

Re: Cosmology group - Schutz meetings and gravity wave notes

Bill <billsackett@comcast.net>

12/12/2009 3:02 PM 

To Bill Sackett

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I put the slides on sackett.net - SaulsonTeachingGravitationalWavesSlides.pdf and a link in cosmologyAll.hm.

On 12/11/2009 3:09 PM MST jeff grove <jeff1.grove@gmail.com> wrote:

Hello All,

At our meeting next Thursday, we will discuss Schutz, Ch. 22-23 on gravitational waves and lenses. Here's some comments and supplementary material I have found:

On Wikipedia, http://en.wikipedia.org/wiki/Gravitational_wave#Sources_of_gravitational_waves has several examples of what configurations of matter will or will not generate waves, such as a rotating binary star will but a rotating disk will not. The rest of that page also has some good stuff. <http://en.wikipedia.org/wiki/LIGO> and http://en.wikipedia.org/wiki/Laser_Interferometer_Space_Antenna (LISA) describe those detector experiments. The attached "TGRU SaulsonTalk-Teaching gravitational waves" has a good overview of GW, and the last third addresses a question I had about interferometers: If space stretches, and the wavelength stretches with it, phase doesn't change, and how can an interferometer work? Another overview is at <http://www.black-holes.org/gwa1.html>, both the five main pages (1-5 top right), and the nine small bulleted links (top center). Still another is <http://www.einstein-online.info/en/elementary/gravWav/index.html> (6 pages, left side) and some of the pages on <http://www.einstein-online.info/en/spotlights/gravWav/index.html>. Both Einstein-online.info and [black-holes.org](http://www.black-holes.org) are confusingly organized, but have some interesting stuff, including sound clips of what various gravity wave events would sound like if the waveform were changed into sound.

See you Thursday,
Jeff

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