

sci.physics: Re: Question from my 7 year old son

## Re: Question from my 7 year old son

**Source:** <http://sci.tech-archive.net/Archive/sci.physics/2005-03/12471.html>

---

**From:** Richard Tobin ([richard\\_at\\_cogsci.ed.ac.uk](mailto:richard_at_cogsci.ed.ac.uk))

**Date:** 03/24/05

Date: 24 Mar 2005 17:18:28 GMT

In article <mIq0e.14514\$fn3.8659@attbi\_s01>, Sam Wormley <[swormley1@mchsi.com](mailto:swormley1@mchsi.com)> wrote:

- > See: <http://www.mhhe.com/physsci/astronomy/fix/student/chapter12/12f36.html>
- > *The ring material is inside Saturn's Roche distance (tidal forces are*
- > *strong enough to pull apart material that tries to clump). Good question*
- > *from a 7-yr old.*

That diagram shows a single Roche distance. But the distance depends on the size of the satellite (small rocks can survive closer than large ones). So what is the diagram representing?

— Richard