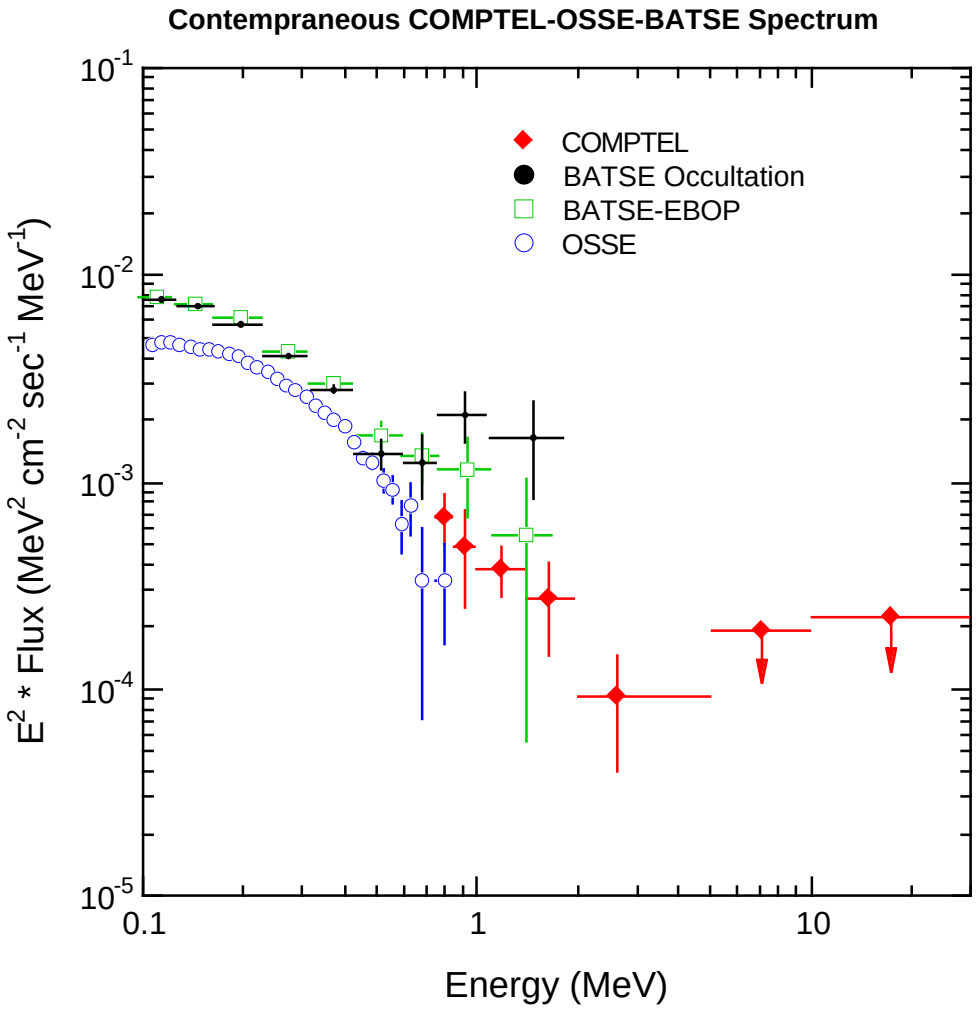
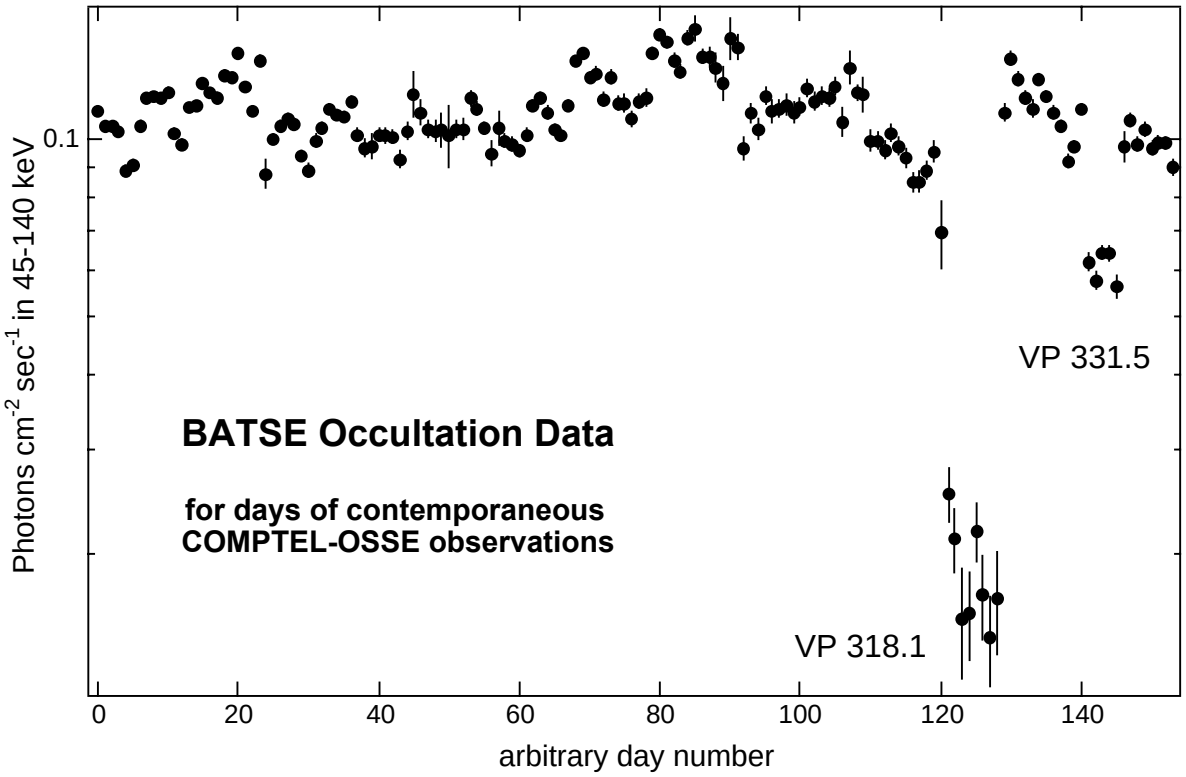
Cygnus X-1 : Previous Status

- **Trying to assemble a contemporaneous spectrum based on COMPTEL, BATSE and OSSE data.**
- **Need lower energy data to aid in interpretation of COMPTEL spectrum.**
- **OSSE data consistently lower than BATSE data.**



Flux Time History

- **Hard X-ray flux largely constant for all COMPTEL observations**
- **Major exception wasVP 318.1 - a ToO based on an extremely low hard X-ray state.**
- **During ToO, OSSE was in a 'staring' mode. Its exposure was much larger than a typical observation.**



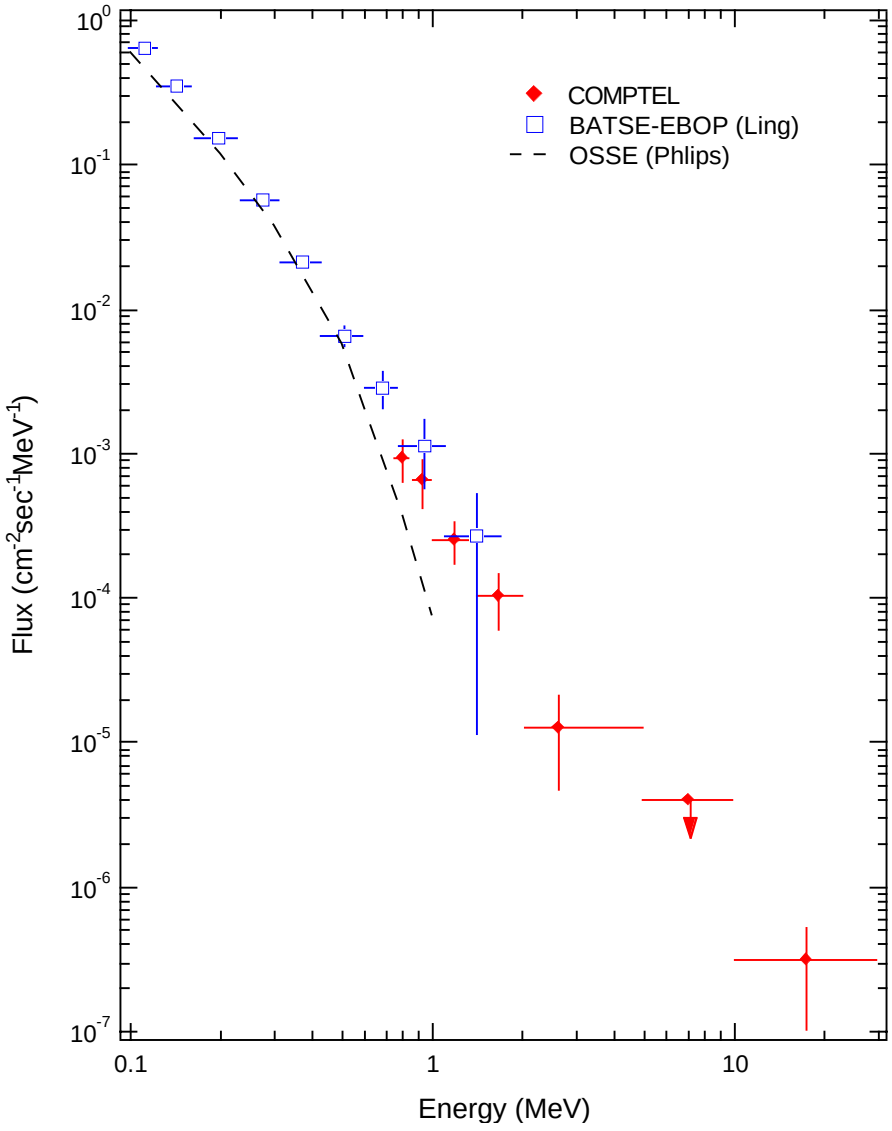
Relative Exposures of CGRO Instruments

- **Relative exposure of COMPTEL and BATSE determined primarily by length of observation.**
- **Relative exposure of OSSE determined by length of observation *and* operational mode.**
- **OSSE exposure dominated by VP 318.1 - low state data!**
- **Need to restrict the analysis to observations where Cyg X-1 is in a common state.**

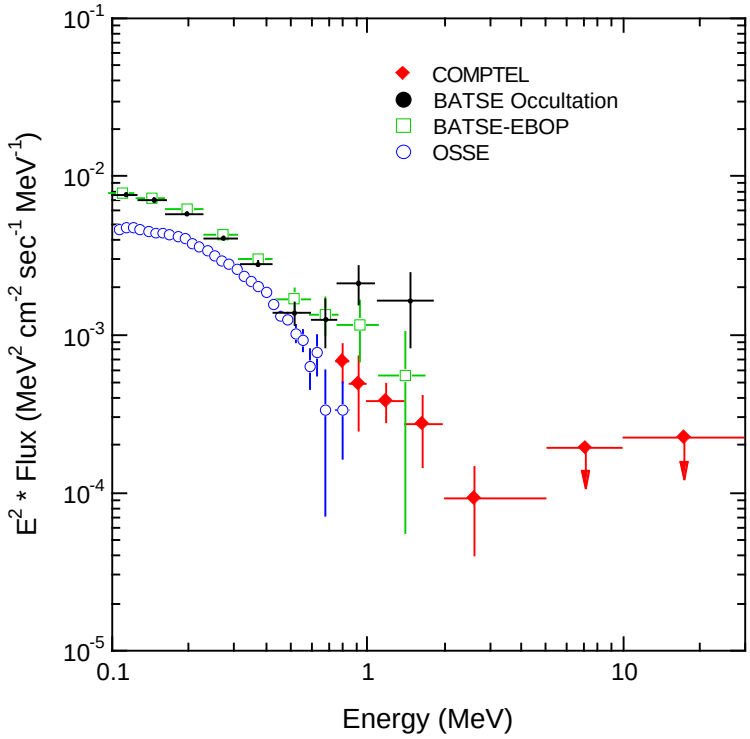
	COMPTEL / BATSE		OSSE	
VP	days	fraction of total	livetime	fraction of total
2.0	9	0.11	392,000	0.28
7.0	7	0.09	109,000	0.08
203	21	0.27	218,000	0.15
212.0	14	0.18	54,000	0.04
318.1	**7**	**0.09**	**438,000**	**0.31**
328.0	7	0.09	27,000	0.02
331.0	3	0.04	28,000	0.02
331.5	**4**	**0.05**	**121,000**	**0.09**
333.0	7	0.09	25,000	0.02

New Spectrum

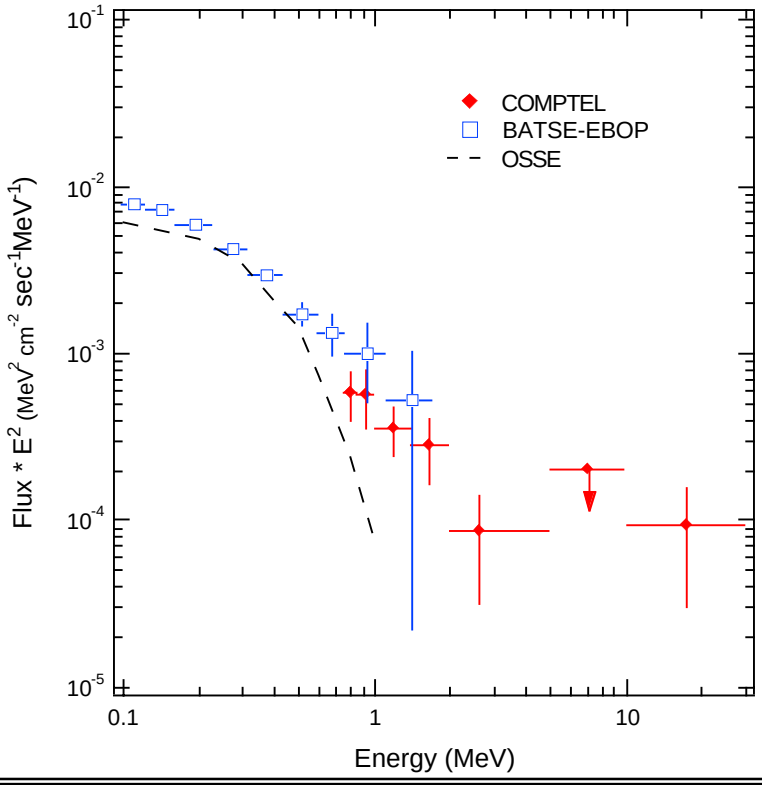
- **New spectrum now excludes VPs 318.1 and 331.5.**
- **Common level of hard X-ray flux.**
- **Better agreement between OSSE and BATSE-EBOP !!**



Old vs. New Spectrum



Previous spectra with periods 318.1 and 331.5



New spectra without periods 318.1 and 331.5