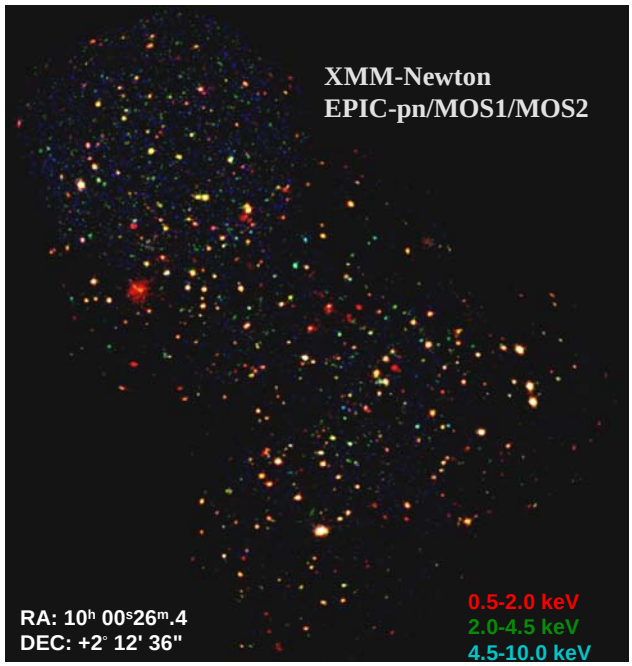
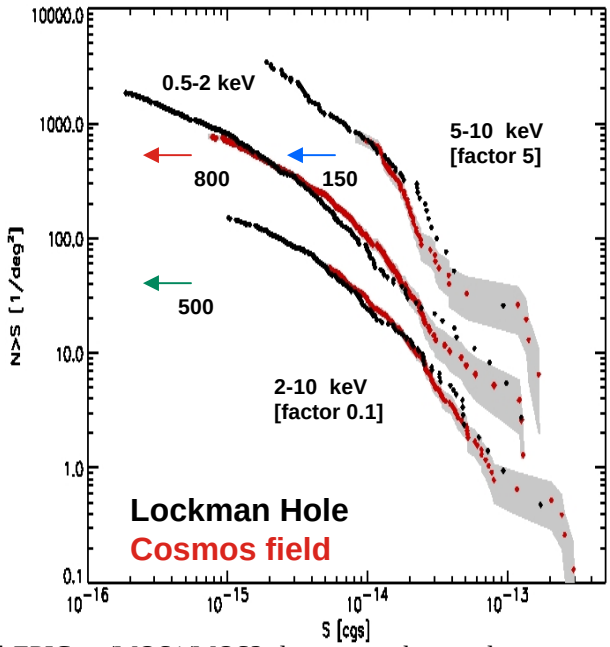
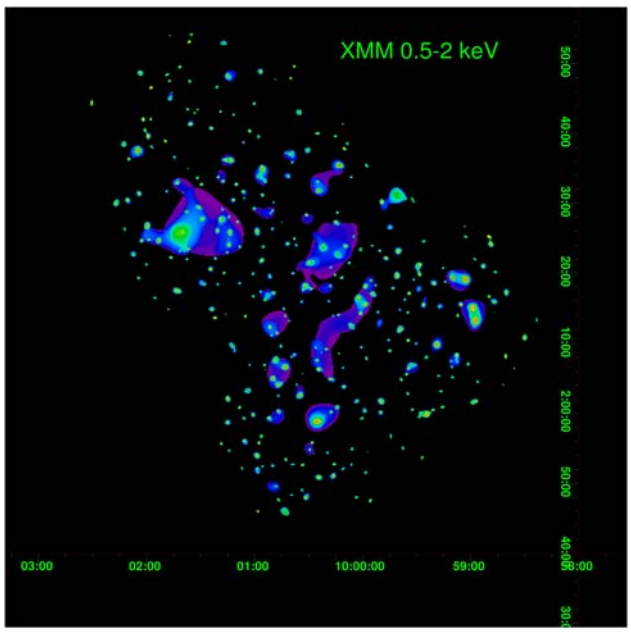
Evolution of AGN in the Cosmic web

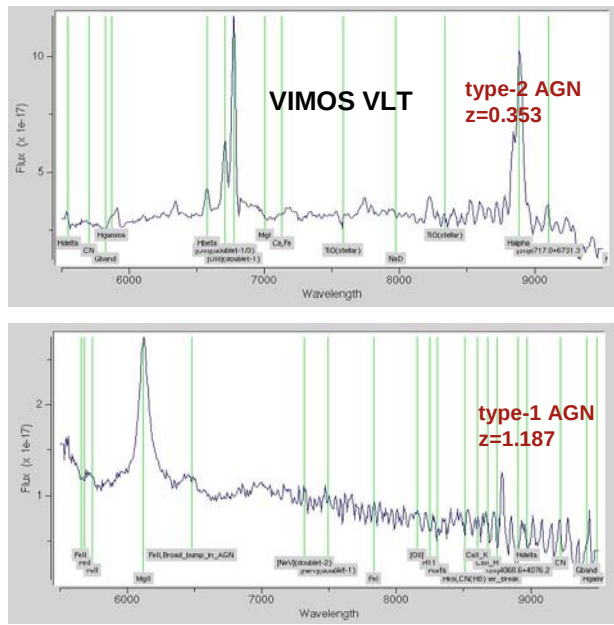
The Deep XMM-Newton/Cosmos survey will homogeneously cover the 2 deg^2 contiguous area of the Cosmos field to a sensitivity level similar to that of the deepest ROSAT surveys. We will obtain about 2000 obscured and un-obscured AGN, which are crutial to study the formation and evolution of super-massive black holes, the evolution of the spatial distribution and the correlation with galaxy morphology and evolution.





Left: X-ray colour image from the existing six combined EPIC-pn/MOS1/MOS3 data sets, where red, green, and blue colours refer to the soft, medium, and hard energy bands, respectivily. **Right:** Number counts of the Cosmos field in different energy bands compared with those from the 1Msec Deep XMM-Newton Lockman Hole survey.





Left: The wavelet analysis has revealed about twenty candidates for groups and clusters of galaxies. A galaxy cluster at z=0.73 has been already spectroscopically identified using VLT FORS2 spectra. **Right:** First VIMOS VLT spectra of two X-ray sources taken in May 2004 reveal an obscured and un-obscured AGN.

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