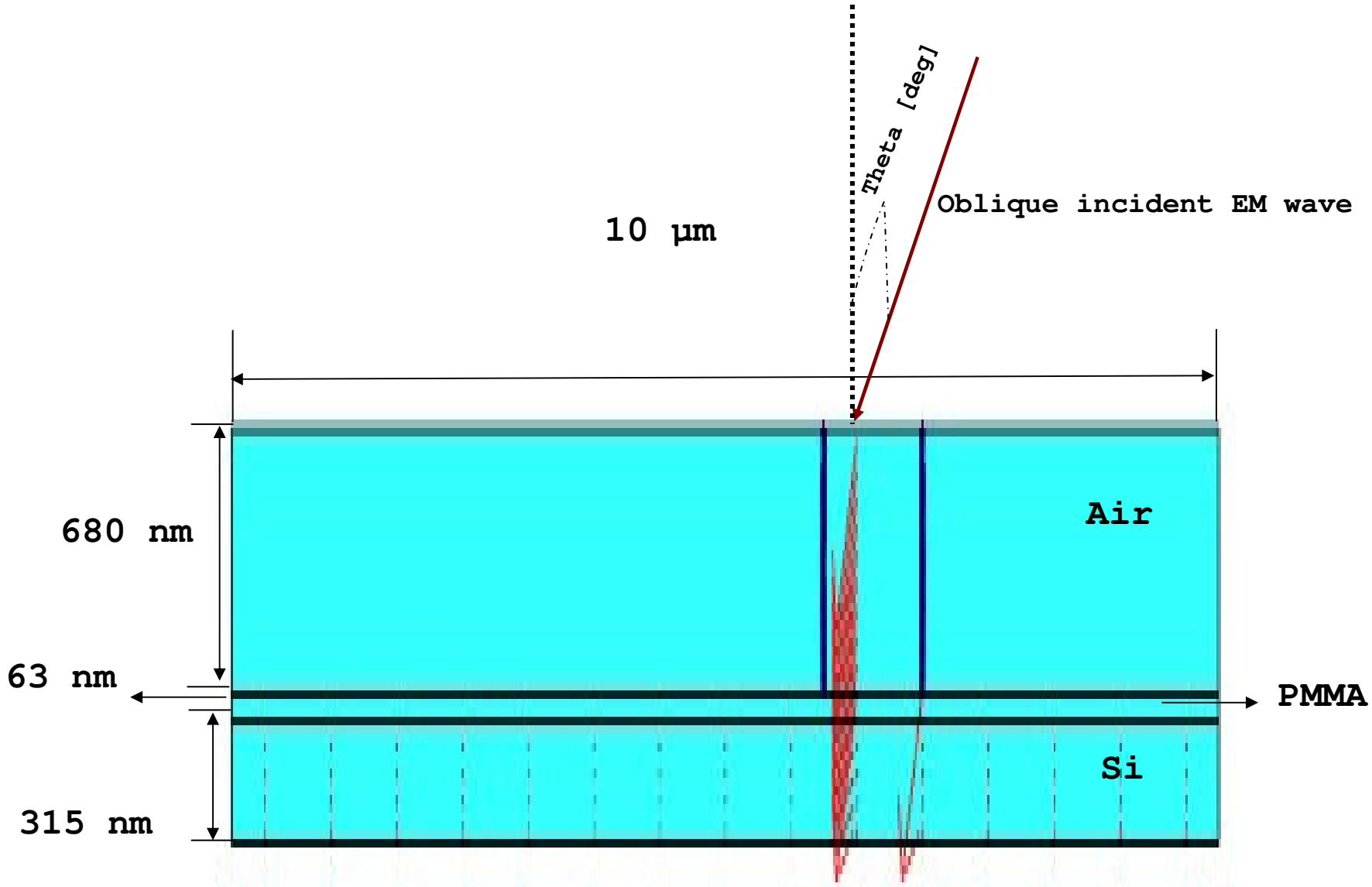

3 layered slab waveguide

MATLAB CALCULATIONS

```
clc;
clear all;
%%%%%%%%%%%% Constants for the geometry, in COMSOL%%%%%%%%%%%%%%%%%%%%%%%%%%%%
pi=3.414;
L=10e-6;
%%%%%%%%%%%% Parameters which modulate the Diffraction amount %%%%%%%%%%%%%%%
c=3e8;
lamda=632e-9;    %%%%%% Wavelength of incident beam %%%%%%%%%%
height=680e-9;   %%%%%% height of the layer in Geometry %%%%%%%
theta=30;        %%%%%% angle of incidence %%%%%%%
%%%%%%%%% number of Time-steps (based on time of propagation) %%%%%%%
f=c/lamda;
omega1=2*pi*f;
tp=1/f;
delT=tp/10;
time_prop=abs(2*height/(c*cos(theta)));
N_step=time_prop/delT;      %%%%%%% Number of time steps required for full
propagation %%%%%%%%%%
t_final=delT*(N_step);%%%%%%% Cross check the propagation time and calculated time
%%%%%%%%% Calculation for the Solver settings %%%%%%%
%%% N_step(solver)<= N_step;
t_solver=(N_step-10)*delT;
time_array=[0:delT:t_solver];
incr=(delT/t_solver);
time_final=[0:incr:1];%%%%%%% Final time array to be fed into the COMSOL solver%%
sprintf('%s %6f',incr)
```