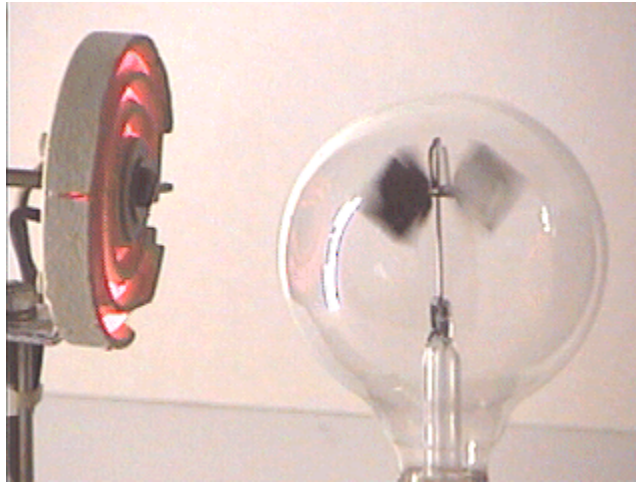


Answer #180

The answer is (c): the radiometer will slowly stop, then move slowly in reverse.



When the radiometer is heated, it reaches a high equilibrium temperature, at which point it slows down. As the radiometer cools, the black side radiates more efficiently and therefore cools faster than the white side (just as it heated faster than the white side, causing the motion in the first place). Therefore, the effect that drives the motion, discussed in the previous questions, is reversed. Therefore, the direction of motion of the radiometer will reverse. This happens relatively quickly: the radiometer is heated for about one minute, after which time it has slowed down somewhat. About 30 seconds after the heater is removed the rotator motion ceases. It then reverses, and moves slowly for about another minute.

Click [here](#) for a 5-second snippet of the motion about 20 seconds after the heater was removed. Click [here](#) for a 5-second snippet of the motion about 40 seconds after the heater was removed.

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