

ADVANCED OBSERVING - "INTERACTIONS" - T.S.P. 2002

<> Observe any 25 Objects <>

| <u>OBJECT</u> | <u>COOR (2000)</u> | <u>CONS</u> | <u>TYPE</u> | <u>SIZE</u> | <u>MAG.</u> | <u>R.V.</u> | <u>DIST. H₀=70</u> | <u>URANO 1 / 2</u> | |
|---------------------------------------|---------------------|-------------|-------------|-------------|-------------|-------------|-------------------------------|--------------------|-----|
| ARP 243, NGC2623 | 08 38 24 + 25 45 15 | Cnc | Trpl | 2.4 X 0.7' | 13.4v | +5472 | 254.8 | 141 | 75 |
| ARP 321, HICKSON 40A | 09 38 53 - 04 50 55 | Hya | E8 | 0.9 X 0.7' | 12.8v | +6622 | 308.4 | 233 | 1 |
| HICKSON 40B | | | SOP | 0.8 X 0.5' | 14.0v | +6821 | 317.7 | | |
| HICKSON 40C | | | Sbc | 1.1 X 0.3' | 14.9v | +6853 | 319.2 | | |
| HICKSON 40D | | | Sba | 0.7 X 0.3' | 14.1v | +6466 | 301.1 | | |
| HICKSON 40E | | | Sc | 0.6 X 0.3' | 17.3 | +6625 | 308.5 | | |
| SHAKHBAZIAN 1 CLUSTER | 10 55 06 + 40 27 29 | UMa | Clstr | 1.4 X 1.0' | 16.5 | +34,910 | 1625.8 | 73 | 55 |
| ARP 105, "Ambartsumian's Knot" | | | | | | | | | |
| NGC 3561 | 11 11 13 + 28 41 46 | UMa | Dbl | 0.7 X 0.7' | 13.8v | +8549 | 398.3 | 106 | 73 |
| NGC3561A | | | P | 0.8 X 0.8' | 13.3v | +8811 | 410.3 | | |
| PGC 33994 - The Knot | | | | 0.1 X 0.1' | | +8870 | 413.1 | | |
| MAC 111+2845A | | | | 0.5 X 0.5' | 17.5 | | | | |
| ARP 322, HICKSON 56A | 11 32 40 + 52 57 00 | UMa | Sc | 1.3 X 0.2' | 16.2b | +7929 | 369.3 | 47 | 24 |
| HICKSON 56B | | | SBO | 0.7 X 0.3' | 16.2b | +7929 | 369.3 | | |
| HICKSON 56C | | | SOP | 0.7 X 0.4' | 15.8b | +8110 | 377.7 | | |
| HICKSON 56D | | | SO | 0.4 X 0.3' | 16.8 | +8346 | 388.7 | | |
| HICKSON56E | | | SOP | 0.5 X 0.3' | 16.4b | +7884 | 367.2 | | |
| VV172, ARP 329, HICK 55A | 11 32 07 + 70 48 56 | Dra | EO | 0.2 X 0.2' | 15.9b | +15,649 | 728.8 | 25 | 13 |
| HICKSON 55B | | | SO | 0.3 X 0.2' | 16.4 | +15,480 | 720.9 | | |
| HICKSON 55C | | | E3 | 0.2 X 0.2' | 16.9 | +15,571 | 725.2 | | |
| HICKSON 55D | | | E2 | 0.2 X 0.1' | 17.1 | +15,891 | 740.1 | | |
| HICKSON 55E | | | Sc | 0.2 X 0.1' | 17.4 | +36,880 | 1717.6 | | |
| "COPELAND'S" SEPTET | | | | | | | | | |
| HICKSON 57A, NGC3753 | 11 37 54 + 21 58 51 | Leo | Sb | 1.9 X 0.5' | 13.6v | +8717 | 406.0 | 147 | 72 |
| HICKSON 57B, NGC3746 | | | SBb | 1.1 X 0.5' | 14.2v | +9074 | 422.6 | | |
| HICKSON 57C, NGC3750 | | | E3 | 0.9 X 0.5' | 13.9v | +9064 | 422.1 | | |
| HICKSON 57D, NGC3454 | | | SBc | 0.6 X 0.4' | 14.3v | +9012 | 419.7 | | |
| HICKSON 57E, NGC3748 | | | SOa | 0.8 X 0.3' | 14.8v | +8989 | 418.6 | | |
| HICKSON 57F, NGC3751 | | | E4 | 0.9 X 0.4' | 13.9v | +9592 | 446.7 | | |
| HICKSON 57G, NGC3745 | | | SBO | 0.4 X 0.41' | 15.2v | +9413 | 438.4 | | |
| HICKSON 57H | | | SBb | 0.3 X 0.2' | 16.0v | | | | |
| "WILDS TRIPLET", ARP 248 | | | | | | | | | |
| MCG-1-30-33 | 11 46 45 - 03 50 50 | Vir | SBP1 | 3.1 X 0.7' | 13.4v | +5008 | 233.2 | 237 | 111 |
| MCG-1-30-32 | | | P | 1.8 X 0.8' | 13.8v | +5108 | 237.9 | | |
| MCG-1-30-34 | | | SBP | 1.3 X 0.5' | 15.3v | +5396 | 251.3 | | |
| VV 523, NGC 3991 | 11 57 30 + 32 20 04 | UMa | l pec | 1.9 X 0.6' | 13.1v | +3204 | 149.2 | 107 | 54 |
| ARAKELIAN 337, NGC3994 | | | Sa pec | 1.5 X 1.0' | 12.7v | +3096 | 144.2 | | |
| ARP 313, NGC3995 | | | Sa pec | 3.1 X 1.2' | 12.4v | +3339 | 155.5 | | |
| ARP 97, MCG+5-29-11 | 12 05 45 + 31 03 17 | UMa | P | 1.4 X 0.5' | 14.1v | +6886 | 320.7 | 107 | 54 |
| MCG+5-29-10 | | | P | 1.6 X 0.5' | 15.7 | +6949 | 323.6 | | |
| MCG+5-29-12 | | | S | 0.4 X 0.2' | 16.4v | | | | |
| "BOX", HICK 61A, NGC4169 | 12 12 19 + 29 10 47 | Com | SOa | 2.3 x 1.2' | 12.2v | +3783 | 176.2 | 107 | 72 |
| HICKSON 61B, NGC4170-73 | | | SM | 5.0 x 0.7' | 13.0v | +1121 | 52.2 | | |
| HICKSON 61C, NGC4175 | | | Sbc | 1.8 x 0.4' | 13.3v | +4007 | 186.6 | | |
| HICKSON 61D, NGC4174 | | | SO | 1.1 x 0.5' | 13.4v | +3980 | 185.4 | | |
| MAC 59722 | | | -- | 0.2 x 0.1' | 17.5p | | | | |
| "MITCHELL'S" OBJECT | 12 17 48 + 46 34 59 | CVn | Dbl | 0.75 x 0.5' | 16.0p | | | 74 | 37 |
| NGC4298 | 12 21 33 + 14 36 11 | Com | Sc | 3.0 x 1.8' | 11.3v | +1122 | 52.3 | 193 | 91 |
| NGC4302 | | | Sc | 5.8 x 0.7' | 11.6v | +1111 | 51.7 | | |
| MAC 1221+1437 | | | -- | 0.4 x 0.2' | 17.0p | | | | |

Advanced Observing T.S.P. 2002 - "Interactions", Cont.

| <u>OBJECT</u> | <u>COORD. (2000)</u> | <u>CONS</u> | <u>TYPE</u> | <u>SIZE</u> | <u>MAG.</u> | <u>R.V.</u> | <u>DIST. H₀= 70</u> | <u>URANO 1/2</u> | |
|--|----------------------|-------------|-------------------------------------|--|--|--|--|------------------|-----|
| "SIAMESE TWINS", NGC4567 NGC4568 | 12 36 33 + 11 15 31 | Vir | Sc Sc | 3.3 x 2.0' 4.8 x 2.0' | 13.1v 10.8v | +2213 +2260 | 103.1 105.3 | 194 | 91 |
| "MICE" ARP 242, NGC4676A NGC4676B | 12 46 11 + 30 44 39 | Com | Dbl Dbl | 2.6 X 0.5' 2.3 X 1.2' | 13.1v 13.8v | +6649 +6549 | 309.7 305.0 | 108 | 53 |
| AM 1316-241, ESO 508-45/A ESO 508-45A | 13 19 32 - 24 29 04 | Hya | Dbl Dbl | 0.8 X 0.8' 0.8 X 0.4' | 15.7 15.8 | +9653 | 449.6 | 330 | 149 |
| "KEENEN'S" SYSTEM, ARP 104 NGC5216 NGC5218 | 13 32 06 + 62 42 01 | UMa | EOP S | 2.4 X 1.8' 2.9 X 1.6' | 12.6v 12.3v | +2949 +2807 | 137.3 130.7 | 26 | 12 |
| ARP 239, NGC5278 NGC5279 | 13 41 39 + 55 40 12 | UMa | Dbl Dbl | 0.8 X 0.6' 0.7 X 0.4' | 13.5v 14.7v | +7541 +7580 | 351.2 353.0 | 49 | 23 |
| "SEASHELL", MCG-5-33-5 NGC5291 | 13 47 23 - 30 25 00 | Cen | S EP | 0.8 X 0.5' 1.3 X 0.9' | 15.1v 14.1v | +3730 +4340 | 173.7 202.1 | 371 | 167 |
| HICKSON 68A, NGC5353 HICKSON 68B, NGC5354 HICKSON 68C, NGC5350 HICKSON 68D, NGC5355 HICKSON 68E, NGC5358 MAC 1353+40158C | 13 53 27 + 40 18 09 | CVn | SO E2 SBbc E3 SO -- | 3.3 X 1.8' 2.8 X 2.2' 3.3 X 2.4' 1.2 X 0.7' 1.7 X 0.7' 0.4 X 0.3' | 10.9v 11.3v 11.3v 13.1v 13.6v 16.0p | +2107 +2459 +2308 +2414 +2432 | 98.1 114.5 107.4 112.4 113.3 | 76 | 53 |
| AM 1352-263, MCG-4-33-13 | 13 55 04 - 26 46 48 | Hya | SP | 1.0 X 1.2' | 13.4p | +3559 | 165.7 | 331 | 149 |
| ARP 271, NGC5426 NGC5427 | 14 03 25 - 06 04 10 | Vir | SaP Sb | 3.0 X 1.6' 3.2 X 2.3' | 12.1v 11.4v | +2371 +2645 | 110.4 123.2 | 286 | 129 |
| ARP 274, NGC5679A NGC5679B MCG+1-37-36 | 14 35 06 + 05 21 18 | Vir | S Dbl -- | 1.3 X 0.6' 1.1 X 0.7' 0.4 X 0.2' | 13.7v 13.6v 17.2 | +7483 +8654 +7618 | 348.5 403.0 354.8 | 242 | 109 |
| ARP 173, MCG+2-38-19 MCG+2-38-20 | 14 51 27 + 09 18 53 | Boo | S S | 1.5 X 0.3' 0.6 X 0.4' | 14.6 14.7v | +8745 +8780 | 407.3 408.9 | 198 | 89 |
| ARP 302, UGC 9618 MCG +4-35-19 | 14 57 00 + 24 36 24 | Boo | Dbl S | 0.7 X 0.7' 0.9 X 0.2' | 14.9 15.8 | +9872 +10,059 | 459.8 468.5 | 153 | 70 |
| "SANCHO'S" OBJECT | 15 10 17 + 58 10 39 | Dra | Dbl | 0.5 X 0.4' | 16.0v | +9563 | 445.4 | 50 | 22 |
| ABELL 2065 | 15 22 42 + 27 43 00 | CrB | Clstr | 22.4 X 22.4' | 15.6 | +21,605 | 1.01Bil | 154 | 69 |
| "SEYFERT'S SEXTET" NGC3027 HICKSON 79A, NGC6027A HICKSON 79B, NGC6027B HICKSON 79C, NGC6027C HICKSON 79D, NGC6027D HICKSON 79E, NGC6027E | 15 59 11 + 20 45 17 | Ser | SOp EO SO SO Sdm Scd | 0.5 X 0.3' 0.9 X 0.6' 0.5 X 0.3' 0.7 X 0.2' 0.3 X 0.3' 0.9 X 0.4' | 14.3v 13.9v 14.3v 15.9v 15.6v 13.5v | +4413 +4197 +4017 +4482 +19,813 +4095 | 205.2 195.5 187.1 208.7 922.7 190.7 | 155 | 69 |
| ARP 101, UGC10169 | 16 04 34 + 14 49 44 | Ser | Dbl | 2.3 X 0.5' | 13.7v | +4708 | 219.3 | 200 | 88 |
| VV489, UGC10273 MAC 16030 | 16 12 45 + 28 17 09 | CrB | Dbl -- | 1.7 X 0.4' 0.4 X 0.1' | 14.3v 16.5p | +7381 -- | 343.7 | 113 | 69 |
| ARP 102, UGC 10814 | 17 19 20 + 49 03 15 | Her | S | 3.7 X 0.5' | 14.1v | +7177 | 334.2 | 81 | 34 |

Source "Megastar"

Distance: 10⁶ light year

H₀ = 70 Km. s⁻¹. Mpc⁻¹

GOOD LUCK

LARRY MITCHELL - Houston, TX.