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#include <Servo.h> //includes the servo library
Servo myservo;
#define ldr1 A0 // set ldr 1 Analog input pin of East ldr as an
integer
#define ldr2 A1 // set ldr 2 Analog input pin of West ldr as an
integer
int pos = 90; // initial position of the Horizontal movement
controlling servo motor
int tolerance = 20; // allowable tolerance setting - so solar servo
motor isn't constantly in motion

void setup(){
myservo.attach(2); // attaches the servo on digital pin 2 to the
horizontal movement servo motor
pinMode(ldr1, INPUT); //set East ldr pin as an input
pinMode(ldr2, INPUT); //set West ldr pin as an input
myservo.write(pos); // write the starting position of the horizontal
movement servo motor

delay(1000); // 1 second delay to allow the solar panel to move to
its staring position before comencing solar tracking
}
void loop(){
int val1 = analogRead(ldr1); // read the value of ldr 1
int val2 = analogRead(ldr2); // read the value of ldr 2

if((abs(val1 - val2) <= tolerance) || (abs(val2 - val1) <=
tolerance)) {
//no servo motor horizontal movement will take place if the ldr value
is within the allowable tolerance
}else {
if(val1 > val2) // if ldr1 senses more light than ldr2
{
pos = pos+1; // decrement the 90 degree poistion of the horizontal
servo motor - this will move the panel position Eastward
}
if(val1 < val2) // if ldr2 senses more light than ldr1
{
pos = pos-1; // increment the 90 degree position of the horizontal
motor - this will move the panel position Westward
}
}
}

```

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if(pos > 180) {pos = 180;} // reset the horizontal position of the
motor to 180 if it tries to move past this point
if(pos < 0) {pos = 0;} // reset the horizontal position of the motor
to 0 if it tries to move past this point
myservo.write(pos); // write the starting position to the horizontal
motor
delay(50);
}
```