with convective overshooting, can be made to fit with a transfer rate only 16 times van Paradijs' estimate and is our favoured model. Indeed Pols et al. (1997) demonstrate that convective overshooting, or some equivalent mixing at the core-envelope boundary, does take place in main-sequence stars with masses between 2 and $3\,M_\odot$.

An alternative model of the light curves (Beer & Podsiadlowski 2001) suggests much lower masses of $5.4\,M_\odot$ for the black hole and $1.45\,M_\odot$ for its companion. If correct these masses allow a model in which the secondary evolves normally to fill its Roche lobe near the end of the main sequence or in its more restrained Hertzsprung gap. In addition Orosz et al. (2001 private communication) have found evidence for contamination of the secondary star in V4641 Sgr.

Thus Nova Sco 1994 may be losing its bizarre claims! But for the moment, at least, it remains the most easily observed soft X-ray transient with a measured black hole component and so it will continue to stand out from the crowd for a while.

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References

Beer, M. E., & Podsiadlowski, P. 2001, in ASP Conf. Ser. Vol. 229, Evolution of Binary and Multiple Star Systems, ed. P. Podsiadlowski, S. Rappaport, A. R. King, F. D'Antona, & L. Burderi (San Francisco: ASP), 547

Kolb, U., King, A. R., Ritter, H., & Frank, J. 1997, ApJ, 485, L33

Orosz, J. A., & Bailyn, C. D. 1997, ApJ, 477, 876

Pols, O. R., Tout, C. A., Schröder, K-P., Eggleton, P. P., & Manners, J. 1997, MNRAS, 289, 869

van der Hooft, F., Heemskerk, M. H. M., Alberts, F., & van Paradijs, J. 1998, A&A, 329, 538

van Paradijs, J. 1996, ApJ, 464, L139