

David Shoemaker

SENIOR RESEARCH SCIENTIST • FORMER LIGO SPOKESPERSON

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Email Correspondence

May 28, 2017

PREFACE

Shoemaker's position as LIGO Spokesperson ended in March 2019. He was kind enough to respond to my query while he was there.

Echoing the common response that building a Small Low-Energy Non-Collider "sounds like a fun experiment," Shoemaker nevertheless felt compelled to drizzle on the would-be parade: "I can't say I know it needs to be done."

Why do they do this? The experiment is doable. It was proposed by Galileo 387 years ago. It's never been done and it would provide the empirical back up that is presently *absent* in a plethora of publications and physics classrooms where the *hole to China* (*gravitational clock, gravity train*, etc.) problem is routinely discussed.

The experiment **OBVIOUSLY** needs to be done. The sooner the better.

C'mon, say it!

PS,

In the following exchange, Shoemaker recommends writing a proposal to the National Science Foundation (NSF) for funding to do Galileo's experiment.

To be taken seriously by the NSF one needs to be a member of an established academic institution.

Perhaps now that Shoemaker is no longer in charge of LIGO public relations, I should get back to him to see if he'd like to endorse the project. Seriously, this idea is now on my to-do list.

To: dhs@ligo.mit.edu
From: Richard J Benish <rjbenish@comcast.net>
Subject: Testing Gravity
Attachments: <Gravitational Clock Pt 1.pdf>

Dear Professor Shoemaker,

The attached paper concerns an elaborate and expensive gravity experiment that has been proposed recently, and a simpler, much less expensive experiment that I think should be performed first.

Please send feedback.

Thanks for your good work.

Sincerely,

Richard Benish

Subject: Re: Testing Gravity
From: David Shoemaker <dhs@mit.edu>
Date: Sun, 28 May 2017 17:34:09 -0400
Cc: dhs@ligo.mit.edu
To: Richard J Benish <rjbenish@comcast.net>

I took a quick look at the notion. *It sounds like a fun experiment, although I can't say I know it needs to be done.*

I think your best approach would be to write a proposal to the NSF gravity program and let the peers at the idea — it will fly or not!

thanks

David



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MIT LIGO

March 2017

David Shoemaker named spokesperson for LIGO Scientific Collaboration

Senior MIT research scientist to speak for international collaboration for gravitational wave detection research.

MIT News

In the late 70s, I worked in Rai Weiss' lab on the COBE satellite FIRAS interferometer that measured the Planck Spectrum, and then moved to the interferometric detection of gravitational waves in the early 80s. I spent a few years at Max Planck in Garching, Germany and the CNRS in Paris, France, developing specific technologies for gravitational wave detection, then returned to MIT in '89. I led the Advanced LIGO Project. The team delivered detectors in March 2015 which, after commissioning and observing, enabled the first detection of gravitational waves in September 2015. In March 2017 I was elected for a 2-year term as Spokesperson of the LIGO Scientific Collaboration.

LIGO and gravitational wave resources in DSpace@MIT

I work on instrumentation to enable the observation of gravitational radiation via precision measurement techniques.

Research Areas and Projects

Strong Gravity & Gravitational Radiation

Gravitational Wave Detection

High Energy Astrophysics

High Performance Computing

Radio Astronomy

LIGO

Quantum Measurements