

**DATA TABLE**  
**IMPEDANCE MATCHING LAB**  
**PHYSICS 281 Summer 2003**

<b>Resistance (<math>\Omega</math>)</b>	<b>Current (A)</b>	<b>Voltage (V)</b>	<b>P=IV (W)</b>
<b>10</b>			
<b>20</b>			
<b>30</b>			
<b>40</b>			
<b>50</b>			
<b>60</b>			
<b>80</b>			
<b>100</b>			
<b>150</b>			

**Choose R ( $< 2\Omega$  or  $>$  than  $200\Omega$  until peak of P-R curve is found).  
Use linear graph paper. 10mm to 1 cm.**

$P_{\max}$  = Maximum power  
 $R_{\text{int}}$  = Internal Resistance  
 $\mathcal{E}$  = E.M.F. of the battery

From P-R graph

$$R_{\text{int}} = \frac{\quad}{\quad} \Omega$$

$$P_{\max} = \frac{\quad}{\quad} \text{W}$$

From V-I Graph

$$\text{Slope} = \frac{\quad}{\quad} \Omega$$

$$\mathcal{E} = \frac{\quad}{\quad} \text{V}$$

$$R_{\text{int}} = |\text{slope}| \frac{\quad}{\quad} \Omega$$

