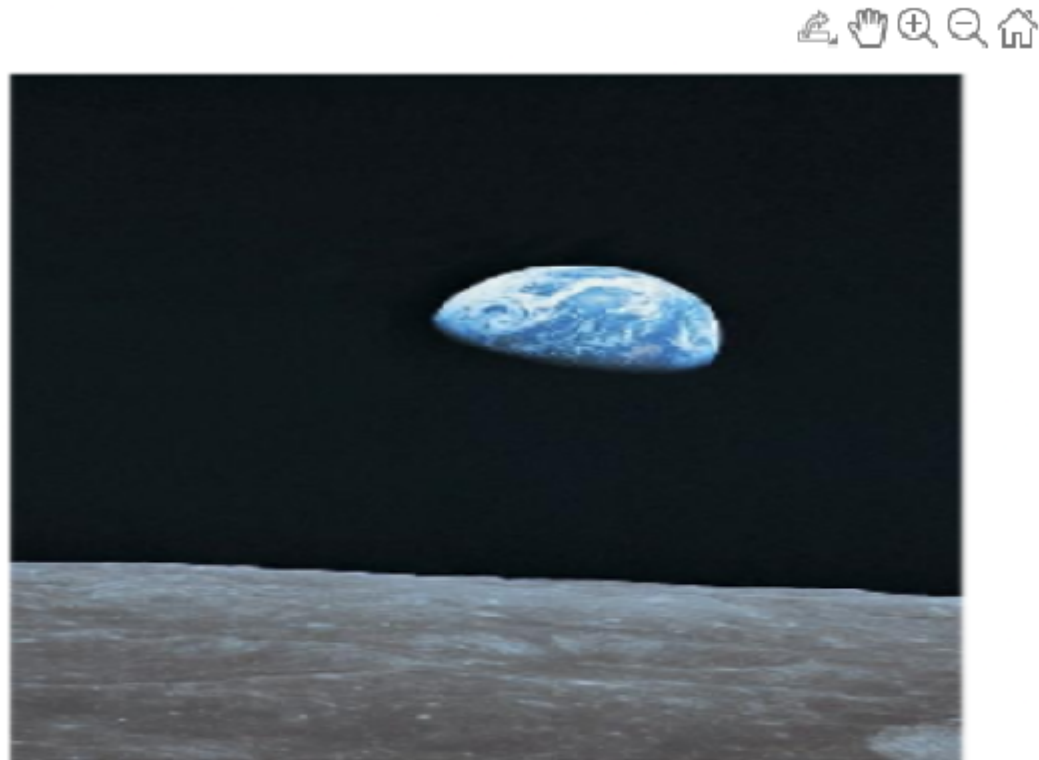


```
I = imread('I6.png');  
[S,BW,BWstripes] = processImage(I);  
imshow(I)
```



```
s = size(I)
```

```
s = 1x3  
    400    600     3
```

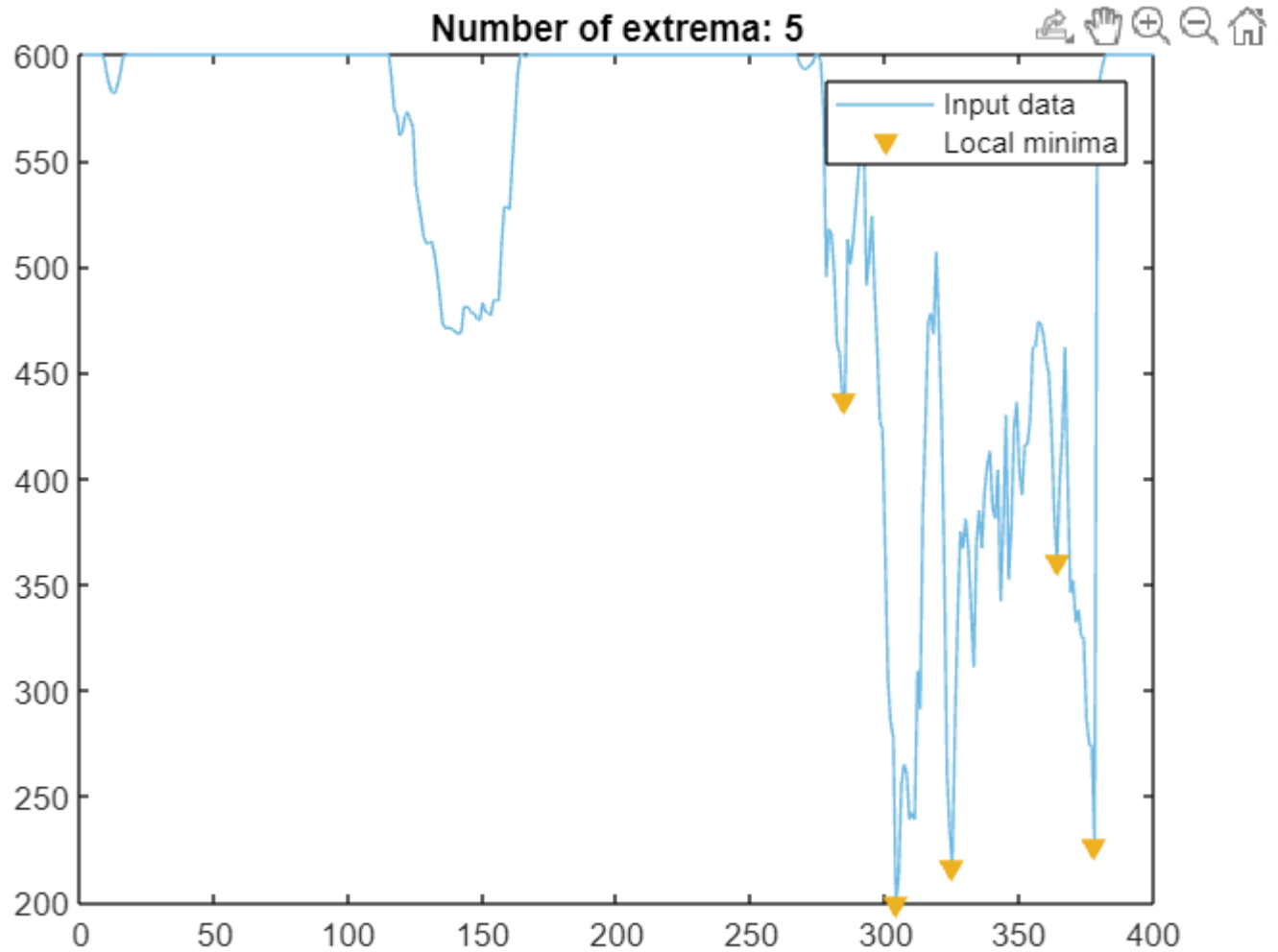
```
minIndices = islocalmin(S,'MinProminence',90,'ProminenceWindow',25);  
  
% Display results  
clf  
plot(S,'Color',[109 185 226]/255,'DisplayName','Input data')
```

```

hold on

% Plot local minima
plot(find(minIndices),S(minIndices),'v','Color',[237 177 32]/255,...
     'MarkerFaceColor',[237 177 32]/255,'DisplayName','Local minima')
title(['Number of extrema: ' num2str(nnz(minIndices))])
hold off
legend

```



```
nMin = nnz(minIndices);
```

```
isReceipt = nMin >= 9
```

```
isReceipt = logical
0
```

```
function [signal,Ibw,stripes] = processImage(img)
% This function processes an image using the algorithm
% developed in previous chapters.

gs = im2gray(img);
gs = imadjust(gs);

H = fspecial("average",3);
gssmooth = imfilter(gs,H,"replicate");

SE = strel("disk",8);
Ibg = imclose(gssmooth, SE);
Ibgsub = Ibg - gssmooth;
Ibw = ~imbinarize(Ibgsub);

SE = strel("rectangle",[3 25]);
stripes = imopen(Ibw, SE);

signal = sum(stripes,2);

end
```