(by a factor 1.13 ± 0.05) than the one in the B-band. The dependence of the variability time scale on the wavelength is a standard prediction of the accretion disk model. The temperature of the disk decreases with radius, and the dynamical, thermal and viscous time scales increase as $r^{3/2}$. In the standard model, with instabilities in a thin accretion disk around a supermassive black hole, the characteristic time scale should vary as $\tau \propto \lambda^2$. If the source is thermal and the flux variability is due to temperature changes, the observed wavelength dependence can be naturally produced. The only requirement concerns the turnover in the energy distribution that should not be located at such a high frequency that the spectral slope in the observed band becomes independent of temperature. If brighter objects are on average hotter and the variability is due to temperature changes, the observed variability-luminosity negative correlation is expected. Assuming a black body or thermal bremsstrahlung, the spectral turnover of brighter objects is shifted to higher frequencies producing smaller flux changes, from $\delta I/I \propto \delta T/T(h\nu/kT)$ for $kT < h\nu$, to $\delta I/I \propto \delta T/T$ for $kT > h\nu$. The broadband variability in the starburst model is defined by the superposition of a variable component, supernova explosions (SNe) generating rapidly evolving compact supernova remnants (cSNR), and a non-variable component, a young stellar cluster and the other stars of the galaxy. The spectrum of the non-variable component has been predicted to show a $F_\nu \propto \nu^\alpha$ with $\alpha \sim -1.0 \div 0$. The variable/non-variable relative luminosities can be estimated on the basis of stellar evolution and of the variability pattern. The optical/UV spectrum of the variable component is expected to be harder than the non-variable component with $\alpha \sim 0.5$. Thus, the starburst scenario predicts a decrease of the $\Delta M_{\rm B}/\Delta M_{\rm R}$ with increasing redshift, compatible with the data, and with increasing absolute luminosity, contrary to the observational trend. A more general situation has to be explored, with the fraction on the non-variable component and/or the pulse properties (e.g., the spectral distribution) depending on the global luminosity of the object. A non-achromatic behaviour can be accommodated in the microlensing scenario. For a source comparable in size to the Einstein ring of the lens, with a quasar disk redder at larger radii, the bluer compact core would produce a larger variation in the B passband and the larger extent of the R image would cause a smaller R variation, albeit with a longer duration. It cannot be denied that achromatic light variations would have been one of the most significant characteristics of the microlensing model and the present observation of the wavelength dependence make it less appealing/compelling. Further details are given in Cristiani et al. 1996, A&A, 306, 395 and Cristiani et al. 1996, A&A submitted.

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THE EVOLUTION OF THE MERGING RATE OF NEUTRON STAR BINARIES IN ELLIPTICAL GALAXIES

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The merging rate of compact objects locked in binary systems are of great interest since those events should be a powerful source of detectable gravitational waves and have also being claimed as strong candidates for the cosmological source of the elusive Gamma Ray Bursts (GRB). Here we estimate the evolution of the merging rate of close binaries formed by neutron stars, using a chemo-dynamical model for the evolution of an elliptical galaxy. The model self-consistently follows the hydrodynamical evolution of the gas and the chemical evolution of the star population of an elliptical galaxy assumed to to be the host of an active galactic nuclei. Several nuclear starburst episodes are predicted over the lifetime of the galaxy. This, combined with a z-dependent luminosity function of galaxies, allows for the calculation of the different merging rates as a function of redshift.

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A SPECTRAL STUDY OF CLUMPY IRREGULAR GALAXIES

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Long-slit spectrophotometry of Clumpy Irregular Galaxies (CIG) Markarian 7, 256, 297, 325, 907 obtained with the 6-m and 1-m telescopes of SAO RAS are presented. The presence of very bright clumps scattered all over the galaxy body is the main morphological criterium for identification of CIG (Casini & Heidman 1976). A spectral study of giant H II regions in CIG (H II CIG) revealed some differences to H II regions of normal Irr or spirals (H II Irr and H II SpG):

— For equal intensity of high excitation lines, low excitation lines in the spectra of H II CIG are stronger than the same lines in H II Irr or H II SpG (Boesgaard et al. 1982; Figs. 1–5 Burenkov 1991). The [S II] lines are stronger.

— The [O/H] abundance does not vary as strongly as [N/H] from one clump to another (excluding the