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Subject: Re: Finding all angles within a range of directions; an algorithm question  
Posted by [tbowers0](#) on Tue, 16 Apr 2002 16:08:44 GMT

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> One simplification: in (4), skip taking the acos of the dot products.  
> All of the angles you want will have positive dot products; just throw  
> out the negative ones.  
>  
> -- Mark

Oh! Good point. I still would like to keep it general though because I may sometimes use a smaller 'acceptance angle'. Eg, get all values with 45 degree half angle rather than the plate's 90 degrees. But, it definitely seems appropriate to put a check on the front to see and save from unnecessary function calls, like

```
if (sensorHalfAngle eq 90) then begin
  ;just dot product and where(dotProduct ge 0.0),
  ;no need to acos()
  ...
endif else begin
  ;angle not over a flat plat, so dot product
  ;then calc. psi=acos(dotProduct), then where(psi le 90.0)
  ...
endelse
```

Thanks Mark

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