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```
clear all;  
close all;  
clc;
```

## Get Data

---

```
load("channel.mat")  
M= channel'; % transpose to get in column
```

## Ionospheric Delay calc from a model

---

```
model = 'broadcast';  
ionodata.broadcast.alpha0 = 1.1176e-008;  
ionodata.broadcast.alpha1 = 7.4506e-009;  
ionodata.broadcast.alpha2 = -5.9605e-008;  
ionodata.broadcast.alpha3 = -6.9605e-008;  
ionodata.broadcast.beta0 = 90112;  
ionodata.broadcast.beta1 = 0;  
ionodata.broadcast.beta2 = -296610;  
ionodata.broadcast.beta3 = -75536;  
tGPS.week = 1575;  
tGPS.seconds = 518201.501;  
rRx = [-742005.851560607;-5462223.38476596; 3198008.7346792];  
  
% TXID  
rSv = [20847329.7083373;-15185642.4780402; 6205281.68907901];  
[delTauG] = getIonoDelay(ionodata,0,rRx,rSv,tGPS,model);  
delTauG = round (delTauG,4,'significant');  
disp(['-----Answer-----'])  
disp([' delTauG from getIonoDelay: ',num2str(delTauG), ' s'])  
% find index of I_L1_p_29 where time equals tGPS.seconds.Note: the seconds  
% do not exactly match each other, so I take only the integer value of  
% GPS.seconds to compare with 4th column of L1_TXID
```

```
-----Answer-----  
delTauG from getIonoDelay: 1.1388e-08 s
```

