////MACRO Min, Intensity, IMA

run("Clear Results"); roiManager("reset");

dir1 = getDirectory("Choose Source Directory for Channel1 ");

dir2 = getDirectory("Choose Source Directory Root detection ");

list1 = getFileList(dir1);

//setBatchMode;

for (i=0; i <list1.length; i++) {

open(dir1+list1[i]);

name1= getTitle();

rename("channel1");

run("Z Project...", "projection=[Standard Deviation]");

Stack.getDimensions(width, height, channels, slices, frames);

title=getTitle();

//run("Duplicate...", "title=\*");

//setBatchMode(true);

roiManager("reset");

run("Set Measurements...", "area mean integrated display redirect=None decimal=5");

makeRectangle((width/4), (height/4), (width/2), (height/2));

run("Find Maxima...", "noise=200 output=[Point Selection]");

//Xmax= getResult("X", 0);

//Ymax= getResult("Y", 0);

//toUnscaled (Xmax, Ymax);

run("Select All");

run("Duplicate...", "title=Wave");

run("Select All");

roiManager("Add");

run("Wavelet A Trou");

run("Stack to Images");

close("coeff-5");

close("coeff-4");

close("coeff-2");

close("coeff-3");

close("coeff-1");

roiManager("reset");

selectWindow("plan");

setAutoThreshold("Otsu dark");

run("Convert to Mask");

setOption("BlackBackground", true);

run("Create Selection");

roiManager("add");

saveAs("Tiff", dir2+list1[i]);

close("STD\_channel1");

close("channel1");

close("wave");

close("plan");

close();

run("Z Project...", "projection=[Max Intensity]");

roiManager("measure");

run("Close All");

}