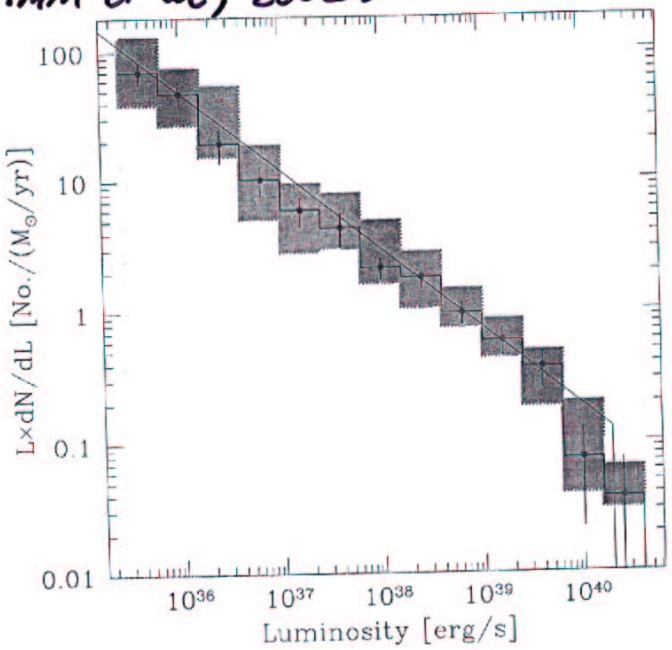
- Can intermediate mass black holes (IMBH) form by mergers in globular clusters ?

$M_{IMBH} \sim 10^2 - 10^4 M_\odot$

- Are ultraluminous X-ray sources (ULXs) powered by IMBH?

$L_X \sim 10^{40}\ erg\,s^{-1} \sim L_{Edd}(10^2 M_\odot)$ if isotropic

X-ray luminosity function of nearby galaxies normalized by star formation rate (Grimm et al, 2002)



- Most ULXs are XRBs – anisotropic emission
- cf GRS 1915+105 :

$M_{BH} \simeq 13 M_\odot$, $L_X^{isotropic} = 7 \times 10^{39}\ erg\,s^{-1}$

$= 4 L_{Edd}$

BH mergers in GCs ?

$v_{kick} \sim v_{ORB}$ (last stable orbit)

$\gg v_{escape}$ in many cases