The Wind of Rotating B Supergiants.
I. Domains of Slow and Fast Solution Regimes.

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In the scenario of rotating radiation-driven wind theory for massive stars, three types of hydrodynamic solutions are currently known: the classical "fast" m-CAK solution, the "Omega-slow" solution that arises for fast rotators, and the so-called "delta-slow" solution for high values of the delta line-force parameter are allowed independently of the rotation speed. Compared to the "fast" solutions, both "slow solutions" have lower terminal velocities.
As the study of the "slow" solution parameters domain is still incomplete, we perform a comprehensive analysis of the distinctive solution regimes for B supergiants that emerge from a fine grid of rotation values, Omega, and various ionization conditions in the wind, the delta parameter. The wind ionization defines two domains: one for "fast" outflowing winds and the other for "slow" expanding flows. Both domains are clear-cut by a gap, where no solution is found for a finite interval of delta. The location and width of the forbidden region depend on Teff and Omega. There is a smooth and continuous transition between the "Omega-slow" and "delta-slow" regimes, a single "Omega-delta-slow" regime.
We discuss different situations where the "slow" solutions can be found and the possibility of a switch between "fast" and "slow" solutions in the B supergiant winds. We compare the theoretical terminal velocity with observations of B and A supergiants and find that the "fast" regime prevails mostly for early B supergiants while the "slow" wind regime matches better for A and B mid- and late-type supergiants.

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