

# OBSERVATORIO ASTRONOMICO RAMON MARIA ALLER

## INTERNATIONAL ASTRONOMICAL UNION COMMISSION 26 (DOUBLE STARS) INFORMATION CIRCULAR No. 155 (FEBRUARY 2005)

| NEW ORBITS          |                       |                  |                  |                |                     |                            |                       |  |
|---------------------|-----------------------|------------------|------------------|----------------|---------------------|----------------------------|-----------------------|--|
| ADS<br>RA 2000 DEC  | Name<br>n (deg)       | P (yr)<br>a (")  | T<br>i (deg)     | e<br>w (deg)   | W(2000)<br>Last ob. | 2005<br>2006               | Author                |  |
| 434<br>00318+5431   | STT 12<br>0.6711      | 536.47<br>1.165  | 2012.09<br>75.8  | 0.816<br>260.5 | 17.4<br>2004.928    | 201.2 0.281<br>203.0 0.255 | LING<br>et al. (*)    |  |
| 873<br>01040+3528   | HO 213<br>0.7200      | 500.<br>0.354    | 1995.82<br>33.2  | 0.156<br>353.2 | 111.7<br>2001.8505  | 113.7 0.299<br>114.5 0.299 | DOCOBO<br>& LING      |  |
| 1769<br>02193+5338  | A 1274<br>0.2807      | 1282.73<br>0.825 | 1697.16<br>66.9  | 0.732<br>116.2 | 9.4<br>1991.25      | 283.5 0.450<br>283.8 0.451 | MANTE                 |  |
| 3228<br>04275+1113  | BU 1186<br>2.2417     | 160.59<br>0.401  | 2005.80<br>118.6 | 0.740<br>27.3  | 5.4<br>1996.869     | 0.7 0.105<br>348.9 0.093   | OLEVIC &<br>CVETKOVIC |  |
| 04422+2257          | McA 16 Aa<br>7.6913   | 46.81<br>0.249   | 2025.11<br>132.3 | 0.324<br>126.8 | 12.2<br>1998.775    | 41.1 0.287<br>37.5 0.291   | OLEVIC &<br>CVETKOVIC |  |
| 4392<br>05484+2052  | STT 118 AB<br>0.6507  | 553.27<br>0.713  | 1797.06<br>90.4  | 0.062<br>124.0 | 136.7<br>1991.25    | 312.9 0.078<br>312.5 0.070 | OLEVIC &<br>CVETKOVIC |  |
| 06425+6612          | MLR 318<br>1.0088     | 356.86<br>0.998  | 2160.55<br>94.1  | 0.577<br>352.6 | 128.7<br>1995.19    | 308.7 1.555<br>308.7 1.553 | OLEVIC &<br>CVETKOVIC |  |
| 07269+2015          | CHR 26<br>25.5900     | 14.07<br>0.067   | 1984.65<br>57.9  | 0.208<br>135.0 | 1.3<br>1995.9215    | 320.9 0.056<br>336.7 0.067 | MANTE                 |  |
| 7456<br>09371+1614  | STF 1372<br>0.9704    | 371.<br>0.645    | 1993.50<br>80.4  | 0.696<br>113.4 | 64.9<br>2003.59     | 245.4 0.267<br>246.0 0.275 | ALZNER                |  |
| 12446-5717          | FIN 65<br>2.9537      | 121.88<br>0.295  | 2063.64<br>109.1 | 0.561<br>109.7 | 68.1<br>1993.0930   | 107.1 0.222<br>105.7 0.227 | MANTE                 |  |
| 8727<br>12597-0349  | CHR 39 Aa<br>45.2261  | 7.96<br>0.077    | 1995.79<br>6.1   | 0.392<br>149.7 | 46.2<br>1996.1840   | 298.1 0.071<br>335.1 0.092 | MANTE                 |  |
| 15234-5919          | HJ 4757<br>0.7086     | 508.06<br>1.009  | 2048.97<br>150.0 | 0.259<br>91.2  | 40.5<br>1996.16     | 5.1 0.769<br>4.1 0.765     | LING<br>et al. (*)    |  |
| 9744<br>15416+1941  | HU 580<br>16.3785     | 21.98<br>0.209   | 2007.22<br>83.8  | 0.093<br>260.4 | 69.8<br>2000.5185   | 254.5 0.155<br>259.0 0.107 | DOCOBO<br>& LING      |  |
| 10374<br>17104-1544 | BU 1118 AB<br>4.1040  | 87.72<br>1.384   | 2024.81<br>95.3  | 0.947<br>274.9 | 39.0<br>2002.443    | 238.5 0.574<br>237.8 0.579 | DOCOBO<br>& LING      |  |
| 19411+1349          | KUI 93<br>5.8328      | 61.72<br>0.129   | 2023.11<br>65.4  | 0.966<br>314.7 | 153.8<br>2001.731   | 314.6 0.183<br>314.9 0.180 | DOCOBO<br>& LING      |  |
| 13964<br>20320+2548 | STF 2695<br>1.3383    | 269.<br>0.773    | 2016.37<br>84.1  | 0.431<br>174.1 | 77.4<br>2004.16     | 251.3 0.330<br>251.9 0.344 | ALZNER                |  |
| 16368<br>22550+5132 | HU 785<br>1.3492      | 266.82<br>0.285  | 2125.41<br>109.8 | 0.269<br>108.6 | 87.7<br>1991.25     | 119.0 0.205<br>118.2 0.208 | OLEVIC &<br>CVETKOVIC |  |
| 16904<br>23393+4543 | CHR 149 Aa<br>16.1915 | 22.23<br>0.040   | 1999.03<br>150.0 | 0.228<br>205.7 | 63.8<br>1999.821    | 93.4 0.042<br>81.5 0.045   | OLEVIC &<br>CVETKOVIC |  |

PAPERS PUBLISHED IN 2004

1. ABAD, C. et al.: "Reduction of CCD observations of visual binaries using the 'Tepui' function as PSF", *Astron. Astrophys.* 416, (2), 811 (2004).
2. ABT, H.A. & BOONYARAK, C.: "Tidal Effects in Binaries of Various Periods", *Astrophys. J.* 616, (1), 562 (2004).
3. ABT, H.A. & WILLMARTH, D.W.: "The Mass Distribution of Secondaries to Solar-Type Stars", *Rev. Mex. A. C.* 21, 37 (2004).
4. AHMAD, A.; JEFFERY, C.S. & FULLERTON, A.W.: "Discovery of a spectroscopic binary comprising two hot helium-rich subdwarfs", *Astron. Astrophys.* 418, (1), 275 (2004).
5. ALLEN, C. et al.: "Internal Motions of Trapezium Systems", *Rev. Mex. A. C.* 21, 195 (2004).
6. ARGYLE, R.: "Observing and measuring visual double stars", Patrick Moore's practical astronomy series. Berlin: Springer, (2004).
7. BALEGA, I. et al.: "Speckle interferometry of nearby multiple stars. II", *Astron. Astrophys.* 422, (2), 627 (2004).
8. BECK, T.L. et al.: "A High Spatial Resolution Infrared View of the T Tauri Multiple System", *Astrophys. J.* 614, (1), 235 (2004).
9. BEUZIT, J.-L. et al.: "New neighbours - III. 21 new companions to nearby dwarfs, discovered with adaptive optics", *Astron. Astrophys.* 425, (3), 997 (2004).
10. BOUY, H. et al.: "First determination of the dynamical mass of a binary L dwarf", *Astron. Astrophys.* 423, (1), 341 (2004).
11. BRANDNER, W. et al.: "Astrometric monitoring of the binary brown dwarf DENIS-P J1228.2-1547", *Astron. Astrophys.* 428, (1), 205 (2004).
12. CARQUILLAT, J.-M. et al.: "Contribution to the search for binaries among Am stars VI. Orbital elements of ten new spectroscopic binaries, implications on tidal effects", *Monthly Notices* 352, (2), 708 (2004).
13. COURTOT, J.-F. & ARGYLE, R. W.: "Micrometric measures of double stars from 2003.0 to 2004.0", *The Webb Soc. Double Star Section Cir.* 12, 1 (2004).
14. DE BECKER, M.; RAUW, G. & MANFROID, J.: "A Spectroscopic study of the non-thermal radio emitter Cyg OB2 #8A: Discovery of a new binary system", *Astron. Astrophys.* 424, (3), 39L (2004).
15. DE DONDER, E. & VANBEVEREN, D.: "The influence of binaries on galactic chemical evolution", *New Astron. Rev.* 48, 861 (2004).
16. DOCOBO, J.A. et al.: "Binary Star Speckle Interferometry: Measurements and Orbits", *Astron. J.* 127, (2), 1181 (2004).
17. EDELMANN, H. et al.: "Radial velocity curves of nine sdB binary stars", *Astrophys. Space Science* 291, (3), 315. (2004).
18. EGGENBERGER, A. et al.: "Statistical properties of an unbiased sample of F7-K binaries: towards the long-period systems", *Rev. Mex. A. C.* 21, 28 (2004).
19. FEKEL, F.C.: "Increased Multiplicity of 77 Cygni, V815 Herculis, and HD 140122", *Rev. Mex. A. C.* 21, 45 (2004).
20. FEKEL, F.C.: "The Spectroscopic Orbit of phi Cygni, a System with Two Late-Type Giants", *Rev. Mex. A. C.* 21, 63 (2004).
21. FEKEL, F.C.: "Chromospherically Active Stars. XXIII. The Triple System HD 7205 = QU Andromedae", *Astron. J.* 127, (5), 2931 (2004).
22. FEKEL, F.C. & TOMKIN, J.: "Spectroscopic orbits of potential interferometric binaries", *Astron. Nach.* 325, (6-8), 649 (2004).
23. FEKEL, F.C.; HENRY, G.W. & ALSTON, F.M.: "Chromospherically Active Stars. XXII. HD 18955, A Massive K Dwarf Binary", *Astron. J.* 127, (4), 2303 (2004).
24. FISHER, J.; SCHRODER, K.-P. & SMITH, R.C.: "Volume-limited Spectroscopic Binary Statistics", *Rev. Mex. A. C.* 21, 65 (2004).
25. FISHER, R.T.: "A Turbulent Interstellar Medium Origin of the Binary Period Distribution", *Astrophys. J.* 600, (2), 769 (2004).
26. FORS, O.; HORCH, E.P. & NUNEZ, J.: "Application of fast CCD drift scanning to speckle imaging of binary stars", *Astron. Astrophys.* 420, (1), 397 (2004).

27. FORS, O. et al.: "Infrared and visual lunar occultations measurements of stellar diameters and new binary stars detections at the Calar Alto 1.5 m telescope", *Astron. Astrophys.* 419, (1), 285 (2004).
28. GRIFFIN, R.F.: "Spectroscopic Binary Orbits from Photoelectric Radial Velocities - Paper 174: HD 14914, HR 2599, and HD 221422", *The Observatory* 124, 22 (2004).
29. GRIFFIN, R.F.: "Spectroscopic Binary Orbits from Photoelectric Radial Velocities - Paper 175: BD +48.1048, HR 1736, HR3416, and HD 199378/9", *The Observatory* 124, 97 (2004).
30. GRIFFIN, R.F.: "The Orbital Eccentricity of HDE 258878 (OW Gem)", *The Observatory* 124, 136 (2004).
31. GRIFFIN, R.F.: "Spectroscopic Binary Orbits from Photoelectric Radial Velocities - Paper 176: HD 142353, HD 164025, HD165007, and HD 209746", *The Observatory* 124, 190 (2004).
32. GRIFFIN, R.F.: "Spectroscopic Binary Orbits from Photoelectric Radial Velocities - Paper 177: 85 Pegasi", *The Observatory* 124, 258 (2004).
33. GRIFFIN, R.F.: "A Second Look at the Orbit of HR 6388", *The Observatory* 124, 294 (2004).
34. GRIFFIN, R.F.: "Spectroscopic Binary Orbits from Photoelectric Radial Velocities - Paper 178: HD 109118, HD 112138, HD 112445, and HD 114941", *The Observatory* 124, 371 (2004).
35. GRIFFIN, R.F.: "Spectroscopic Binary Orbits from Photoelectric Radial Velocities - Paper 179: HD 108547, HD 113093, HD 113393, and HD 113638", *The Observatory* 124, 429 (2004).
36. HARTKOPF, W.I. & MASON, B.D.: "Addressing confusion in double star nomenclature: The Washington Multiplicity Catalog", *Rev. Mex. A. C.* 21, 83 (2004).
37. HENRY, G.W.; FEKEL, F.C. & HENRY, S.M.: "HD 207651: A Triple System with delta Scuti and Ellipsoidal Variations But No gamma Doradus Pulsations", *Astron. J.* 127, (3), 1720 (2004).
38. HILLENBRAND, L.A. & WHITE, R.J.: "An Assessment of Dynamical Mass Constraints on PreMain-Sequence Evolutionary Tracks", *Astrophys. J.* 604, (2), 741 (2004).
39. HORCH, E.P.; MEYER, R.D. & VAN ALTENA, W.F.: "Speckle Observations of Binary Stars with the WIYN Telescope. IV. Differential Photometry", *Astron. J.* 127, (3), 1727 (2004).
40. JIANG, I.-G. & YEH, L.-C.: "The Modified Restricted Three Body Problems", *Rev. Mex. A. C.* 21, 152 (2004).
41. JORISSEN, A. et al.: "Spectroscopic Binaries among a Complete Sample of Hipparcos M Giants", *Rev. Mex. A. C.* 21, 71 (2004).
42. KAISLER, D. et al.: "HD 199143 and HD 358623: Two recently identified members of the beta Pictoris moving group", *Astron. Astrophys.* 414, (1), 175 (2004).
43. KARATA Y. et al.: "Kinematics of chromospherically active binaries and evidence of an orbital period decrease in binary evolution", *Monthly Notices* 349, (3), 1069 (2004).
44. KAYE, A.B.; GRAY, R.O. & GRIFFIN, R.F.: "On the Spectroscopic Nature of HD 221866", *Pub. Astron. Soc. of the Pacific* 116, (820), 558 (2004).
45. KONACKI, M. & LANE, B.F.: "The Visual Orbits of the Spectroscopic Binaries HD 6118 and HD 27483 from the Palomar Testbed Interferometer", *Astrophys. J.* 610, (1), 443 (2004).
46. LAMPENS, P.; PRIEUR, J.-L. & ARGYLE, R.: "Infrared differential photometry of selected orbital binaries", *Rev. Mex. A. C.* 21, 75 (2004).
47. LANE, B.F. & MUTERSPAUGH, M.W.: "Differential Astrometry of Subarcsecond Scale Binaries at the Palomar Testbed Interferometer", *Astrophys. J.* 601, (2), 1129 (2004).
48. LEVATO, H. et al.: "Spectroscopic binaries in southern open clusters", *Rev. Mex. A. C.* 21, 141 (2004).
49. LING, J.F.: "Preliminary Orbits for Eight Visual Binaries", *Astrophys. J. Suppl. Ser.* 153, (2), 545. (2004).
50. LING, J.F.; MAGDALENA, P. & PRIETO, C.: "The Distribution of separations of DMSA Hipparcos Catalogue", *Rev. Mex. A. C.* 21, 77 (2004).
51. LUHMAN, K.L.: "The First Discovery of a Wide Binary Brown Dwarf", *Astrophys. J.* 614, (1), 398 (2004).
52. MASON, B.D. et al.: "Speckle Interferometry at the US Naval Observatory. IX", *Astron. J.* 127, (1), 539 (2004).

53. MASON, B.D. et al.: "Speckle Interferometry at the US Naval Observatory. X", *Astron. J.* 128, (6), 3012 (2004).
54. MONNIER, J. D. et al.: "First Results with the IOTA3 Imaging Interferometer: The Spectroscopic Binaries Virginis and WR 140", *Astrophys. J. Lett.* 602, (1), L57 (2004).
55. NURMI, P.: "Observational Properties of Synthetic Visual Binary Catalog", *Rev. Mex. A. C.* 21, 263 (2004).
56. PARSONS, S. B.: "New and Confirmed Triple Systems with Luminous Cool Primaries and Hot Companions", *Astron. J.* 127, (5), 2915 (2004).
57. OLEVIC, D. & CVETKOVIC, Z.: "Orbits of 10 interferometric binary systems calculated by using the improved Koval'skiij method", *Astron. Astrophys.* 415, (1), 259 (2004).
58. PEREIRA, C. B. : "The nature of Hen 3-1312: A post-AGB star in a binary system", *Astron. Astrophys.* 413, (3), 1009 (2004).
59. PEREZ, M. R. et al.: "A young and complex binary star - HD 144432", *Astron. Astrophys.* 416, (2), 647 (2004).
60. POURBAIX, D. et al.: "Color-Induced Displacement double stars in SDSS", *Astron. Astrophys.* 423, (2), 755 (2004).
61. POURBAIX, D.; JANCART, S. & BOFFIN, H.M.J.: "What can the SB9 database do for you?", *Rev. Mex. A. C.* 21, 265 (2004).
62. POURBAIX, D. et al.: "SB9: The ninth catalogue of spectroscopic binary orbits", *Astron. Astrophys.* 424, (2), 727 (2004).
63. POVEDA, A. & ALLEN, C.: "The distribution of separations of wide binaries of different ages", *Rev. Mex. A. C.* 21, 49 (2004).
64. RAMM, D.J.; SKULJAN, J. & HEARNshaw, J. B.: "The orbit of a new double-lined spectroscopic binary: HD 161958", *The Observatory* 124, 167 (2004).
65. RAUW, G. & DE BECKER, M. : "Early-type stars in the young open cluster IC 1805. I. The SB2 system BD+60 497 and the probably single stars BD+60 501 and BD+60 513", *Astron. Astrophys.* 421, (2), 693 (2004).
66. RAUW, G. et al.: "WR 20a: A massive cornerstone binary system comprising two extreme early-type stars", *Astron. Astrophys.* 420, (2), L15 (2004).
67. REIPURTH, B. & ASPIN, C.: "The FU Orionis Binary System and the Formation of Close Binaries", *Astrophys. J. Lett.* 608, (1), L65 (2004).
68. RICHICHI, A.: "Interferometry and Lunar Occultations: Status and Prospects of Ground-based Milliarcsecond Resolution Observations ", *Rev. Mex. A. C.* 21, 247 (2004).
69. RUBINOV, A.V.: "Dynamical Evolution of Multiple Stars: Influence of the Initial Parameters of the System", *Astron. Reports* 48, (1), 45 (2004).
70. SCARFE, C.D.; GRIFFIN , R.F. & GRIFFIN, R.E.M.: "The Double-Lined Spectroscopic Binary HR 6046", *Rev. Mex. A. C.* 21, 79 (2004).
71. SIMON, M. & PRATO, L.: "The Double-lined Spectroscopic Binary Haro 1-14c", *Astrophys. J. Lett.* 613, (1), L69 (2004).
72. SKULJAN, J. ; RAMM, D.J. & HEARNshaw, J.B.: "Accurate orbital parameters for the bright southern spectroscopic binary zeta Trianguli Australis - an interesting case of a near-circular orbit", *Monthly Notices* 352, (2), 975 (2004).
73. STRIGACHEV, A. & LAMPENS, P.: "Multicolour CCD measurements of nearby visual double stars. II", *Astron. Astrophys.* 422, (3), 1023 (2004).
74. STASSUN, K.G. et al.: "Dynamical Mass Constraints on Low-Mass PreMain-Sequence Stellar Evolutionary Tracks: An Eclipsing Binary in Orion with a 1.0 Msun Primary and a 0.7 Msun Secondary", *Astrophys. J. Suppl. Ser.* 151, (2), 357. (2004).
75. TAMAZIAN, V.S.: "Orbit of T TAU Ba-Bb and Mass Estimate for its Infrared Companion", *Astron. J.* 127, (4), 2378 (2004).
76. TOKOVININ, A.: "Statistics of multiple stars", *Rev. Mex. A. C.* 21, 7 (2004).
77. TOKUNAGA, A.T. et al.: "A Subarcsecond Companion to the T Tauri Star AS 353B", *Astron. J.* 127, (1), 444 (2004).
78. VALTONEN, M.: "Three-body problem and multiple stellar systems", *Rev. Mex. A. C.* 21, 147 (2004).
79. VANBEVEREN, D.: "The effects of binaries on population studies", *Rev. Mex. A. C.* 20, 85 (2004).
80. WANG, H. et al.: "FU Orionis: A Binary Star?", *Astrophys. J. Lett.* 601, (1), L83 (2004).

81. YOO, J.; CHANAME, J. & GOULD, A.: "The End of the MACHO Era: Limits on Halo Dark Matter from Stellar Halo Wide Binaries", *Astrophys. J.* 601, (1), 311 (2004).
82. ZAPATERO, M. R. & MARTIN, E. L.: "A CCD imaging search for wide metal-poor binaries", *Astron. Astrophys.* 419, (1), 167 (2004).
83. ZAPATERO, M. R. et al.: "Dynamical Masses of the Binary Brown Dwarf GJ 569 Bab", *Astrophys. J.* 615, (2), 958 (2004).
84. ZINNECKER, H.; KOHLER, R. & JAHREISS, H.: "Binary statistics among population II stars", *Rev. Mex. A. C.* 21, 33 (2004)
85. ZUCKER, S. et al.: "Multi-order TODCOR: Application to observations taken with the CORALIE echelle spectrograph. II. A planet in the system HD 41004", *Astron. Astrophys.* 426, (2), 695 (2004).
86. ZWAHLEN, N. et al.: "A purely geometric distance to the binary star Atlas, a member of the Pleiades", *Astron. Astrophys.* 425, (3), L45 (2004).
87. ZWITTER, T. & MUNARI, U.: "Spectroscopy, Photometry and Micro-arcsec Astrometry of Binaries with the GAIA Space Mission and with the RAVE Experiment", *Rev. Mex. A. C.* 21, 251 (2004).

#### NOTE

Dear colleagues,

William H. Hartkopf (President of the IAU Comm. 26 and Webmaster of the webpage) and we ourselves have delivery problems with the e-mail addresses for the following Commission members: (note: email address removed from web version for security reasons - wih)

- John L. Hershey
- Bambang Hidayat (email okay)
- Pavel Kroupa (new email address received)
- Claude Meyer
- Joseph I. Smak
- Wean-Shun Tsay

So we ask anyone who knows the current e-mail addresses of these members to please get in touch with us.

Thanks in anticipation.  
The Editors.

#### ANNOUNCEMENT

##### A MODEL OF THE ORIENTATION OF THE ORBITAL PLANES OF THE VISUAL DOUBLE STARS

A research made at the Observatoire Royal de Belgique some thirty-five years ago by J. Dommanget and O. Nys, has shown some specific space organisation of the orbital planes of the visual double stars on the contrary of what was thought since more than a century. A tri-dimensional model based on 70 stars showed this organisation very clearly especially in the Sun's environment. Twenty years later a second research (1982-1987) concerning 145 stars, confirmed this result which was observed with more precision on a second model that was exhibited, during the IAU Colloquium n.97 "Wide components in double and multiple stars" held at Brussels in 1987. (See: *Astrophysics and Space Science*, 142, 1988, pp. 171-176).

A short presentation of this model has recently been given in the *Bulletin de la Commission des Etoiles doubles de la Societe Astronomique de France*, n.42 of march 2004, pp. 13-14 and an historical synthesis of the various researches made on this subject since 1838 by J. H. MADLER will appear in *Ciel et Terre* n.121, 1, 2005.

On these occasions and on that of a few talks on the subject, it was decided to transfer this model from the Observatoire Royal de Belgique to the Observatoire de la Cote d'Azur, France where it will be preserved. In the framework of the project "Museal", near to the historical refractors of the Nice Observatory, this model will be integrated in the presentation devoted to the double star researches.

J. Dommanget.

#### GEOFFREY G. DOUGLASS (1942 - 2005)

We have the sad duty to report the passing of longtime Commission 26 member Geoffrey G. Douglass, who died 15 February 2005 after a long illness.

Geoff worked at the U.S. Naval Observatory for over 30 years, until his retirement in January 1999. Much of his work involved observations of visual double stars, from collaborating on the photographic program in the late 1960's to development of the USNO's speckle interferometry program throughout the 1990's. A brief summary of his work can be found at <http://ad.usno.navy.mil/wds/history/douglass.html>.

Geoff collaborated with Charles Worley from 1968 until Charles' death in December 1997, writing much of the double star software and assisting in the production of the observatory's double star catalogs. It was often joked that the "W" and "D" in the WDS (officially the "Washington Double Star" catalog) really stood for "Worley" and "Douglass".

During his last year at the observatory he oversaw the publication of over 10,000 speckle observations, and guided the recently hired Brian Mason (Charles' replacement) in the management of the double star program. He continued to have an interest in the activities at the USNO even during his long hospitalization, and was regularly sought out for his knowledge on instrumentation and earlier observations.

Those of you who knew Geoff also knew he battled illness for many years. He was a symbol of the worthiness of organ donation, living for some two decades following a kidney transplant, before succumbing to complications following kidney failure.

Geoff is survived by his wife Doris, with whom he shared a love of cats and classical music, as well as passionate religious beliefs. He will be sorely missed by his many friends and colleagues.

William Hartkopf and Brian Mason.  
U.S. Naval Observatory.

\*\*\*\*\*

The deadline for contributions to Information Circular No. 156 is:

June 15th 2005

J. A. Docobo (oadoco@usc.es)  
J. F. Ling (oafana@usc.es)  
Tel: +34 981592747  
Fax: +34 981597054

Observatorio Astronomico "R. M. Aller"  
P. O. Box 197  
Universidade de Santiago de Compostela  
SPAIN  
<http://www.usc.es/astro>

ISSN: 1024-7769