

- **cosmo: set the cosmology**

Set the cosmology used (i.e., $\langle H_0 \rangle$, $\langle q_0 \rangle$, and $\langle \Lambda_0 \rangle$).

Syntax: **cosmo** $\langle H_0 \rangle$ $\langle q_0 \rangle$ $\langle \Lambda_0 \rangle$

where $\langle H_0 \rangle$ is the Hubble constant in $\text{km s}^{-1} \text{Mpc}^{-1}$, $\langle q_0 \rangle$ is the deceleration parameter, and $\langle \Lambda_0 \rangle$ is the cosmological constant. If the cosmological constant is non-zero then at present XSPEC requires that the universe is flat. In this case the value of $\langle q_0 \rangle$ will be ignored and XSPEC will assume that $\Omega_{\text{matter}} \geq 1 - \Lambda_0$. The default values are $\langle H_0 \rangle = 50$, $\langle q_0 \rangle = 0.5$, and $\langle \Lambda_0 \rangle = 0$.

Examples:

```
XSPEC12> cosmo 100
           // Set  $\langle H_0 \rangle = 100 \text{ km s}^{-1} \text{Mpc}^{-1}$ 
XSPEC12> cosmo ,0
           // Set  $\langle q_0 \rangle = 0$ 
XSPEC12> cosmo ,,0.7
           // Set a flat universe with  $\langle \Lambda_0 \rangle = 0.7$ 
```