```
Needs["CCompilerDriver`"];
```

```
bianyi:=(gzuobiao=Compile[{
{data,_Real,3},
{dim(* (L,l) *),_Integer,1},
{r(* 0.~1. *),_Real},
{mode (* 1:L  2:R  3:L&R *) ,_Integer},
{di,_Real}
},
Module[{
L=0,l=0,lr=0,u={{0.,0.}},lu=0, sx=0.,sy=0.,sumrgb=0.,max=0.,xxL=0.,
yyL=0.,xxR=0.,yyR=0.  ,xxyy={{0.,0.}} },
L=dim[[1]];l=dim[[2]];lr=Round[r*l];
Which[

(* 只提取左半图像=================================== *)
mode==1,
(
Do[
sumrgb=Total[data[[m,n]]];
If[sumrgb>max,max=sumrgb],
{m,1,L},{n,1,lr-1}];
Do[
If[max-di<=Total[data[[m,n]]]<=max,
u=Append[u,{n-1,L-m}]],
{m,1,L},{n,1,lr-1}];
lu=Length[u]-1;
Do[sx+=u[[j,1]];sy+=u[[j,2]],{j,2,lu+1}];
xxL=N[sx/lu];yyL=N[sy/lu];
xxyy={{xxL,yyL}}
),

(* 只提取右半图像=================================== *)
mode==2,
(
Do[
sumrgb=Total[data[[m,n]]];
If[sumrgb>max,max=sumrgb],
{m,1,L},{n,lr+1,l}];
Do[
If[max-di<=Total[data[[m,n]]]<=max,
u=Append[u,{n-1,L-m}]],
{m,1,L},{n,lr+1,l}];
lu=Length[u]-1;
Do[sx+=u[[j,1]];sy+=u[[j,2]],{j,2,lu+1}];
xxR=N[sx/lu];yyR=N[sy/lu];
xxyy={{xxR,yyR}}
),

(* 两半图像同时提取=================================*)
mode==3,
(
Do[
sumrgb=Total[data[[m,n]]];
If[sumrgb>max,max=sumrgb],
{m,1,L},{n,1,lr-1}];
```

```
Do[
If[max-di<=Total[data[[m,n]]]<=max,
u=Append[u,{n-1,L-m}]],
{m,1,L},{n,1,lr-1}];
lu=Length[u]-1;
Do[sx+=u[[j,1]];sy+=u[[j,2]],{j,2,lu+1}];
xxL=N[sx/lu];yyL=N[sy/lu];
max=0.;
u={{0.,0.}};
sx=0.;sy=0.;
Do[
sumrgb=Total[data[[m,n]]];
If[sumrgb>max,max=sumrgb],
{m,1,L},{n,lr+1,l}];
Do[
If[max-di<=Total[data[[m,n]]]<=max,
u=Append[u,{n-1,L-m}]],
{m,1,L},{n,lr+1,l}];
lu=Length[u]-1;
Do[sx+=u[[j,1]];sy+=u[[j,2]],{j,2,lu+1}];
xxR=N[sx/lu];yyR=N[sy/lu];
xxyy={{xxL,yyL},{xxR,yyR}};
)
];
xxyy
],
CompilationTarget->"C"
];
gzuobiao::usage="gzuobiao[imagedata, {L,l}, r, mode, di]";
)
```