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Subject: Strange behavior of POLYFILL

Posted by [Xavi Llorca](#) on Wed, 21 Sep 2011 08:41:57 GMT

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Dear all,

After hours fighting against POLYFILL, I found a strange behavior that I cannot understand...

Here there is a small code searching the points inside a triangle. Why there is a point that clearly is inside the triangle and not retrieved by Polyfill (see plot)? Does anyone have a solution?

Thanks in advance,  
Xavi

PRO POLY\_HELL

```
dim_x = 1024 & dim_y = 1024
```

```
lon_res = 0.02 & lat_res = 0.02
```

```
lon_arr = DINDGEN(dim_x)*lon_res - 12.99
```

```
lat_arr = DINDGEN(dim_y)*lat_res + 29.53
```

```
triangle_xx = [-4.27, -4.3221145, -4.3234300, -4.27]
```

```
triangle_yy = [35.449997, 35.535344, 35.365467, 35.449997]
```

```
xx_n = (triangle_xx - lon_arr[0]) / lon_res + 1.
```

```
yy_n = (triangle_yy - lat_arr[0]) / lat_res + 1.
```

```
points_in = POLYFILLV(xx_n, yy_n, dim_x, dim_y)
```

```
DEVICE, DEC=0
```

```
LOADCT, 5
```

```
WINDOW, 0, XSIZE=800, YSIZE=800
```

```
PLOT, triangle_xx, triangle_yy, PSYM=-4, XR=[-4.39, -4.15], XSTYLE=1,  
$
```

```
YR=[35.33, 35.57], YSTYLE=1
```

```
lon_mat = REBIN(lon_arr, dim_x, dim_y)
```

```
lat_mat = REBIN(TRANPOSE(lat_arr), dim_x, dim_y)
```

```
OPLOT, lon_mat, lat_mat, psym=1, SYMSIZE=0.7
```

```
OPLOT, lon_mat[points_in], lat_mat[points_in], psym=4, SYMSIZE=1.4,
```

```
COLOR=115, THICK=2.
```

```
END
```

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