```matlab
function stat_ersp(file_name)
%pos = [1,2,4,3];
ch = [1,2,3,6,7,8,9,12,13,14,15,16,17,18,19,20,24,25];
chn =
['O1';'O2';'O3';'O6';'O7';'O8';'O9';'12';'13';'14';'15';'16';'17';'18';'19';'20'
;'24';'25'];
%ch = [12,13];
%chn = ['C5','C3']
chn = [''];
loc1 = cd;
lowlimit = -2000;
uplimit = 2000;
tlim = [lowlimit uplimit];

[file1,loc] = uigetfile('*.eeg','Pick the first EEG file');
cd(loc);
[file2,loc] = uigetfile('*.eeg','Pick the second EEG File');
cd(loc);
for li = 1:length(ch)
    EEG = pop_loadeeg(file1);
    [ersp,r,mbase] = gvpop_timef(EEG,1,ch(li),tlim,0,'padratio',
4,'plotersp','off','plotitc', 'off', 'plotphase',
'off','erspmax',[5],'title',chn);
    close all
    clear EEG
    load gvf
    load gvt
    load gvp1
    load gvp2

    f1 = P_1;
    b1 = P_2;

    delete('gvf.mat');
    delete('gvt.mat');
    delete('gvp1.mat');
    delete('gvp2.mat');

    EEG = pop_loadeeg(file2);
    [ersp,r,mbase] = gvpop_timef(EEG,1,ch(li),tlim,0,'padratio',
4,'plotersp','off','plotitc', 'off', 'plotphase',
'off','erspmax',[5],'title',chn);
    close all
    clear EEG

    load gvf
    load gvt
    load gvp1
    load gvp2

    f2 = P_1;
    b2 = P_2;

    delete('gvf.mat');
    delete('gvt.mat');
    delete('gvp1.mat');
    delete('gvp2.mat');
```

```matlab
freq1 = freq1';
time1 = time1';

fsample = find(freq1 < 50);

f1 = f1(:,:,fsample);
f2 = f2(:,:,fsample);
b1 = b1(fsample,:)';
b2 = b2(fsample,:)';

%size(f1)
%size(f2)
%size(b1)
%size(b2)

n1 = size(f1,1);
n2 = size(f2,1);
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
f1 = log10(f1);
f2 = log10(f2);
for i = 1:n1
    f1(i,:,:) = squeeze(f1(i,:,:)) - b1;
end

for i = 1:n2
    f2(i,:,:) = squeeze(f2(i,:,:)) - b2;
end

f1 = f1*10;
f2 = f2*10;
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
group(1:n1) = '1';
group(n1+1:n1+n2) = '2';

for i = 1:size(f1,2)
    for j = 1:size(f1,3)
        x(1:n1) = squeeze(f1(:,i,j));
        x(n1+1:n1+n2) = squeeze(f2(:,i,j));
        [p(i,j)] = anova1(x,group','off');
        if p(i,j) > 0.1;
            p(i,j) = 0.1;
        end
    end
end
erspx = [lowlimit:ceil((uplimit - lowlimit)/10):uplimit];
%ersp_caxis = [-1 1]*1.1*max(max(abs(P(dispf,:))));
mf1 = squeeze(mean(f1));
mf2 = squeeze(mean(f2));

min1 = min(min(mf1));
min2 = min(min(mf2));
mf1 = mf1 - min1;
mf2 = mf2 - min2;
max1 = max(max(mf1));
max2 = max(max(mf2));
mf1 = mf1/max1;
```

```matlab
        mf2 = mf2/max2;
        mf1 = (mf1 - 0.5)*10;
        mf2 = (mf2 - 0.5)*10;
        %h = figure;
        %h1 = subplot(3,1,1);
        %imagesc(squeeze(mean(f1))',ersp_caxis);
        %caxis([-5 5]);
        %title(strcat(file1,' Chn: ',num2str(ch)));
        %colorbar
        %set(h1,'YTickLabel',10:10:50)
        %set(h1,'XTickLabel',erspx(2:end))
        %set(h1,'XTickLabel',erspx(2:end));


        %h2 = subplot(3,1,2);
        %imagesc(squeeze(mean(f2))',ersp_caxis);
        %caxis([-5 5]);
        %title(strcat(file2,' Chn: ',num2str(ch)));
        %colorbar
        %set(h2,'YTickLabel',10:10:50)
        %set(h2,'XTickLabel',erspx(2:end))
        %set(h2,'XTickLabel',erspx(2:end));


        %h3  = subplot(3,1,3);
        %imagesc(p');
        %title('P Values')
        %colorbar
        %set(h3,'YTickLabel',10:10:50)
        %set(h3,'XTickLabel',erspx(2:end))
        %set(h3,'XTickLabel',erspx(2:end));

        %saveas(h,file_name,'fig')
        %saveas(h,file_name,'tif')
        %close all

        dlmwrite(strcat(file_name,'-',num2str(ch(li)),'-','ERSP1.txt'),mf1','\t');
        dlmwrite(strcat(file_name,'-',num2str(ch(li)),'-','ERSP2.txt'),mf2','\t');
        dlmwrite(strcat(file_name,'-',num2str(ch(li)),'-','Pvalues.txt'),p','\t');
end
```