Subject: EQ2HOR discrepancy -- longitude interpretation?
Posted by Josh Von Korff on Mon, 29 Mar 2010 16:03:27 GMT
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EQ2HOR is supposed to convert (RA, dec) to (azimuth, elevation.)
It disagrees with my hand calculation and
http://home.att.net/~srschmitt/script_celestial2horizon.html ,
as well as common sense, see below for the code. (It gives a negative altitude for some coordinates that I believe to be valid.)

However, when I change the longitude from -66.75 to +66.75, EQ2HOR agrees with
http://home.att.net/~srschmitt/script_celestial2horizon.html
for all inputs I have tried, as long as the former uses +66.75 and the latter uses -66.75.
My telescope is in Puerto Rico, at 66.75 degrees West longitude.

But the online guide clearly states:
"lon : EAST longitude of location in degrees (Specify west longitude with a negative sign.)"
(See http://idlastro.gsfc.nasa.gov/ftp/pro/astro/eq2hor.pro)

What am I doing wrong?

```
IDL> eq2hor, 5.577 * 15, 22.02, 2454989.152131d, alt, az, $
IDL> lat = 18.35, lon = -66.75, altitude=497.0, $
IDL> precess_ = 0, nutate_ = 0, aberration_ = 0, refract_ = 0, /verb
Latitude = +18 21  0.0   Longitude = -66 45  0.0
Julian Date =  2454989.152131
Ra, Dec:  05 34 37.2  +22 01 12.0   (J2000)
Ra, Dec:  05 34 37.2  +22 01 12.0   (J2009.4296)
Ra, Dec:  05 34 37.2  +22 01 12.0   (fully corrected)
LMST = +13 06 47.3
LAST = +13 06 48.2
Hour Angle = +07 32 11.0  (hh:mm:ss)
Az, El =  19 55 26.1  -13 05 11.0   (Apparent Coords)
Az, El =  19 55 26.1  -13 05 11.0   (Observer Coords)
```