

 $\sigma_{es} = 6.7 \text{ x} 10^{-29}$

 $\sigma_{ph} = 7.9 \text{ x} 10^{-22}$

Ten million times bigger!

Usually assumed that inner disc ionised so not relevant But any dense clumps will be strongly affected Some simulations (eg Proga 2005) suggest inner "failed wind"

> Big Blue Bump TDEs



Lawrence 2012



knee is universal at ~1100A suggests atomic physics origin ==> reprocessing? Lawrence 2012



reflection from dense thick clouds at $\sim 30R_s$ from $10^9 M_{sun}$



line spectrum smeared with 75,000 km/s

feeble/cool TDEs

Simple TDE models predict $E{\sim}10^{52-53}$ ergs $T{\sim}10^{5}K$

So far most TDE candidates have $E{\sim}10^{50{-}51}$ ergs $T{\sim}10^4$ K

needs only 10⁻² - 10⁻³ M_{sun} reprocessing clouds again?

Some recent signs of *outflow*





broad Hα profile evolution in ASASSN-14ae

expansion plus time delay?

Holoien et al 2014



for v=virial T=26 days . M₇ . (v/2000)-2

For 107 M_{sun} L_{Edd}=10⁴⁵

cf observed peak 10⁴⁴ but most of power could be in unseen EUV-soft X-ray

Holoien et al 2014



Not necessarily stellar disruption Passing scraps of gas Not a steady accretion process More like an explosive event Most of what we see is reprocessed















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