CoRoT-2: A Planetary System with a Hot Jupiter-like Planet and An Exceptionally Active host Star

- The X-ray luminosity of CoRoT-2A is $1.9 \times 10^{29}$ erg/s.
- Optical observations and models indicate that the companion planet, CoRot-2b, has an unusually large radius for its mass, which is 3 times that of Jupiter.
- The high-energy radiation from CoRoT-2A is likely eroding the planet’s atmosphere, with an estimated mass-loss rate of $4.5 \times 10^{12}$ g/s.
- The relatively strong X-ray luminosity of CoRoT-2A may be due to the interaction with the planet, which could have spun the star up, or enhanced its magnetic activity.


Chandra X-ray Observatory ACIS image