Vertical distribution of HMXBs

h≈85-90 пк

WR ~45 pc *(Conti & Vacca 1990)*
OB assiciations ~30 pc *(Bronfman et al. 2000)*
Open clusters ~50 pc *(Joshi 2005)*

Kinematic age

HMXB systemic velocity

(Kaper et al. 1997; Hutoff & Kaper 2002)

Simple model of wind-accreting NS

NS luminosity depends on:

Companion mass (Mdot_wind)

Orbital period

SFXT (outbursts mechanisms)

Clumpy wind
(Walter et al. 2006, Sidoli et al. 2011)

Inhibition of the Accretion
(Grebenev & Sunyaev 2007, Bozzo et al. 2008)

Flaring activity due to transition from (stable) radiative cooling to (unstable) Compton cooling
(K.Postnov talk, L.Sidoli talk)

Surveys perspectives

NuSTAR

Deep over small area. Not large amount of HMXBs

Spectrum XG

Large area

1.18×10^{-13} erg/s/cm^2

130 persistent HMXB in MW

Conclusions

1) INTEGRAL Legacy: first complete survey of HMXB in Milky Way (absorption ignorant)

2) Dominance of SG systems among persistent sources!

3) Curved shape of HMXB LF

4) Surface density distribution - > SFR

5) Emerging of the global picture of HMXB formation

6) Clues to mechanism of SFXT outbursts