
Subject: Re: Watersheds and Label_Region for 1d
Posted by [Ben Tupper](#) on Fri, 07 Jul 2000 07:00:00 GMT
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Shame on me!

I posted unfinished code. Please find the corrected version below.

Ben

----snip

```
;+
; NAME: LABEL_VECTOR
;
; PURPOSE: This function returns a labeled (blob-colored) vector
; where each unique region bears a unique region number.
; This function is analogous to the built in LABEL_REGION function for IDL.
;
; CALLING SEQUENCE:
; Result = LABEL_VECTOR(Vector, [BackGround])
;
; ARGUMENTS:
; Vector Set this value to a numeric vector (Byte,Integer, etc.)
; BackGround Set this argument equal to the background value
; of the vector... that is, the value that separates the blobs.
; If not provided, the default value of zero is used.
;
; KEYWORDS:
;
; MAXLABEL Set this keyword to a named variable to retrieve the
; maximum label value. (Saves a MAX(Result) later.)
;
; EXAMPLE:
; Generate a dummy vector... then plot it with the colorings
; superimposed.
; IDL> v = indgen(20)
; IDL> v = rebin(shift(v*5,5), 80,/sample)
; IDL> f = Label_Vector(V)
; IDL> plot, v
; IDL> TEK_COLOR
; IDL> plots, indgen(80), v, color=f, /data, psym = 6
;
; MODIFICATION HISTORY:
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```

```

;
;
; 7JUL2000 oops!, Actually implement Background argument! BT
;-

;-----
; Label_Vector
;-----
FUNCTION Label_Vector, Vec, BackGround ,MaxLabel = MaxLabel

On_Error, 2

Sz = Size(Vec)
If Sz[0] NE 1 Then Begin
    Message,'First argument must be a 1d vector'
    Return, -1
EndIf

If N_Params() EQ 2 then Background = Background[0] Else Background = 0
LabeledVec = Fix(Vec NE BackGround)
N = Sz[3]
MaxLabel = 0

A = Where(Labeledvec GT 0, Count)

If Count GT 0 Then Begin

    MaxLabel = 1

    For i = A[0] , N - 1L Do Begin

        If LabeledVec[i] GT 0 Then Begin

            LabeledVec[i] = MaxLabel

        EndIf Else Begin

            If i NE N-1L Then $
                If LabeledVec[i] NE LabeledVec[i+1L] Then $
                    MaxLabel = MaxLabel +1

            EndElse

        EndFor ; i loop

    EndIf ; Count GT 0

Return, LabeledVec

```

END

----snip

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