obtained as follows when $\theta \neq 2n\pi \quad (n = 0, \pm 1, \pm 2, \ldots)$.

$$x = \frac{-2c\tan(\theta/2)}{-4b(c+1)\sin^2(\theta/2) + 3b - 1 - c}, \tag{1}$$

$$y = \frac{2(2b\cos(\theta) + b - 1)\tan(\theta/2)}{-4b(c+1)\sin^2(\theta/2) + 3b - 1 - c}. \tag{2}$$

The curves defined by (1) and (2) as well as the line $x + y = 0$ yield the boundaries of the stability of the scheme.

As $c \to 3b - 1$, one branch of the curve is overlapping to the line $x + y = 0$ and a wedge-shaped unstable region disappears.

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