Homework 2 Problem 2 Part c

AE435 - Spring 2018

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```
alpha=200 % Specific Power [kW/kg]
n=0.80 % Thruster Efficiency [%]
tt=6.307e+7; % Thrusting Time [sec]
vc2 = 2*tt*n*alpha/(1000^2); % Charachteristic [km/s]
c = linspace(10,1000,1000);

dv1 = 1;
dv2 = 5;
dv3 = 10;
dv4 = 20
dv5 = 50;

mplmo1 = zeros(length(c),1);
mplmo2 = zeros(length(c),1);
mplmo3 = zeros(length(c),1);
mplmo4 = zeros(length(c),1);
mplmo5 = zeros(length(c),1);

for i = 1:length(c)
    mplmo1(i) = exp(-dv1/c(i))-(((c(i)^2)/(vc2))*(1-exp(-dv1/c(i))));
    mplmo2(i) = exp(-dv2/c(i))-(((c(i)^2)/(vc2))*(1-exp(-dv2/c(i))));
    mplmo3(i) = exp(-dv3/c(i))-(((c(i)^2)/(vc2))*(1-exp(-dv3/c(i))));
    mplmo4(i) = exp(-dv4/c(i))-(((c(i)^2)/(vc2))*(1-exp(-dv4/c(i))));
    mplmo5(i) = exp(-dv5/c(i))-(((c(i)^2)/(vc2))*(1-exp(-dv5/c(i))));
end

%Plotting Code Not Shown
```