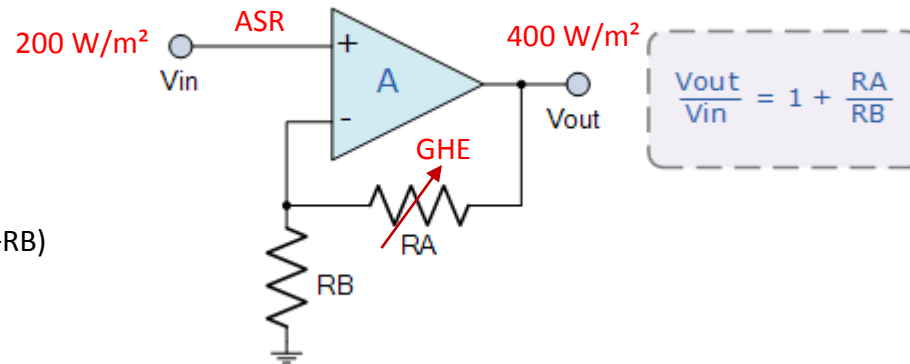


Op-amp circuit from: <https://www.electronics-tutorials.ws/opamp/op-amp-building-blocks.html>  
My additions in red

### The Non-inverting Op-amp Circuit



Closed loop gain  $G=1/(1-B)$

Where feedback fraction  $B=R_A/(R_A+R_B)$

Substituting,  $G=(R_A+R_B)/R_B$

An Op-amp will try to balance  $V_{in+}$  and  $V_{in-}$ . Like  $ASR$  and  $OLR$  must balance.

$V_{in}=ASR$  at the surface ( $160 \text{ SW} + 40 \text{ LW}$  from the atmosphere. Half of the absorbed  $SW$ )  
 $V_{out}=LW$  from the surface

$R_A=R_B \rightarrow V_{feedback}=V_{out}/2$  i.e. feedback fraction 0.5