

**Bell Observatory
Observing Plan
October 2013
Updated October 21 2013**

Below is the updated observing plan and procedures for October 2013. Please direct any questions to Dr. Carini Exposure times are 240s unless otherwise noted. Make sure to get 5-500 second dark frames.

Astrometric studies

Obtain 3 -400 second exposures of these sources in the I and R band each, as close to meridian transit (when RA equals the sidereal time) as possible. X and Y are suggested guide star positions. Guiding must be as good as possible. Refocus in R before beginning these observations and refocus in I as well before the I exposures, as there is a small focus offset between the R and I filters. Make sure you enter the source name as listed below for archiving purposes.

| Name | RA | Dec | R | X | Y |
|---|--------------|--------------|-------|------|------|
| 2MASX J01174564+3637145 01 | 17 45.628 | +36 37 14.55 | 14.94 | -834 | 428 |
| [VV2000] J022601.2+373920 | 02 26 01.208 | +37 39 20.20 | 16.04 | 747 | -379 |

BL Lac Monitoring: Please observe in RA order, from west to east.

| | | |
|---------------------|--------------------------------|--------------------|
| 1611+343 | 16h13m41.06s +34 12'47.91" | 360 seconds |
| 3C 345 | 16h42m58.8s +39 48'7" | 360 seconds |
| MKN 501 | 16h53m52.3s +39 45'36.7" | |
| I ZW 187 | 17h28m18.6s +50°13'10" | |
| 3C 371 | 18h06m50.7s +69°49'28" | |
| 1ES 1959+650 | 19h59m59.85s +65°08'54.7" | |
| BL Lac | 22h02m43.3s +42°16'40" | |
| 3C 454.3 | 22h53m57.7s +16°08'54" | |
| 1ES 2344+514 | 23h47m04.8s +51°42'17.87" | |
| 1ES 0120+340 | 01h 23m 08.9s +34° 20' 50" | |
| 1ES 0229+2000 | 02h 32m 48.6s +20° 17' 17" | |
| AO 0235+164 | 02h 38m 38.9s +16° 36' 59" | 500 seconds! |
| 3C 66A | 02h 22m 03.6s +43° 02' 08" | |
| 1ES 0033+595 | 00h 35m 52.6s +59 50 05 | 500 seconds |
| CTA 26 | 03h 39m 31s -01° 46' 35.6" | |
| H0323+022 | 03h26m14.0s +02°25'15" | 300s exposures |
| 4C 39.12 | 03h 34m18.4s +39 12 25 | |
| *0414+009 | 04h16m52.4s +01° 05'24" | |
| [HB89]0420+003 | 04h22m41.9s +00° 30'20" | |
| 0422+004 | 04h24m46.8s +00° 36'06 | |

| | |
|---------------|-------------------------|
| 0502+675 | 5h07m56.2s +67° 37'24" |
| 0528+134 | 05h30m56.4s +13° 31'55" |
| BL 0647+250 | 06h 50m46.6s +25 03 00 |
| PKS 0716+714 | 07h21m53.4s +71° 20'36" |
| PKS 0735+178 | 07h38m07.4s +17° 42'19" |
| OI 090.4 | 07h57m06.6s +09° 56'35" |
| OJ 287 | 08h54m48.9s +20° 06'31" |
| *1ES 0806+524 | 08 09 49.2 +52 18 58 |

Other objects:

Pluto: Lets try to see what we can get on Pluto before we sign up of the New Horizons monitoring project. Here is an ephemeris of its positions through the end of the month. The first 3 columns are all you really need. You will need to determine a guide star position. A 240 second exposure should do the trick.

| DATE | RIGHT ASCENS | DECLINATION | approx | phase | ang. | solar | CONSTELLATION |
|--------------|--------------|-------------|--------|-------|------|-------|---------------|
| Year Mth Day | hour min sec | deg min sec | mag. | | | | |
| 2013 10 01 | 18 37 34 | -20 10 14 | 14.54 | 1.000 | 0.10 | 91.03 | Sagittarius |
| 2013 10 02 | 18 37 35 | -20 10 24 | 14.54 | 1.000 | 0.10 | 90.06 | Sagittarius |
| 2013 10 03 | 18 37 37 | -20 10 34 | 14.54 | 1.000 | 0.10 | 89.08 | Sagittarius |
| 2013 10 04 | 18 37 39 | -20 10 44 | 14.54 | 1.000 | 0.10 | 88.10 | Sagittarius |
| 2013 10 05 | 18 37 40 | -20 10 54 | 14.54 | 1.000 | 0.10 | 87.13 | Sagittarius |
| 2013 10 06 | 18 37 42 | -20 11 03 | 14.54 | 1.000 | 0.10 | 86.15 | Sagittarius |
| 2013 10 07 | 18 37 45 | -20 11 13 | 14.54 | 1.000 | 0.10 | 85.17 | Sagittarius |
| 2013 10 08 | 18 37 47 | -20 11 22 | 14.54 | 1.000 | 0.10 | 84.19 | Sagittarius |
| 2013 10 09 | 18 37 49 | -20 11 31 | 14.55 | 1.000 | 0.10 | 83.22 | Sagittarius |
| 2013 10 10 | 18 37 52 | -20 11 41 | 14.55 | 1.000 | 0.10 | 82.24 | Sagittarius |
| 2013 10 11 | 18 37 55 | -20 11 50 | 14.55 | 1.000 | 0.10 | 81.26 | Sagittarius |
| 2013 10 12 | 18 37 57 | -20 11 58 | 14.55 | 1.000 | 0.10 | 80.29 | Sagittarius |
| 2013 10 13 | 18 38 00 | -20 12 07 | 14.55 | 1.000 | 0.10 | 79.31 | Sagittarius |
| 2013 10 14 | 18 38 03 | -20 12 16 | 14.55 | 1.000 | 0.10 | 78.33 | Sagittarius |
| 2013 10 15 | 18 38 07 | -20 12 24 | 14.55 | 1.000 | 0.10 | 77.36 | Sagittarius |
| 2013 10 16 | 18 38 10 | -20 12 32 | 14.55 | 1.000 | 0.10 | 76.38 | Sagittarius |
| 2013 10 17 | 18 38 13 | -20 12 40 | 14.56 | 1.000 | 0.10 | 75.40 | Sagittarius |
| 2013 10 18 | 18 38 17 | -20 12 48 | 14.56 | 1.000 | 0.10 | 74.43 | Sagittarius |
| 2013 10 19 | 18 38 21 | -20 12 56 | 14.56 | 1.000 | 0.10 | 73.45 | Sagittarius |
| 2013 10 20 | 18 38 24 | -20 13 04 | 14.56 | 1.000 | 0.10 | 72.47 | Sagittarius |
| 2013 10 21 | 18 38 28 | -20 13 11 | 14.56 | 1.000 | 0.10 | 71.49 | Sagittarius |
| 2013 10 22 | 18 38 32 | -20 13 18 | 14.56 | 1.000 | 0.10 | 70.52 | Sagittarius |
| 2013 10 23 | 18 38 36 | -20 13 25 | 14.56 | 1.000 | 0.10 | 69.54 | Sagittarius |
| 2013 10 24 | 18 38 41 | -20 13 32 | 14.56 | 1.000 | 0.10 | 68.56 | Sagittarius |
| 2013 10 25 | 18 38 45 | -20 13 39 | 14.56 | 1.000 | 0.10 | 67.58 | Sagittarius |