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The Electrical Currents in a DC RC Circuit LIANXI MA, Department of Physics, Blinn College, 2423 Blinn Blvd, Bryan, TX 77805, CHI CHEN, Department of Physics, Texas A&M University, College Station, TX 77843 — A RC circuit with DC voltage source composed of two RC units is investigated. We find that except for a rare scenario of C2R2 = C1R1, there is always an accumulation of charge between the two units. This charge accumulation causes the current difference on R1 and R2. The transient processes of currents and charges are discussed.

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