

```

vid=videoinput('winvideo',1,'YUY2_640x480');

set(vid,'ReturnedColorSpace','rgb');

triggerconfig(vid,'manual');

set(vid,'FramesPerTrigger',1 );
set(vid,'TriggerRepeat', Inf);
start(vid);
aa=1;
Out=[];
while(1)
trigger(vid);
im=getdata(vid,1);
imshow(im);
hold on
if aa == 5
red=im(:,:,1);
Green=im(:,:,2);
Blue=im(:,:,3);
Out(:,:,1)=red;
Out(:,:,2)=Green;
Out(:,:,3)=Blue;
Out=uint8(Out);

end

if aa > 5
red=im(:,:,1);
Green=im(:,:,2);
Blue=im(:,:,3);
red1=Out(:,:,1);
Green1=Out(:,:,2);
Blue1=Out(:,:,3);
z1 = imabsdiff(red,red1);
z2 = imabsdiff(Green,Green1);
z3 = imabsdiff(Blue,Blue1);
zz1= sum(z1,1);
zz2= sum(z2,1);
zz3= sum(z3,1);
zzz1= sum(zz1)/ 307200;
zzz2= sum(zz2)/ 307200;
zzz3= sum(zz3)/ 307200;
Final=(zzz1+zzz2+zzz3)/3;
if Final > 7
disp('Wave Motion Detected!');
end

end
aa=aa+1;

disp(aa);
if aa == 100
break
end
end
stop(vid),delete(vid),clear vid;

```