

# Matlab Generated Maxwell-Boltzmann Distribution

```

m= 29.0;           % amu air = 29
M= 0.029;         % kg/mol air = 0.029
T= 273;           % kelvin
k= 1.38066E23;   % Boltzmann constant in J/K
R= 8.3145;        % universal gas constant = kN(A) in J/mol K
vprob=sqrt(2*R*T/M); % m/s
v=[0:1:10*vprob]; % create a molecular speed variable
y=4*3.14*(M/(2*3.14*R*T)).1.5*v.^2.*exp(-M*v.^2/(2*R*T)); %
plot(v,y)
    
```

