N69c 輻射抵抗影響下輻射圧駆動相対論的降着円盤風

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We examine steady relativistic winds which are emanating from a luminous accretion disk and driven by disk radiation fields under the influence of radiation drag. For wind flows we use a streamline approach where the dynamical equations are represented by the streamline coordinates, and a cold approximation where the pressure gradient force is ignored. For radiation fields, on the other hand, we use a near-disk approximation where the radiation stress-energy tensors are evaluated from the disk region just blow the flows. The streamline may widen since the wind flows gain the angular momentum from the disk radiation field just below them. The wind terminal speed is smaller than the Icke's *magic speed* of $(4+\sqrt{7})c/3 \sim 0.45c$, because the streamlines are generally inclined and therefore the radiative force is smaller than the case of vertical streamline. The conditions that the radiative wind blows are obtained for the control parameters; the radius of the wind base and the normalized disk luminosity. The radiative wind can blow from the inner region ($r_0 \sim 5$ – $8\ r_{\rm g}$) if the disk is sufficiently luminous. We also briefly discuss pure electron-positron pair winds, where the acceleration takes place very close to the disk.