

<http://news.bbc.co.uk/1/hi/world/americas/3564192.stm>

what causes a hurricane?

[http://news.bbc.co.uk/1/hi/in\\_pictures/3561624.stm](http://news.bbc.co.uk/1/hi/in_pictures/3561624.stm)

pictures

[http://ap.indystar.com/dynamic/files/specials/interactives/charley\\_pix/index.html?S](http://ap.indystar.com/dynamic/files/specials/interactives/charley_pix/index.html?S)

$$P + \frac{1}{2} \rho v^2 + \rho gh = \text{constant}$$

$$P_1 + \frac{1}{2} \rho v_1^2 + \cancel{\rho g y_1} = P_2 + \frac{1}{2} \rho v_2^2 + \cancel{\rho g y_2}$$

Since  $y_1 = y_2$   
 $v_2 = 0$  in attic

$$\Rightarrow P_2 - P_1 = \frac{1}{2} \rho v_1^2$$

$$\Delta P = \frac{1}{2} (1.29 \frac{\text{kg}}{\text{m}^3}) (67 \frac{\text{m}}{\text{s}})^2$$

$$P = \frac{F}{A} \quad F \approx 90 \text{ tons}$$



