

# Dalle leggi di Keplero ai buchi neri: sperimentare la gravità in chiave moderna in classe

Adriana Postiglione

*INFN – Laboratori Nazionali di Frascati*

ADRIANA.POSTIGLIONE@LNF.INFN.IT

Ilaria De Angelis

*Dipartimento di Matematica e Fisica, Università Roma Tre*

*INFN - Sezione di Roma Tre*

ILARIA.DEANGELIS@UNIROMA3.IT

Lo spazio-tempo

Leggi di Keplero

Sistemi binari

Effetto fionda

Lenti gravitazionali

Buchi neri e AGN

Onde gravitazionali



## Link utili



Ebook gratuito:

<https://www.edizioniefesto.it/collane/circulidimensio/379-sperimentare-la-gravita-con-il-telo-elastico-linee-guida-e-trucchi-experience-gravity-with-the-rubber-sheet-guidelines-and-tricks>

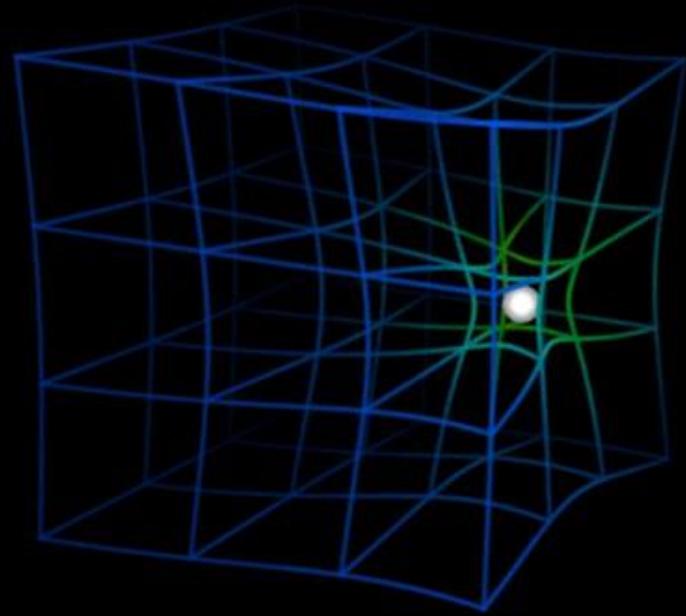
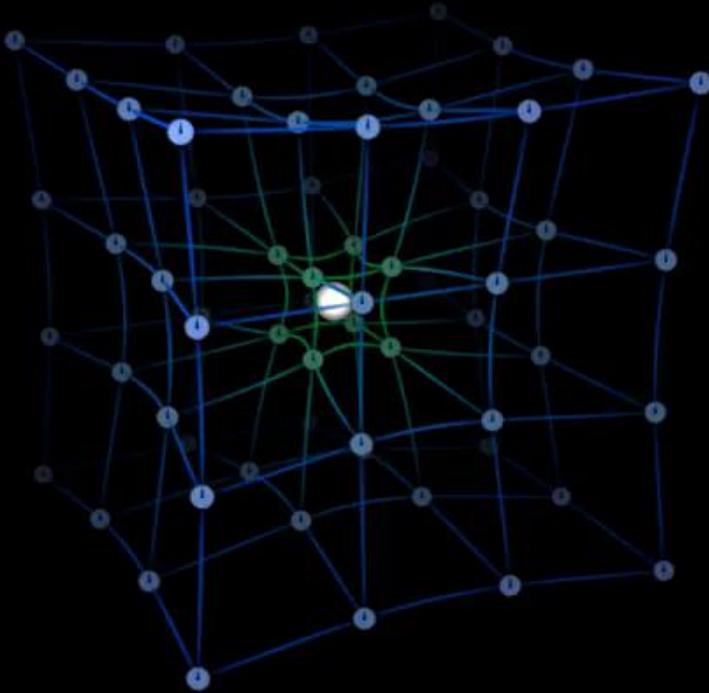
Risorse sullo spazio-tempo:

<https://astrogarden.uniroma3.it/spaziotempo/>

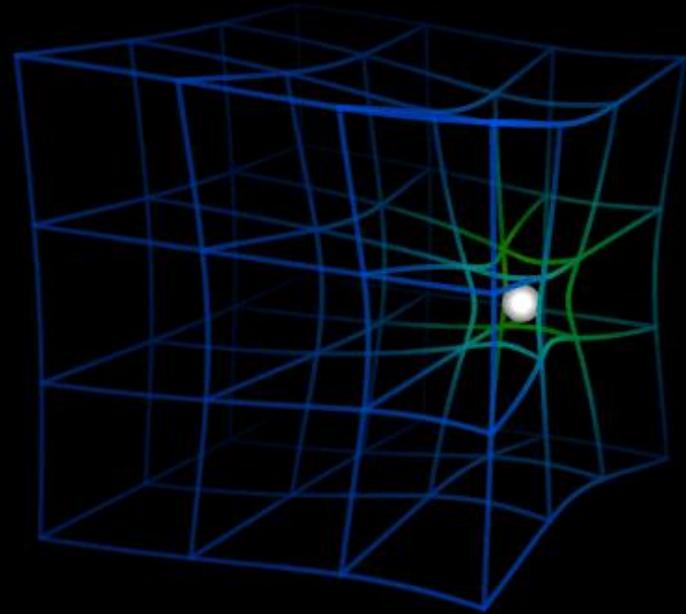
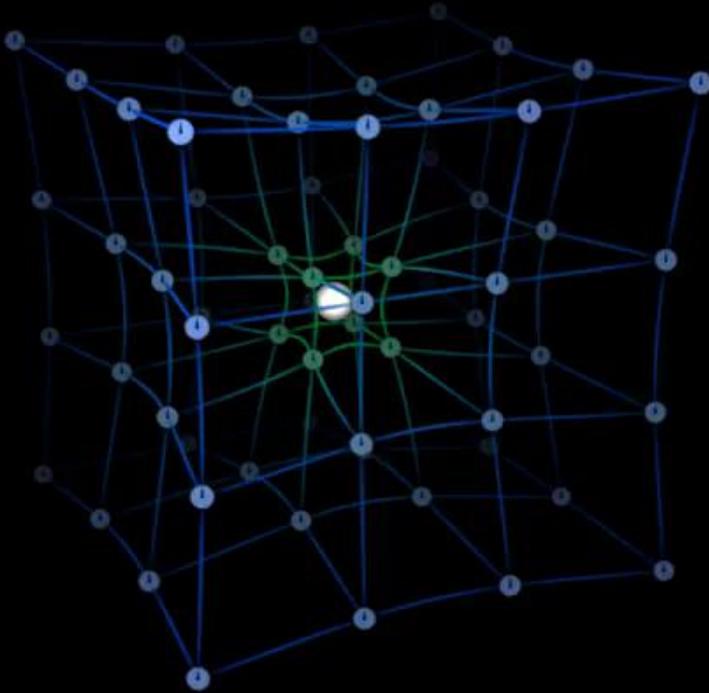
Altre risorse:

<https://astrogarden.uniroma3.it/risorse-online/>

# Newton o Einstein?



# Newton o Einstein?



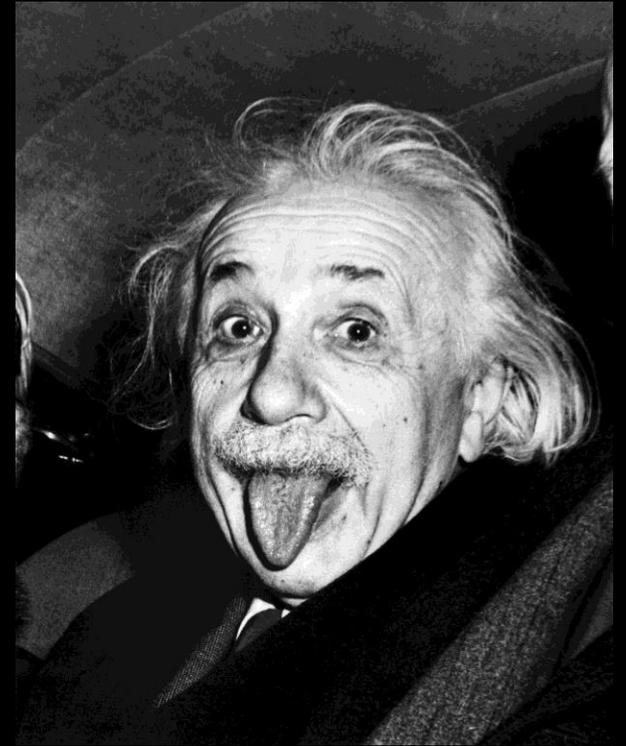
[1ucasvb.tumblr.com](http://1ucasvb.tumblr.com)



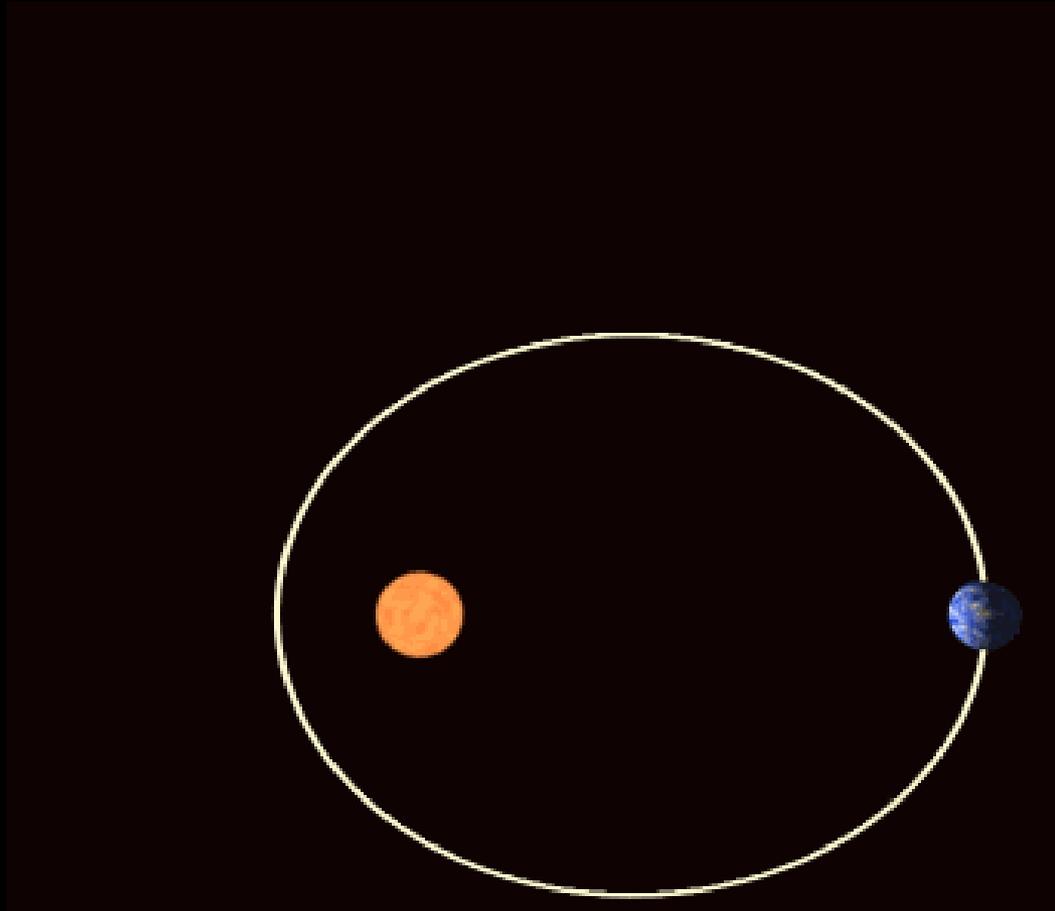
# Newton o Einstein?



by Frits Ahlefeldt



# Newton o Einstein?



# Leggi di Keplero



L'orbita descritta da un pianeta è un'ellisse, di cui il Sole occupa uno dei due fuochi.

# Leggi di Keplero



Il segmento che unisce il centro del Sole con il centro del pianeta descrive aree uguali in tempi uguali.

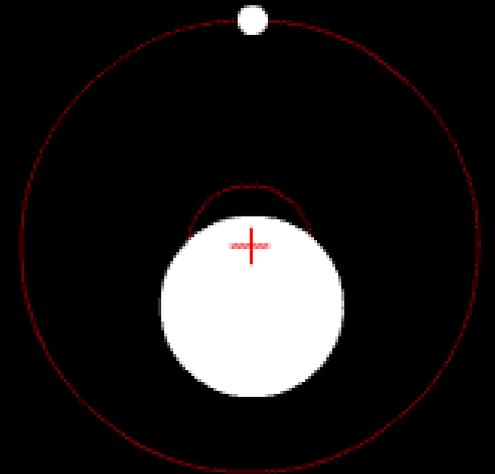
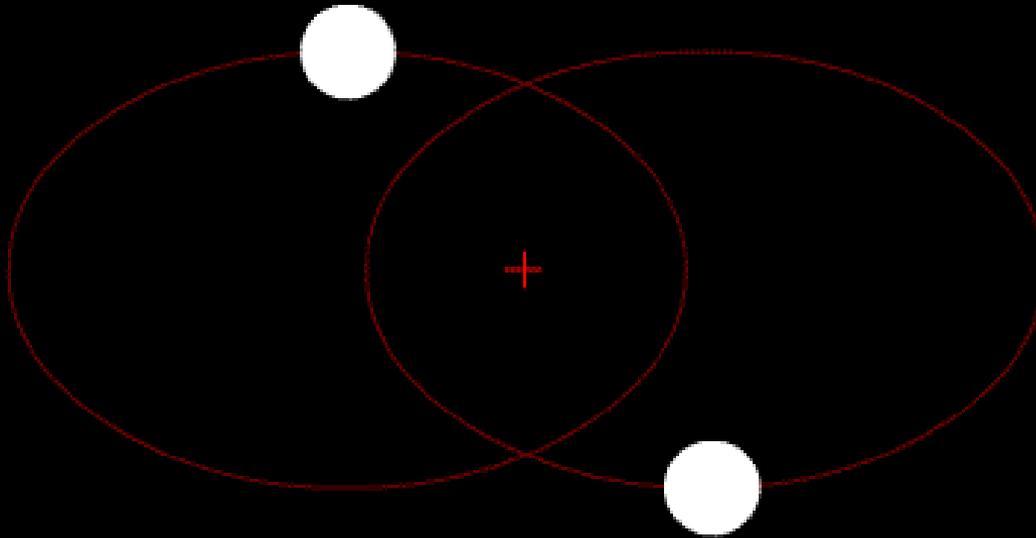
# Leggi di Keplero



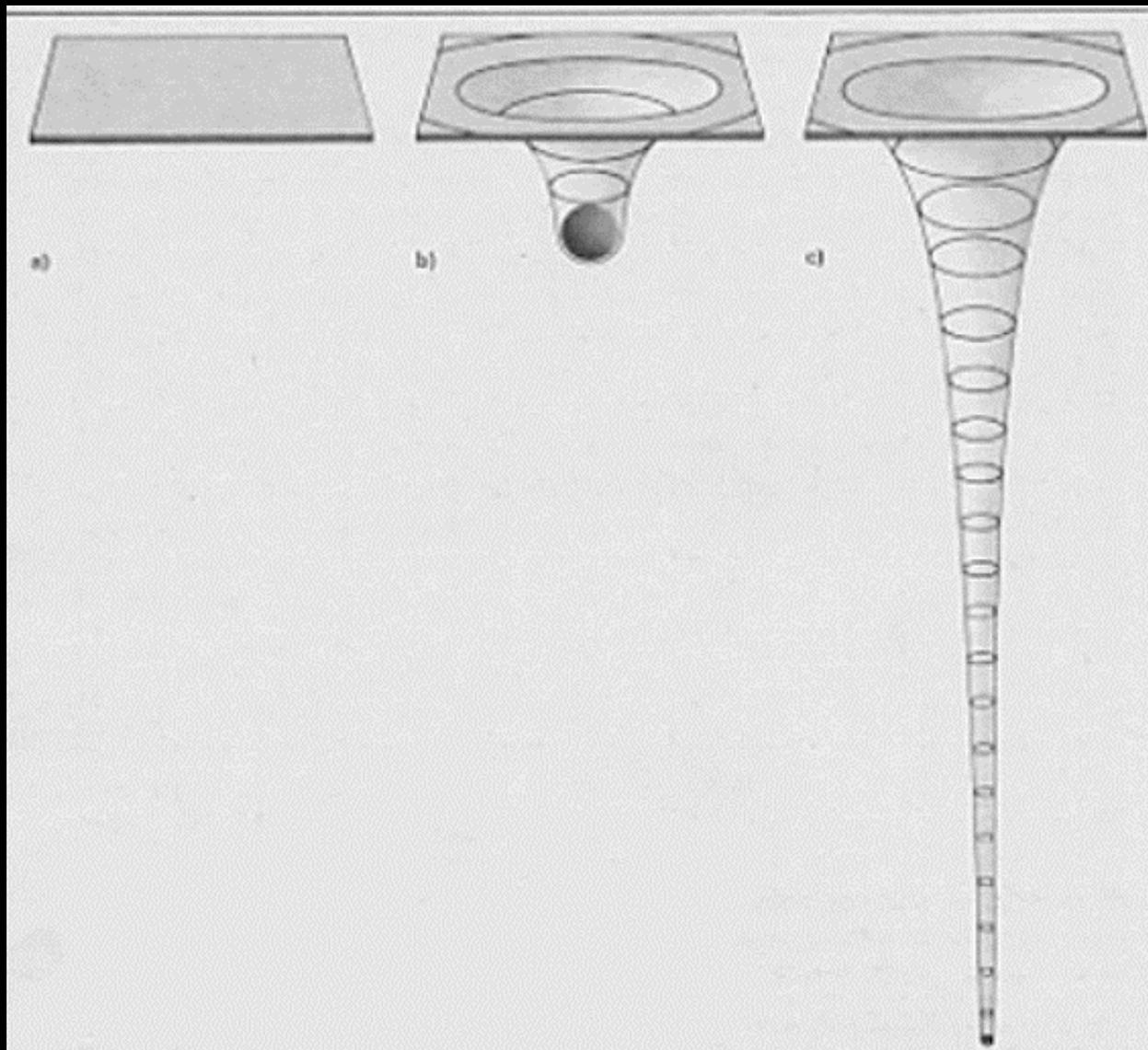
I quadrati dei tempi che i pianeti impiegano a percorrere le loro orbite sono proporzionali al cubo delle loro distanze medie dal Sole

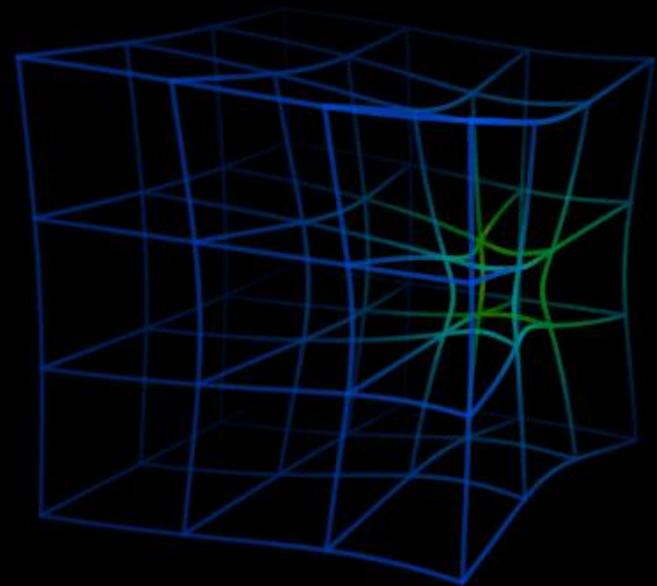
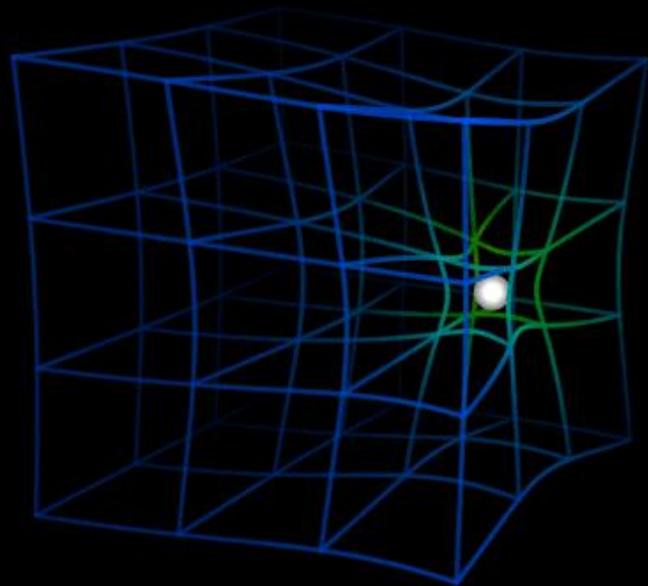


# Sistemi binari



# Buchi neri



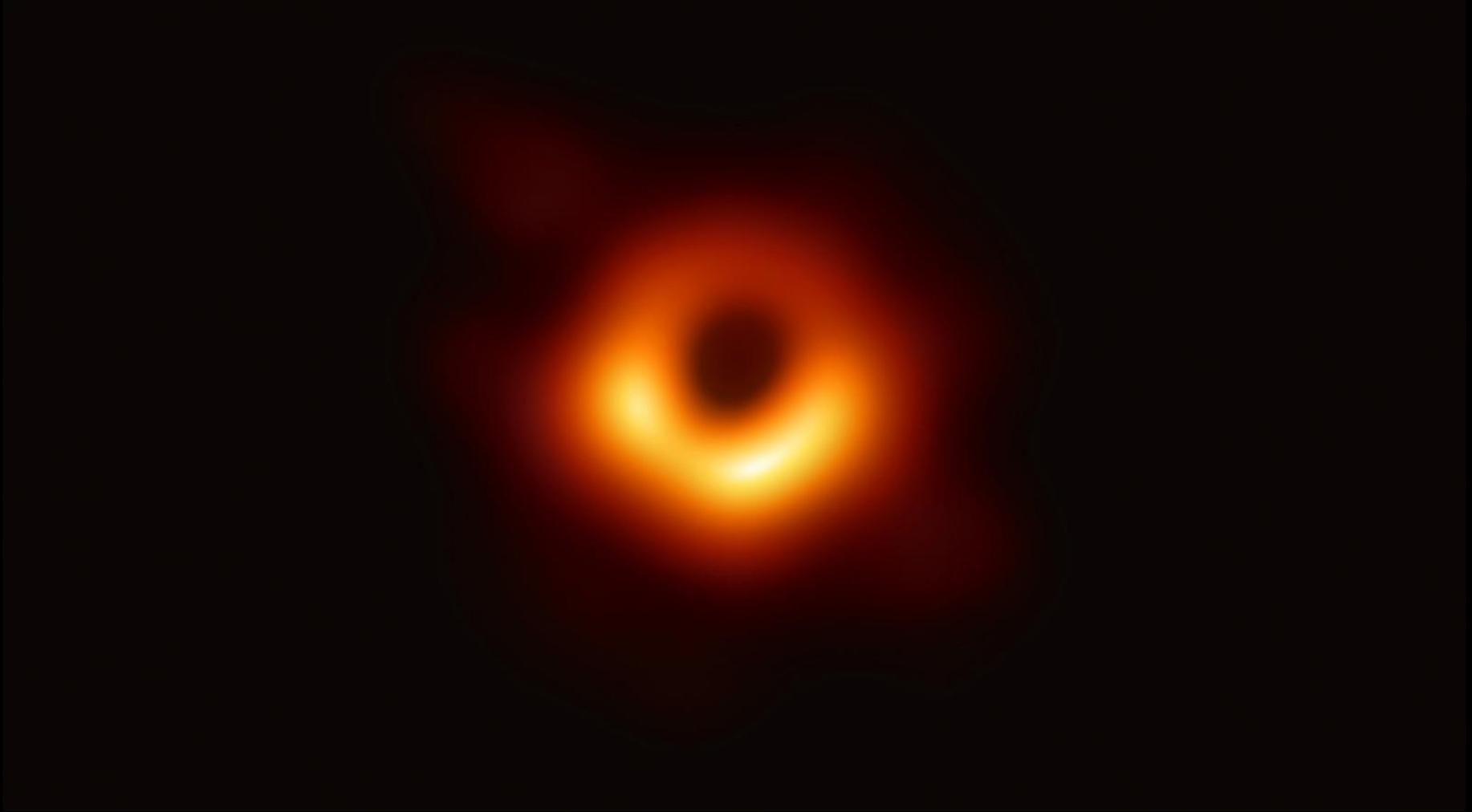


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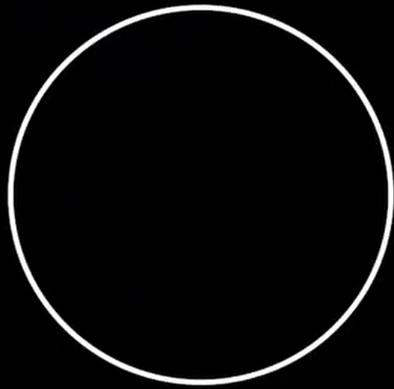
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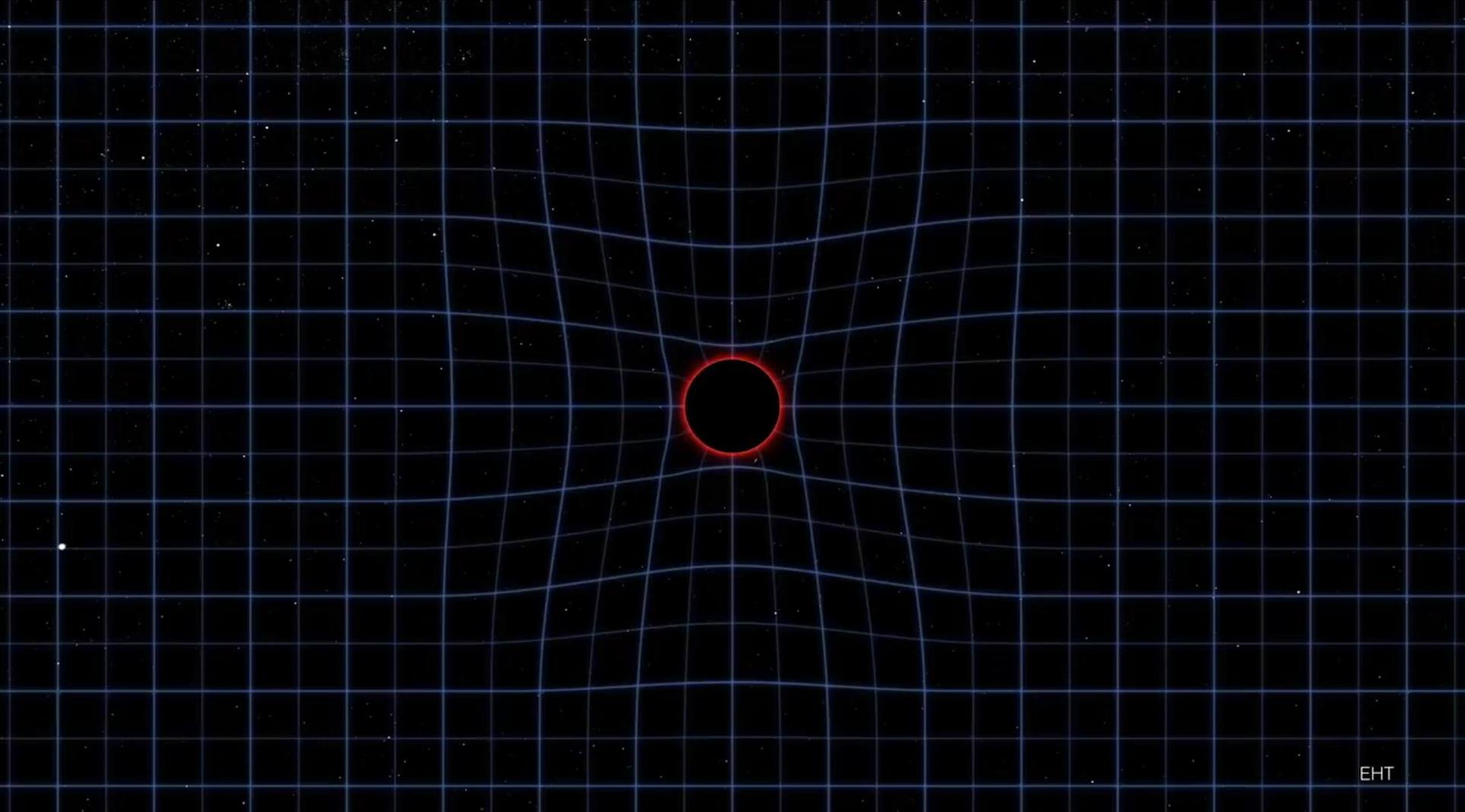
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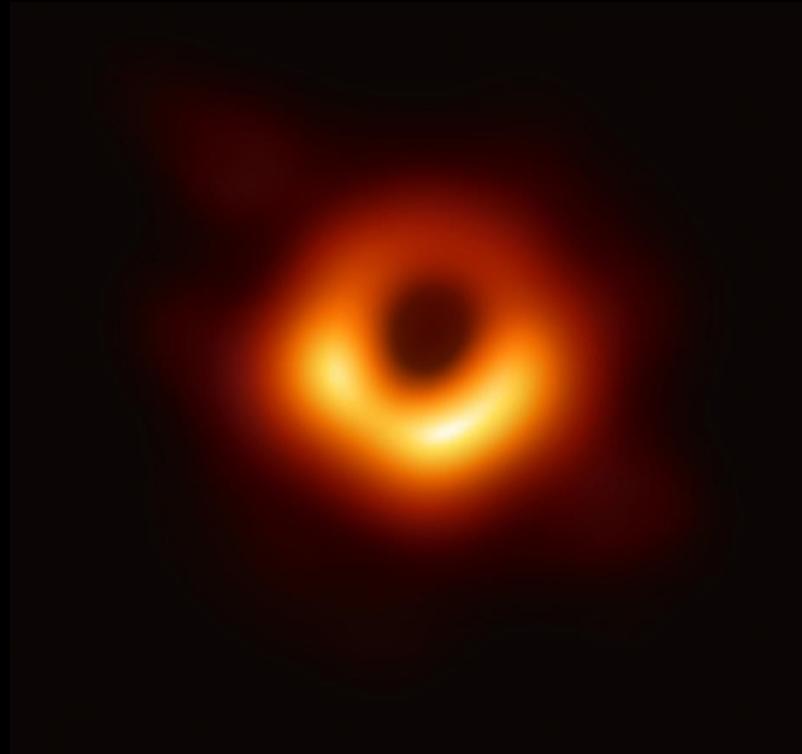
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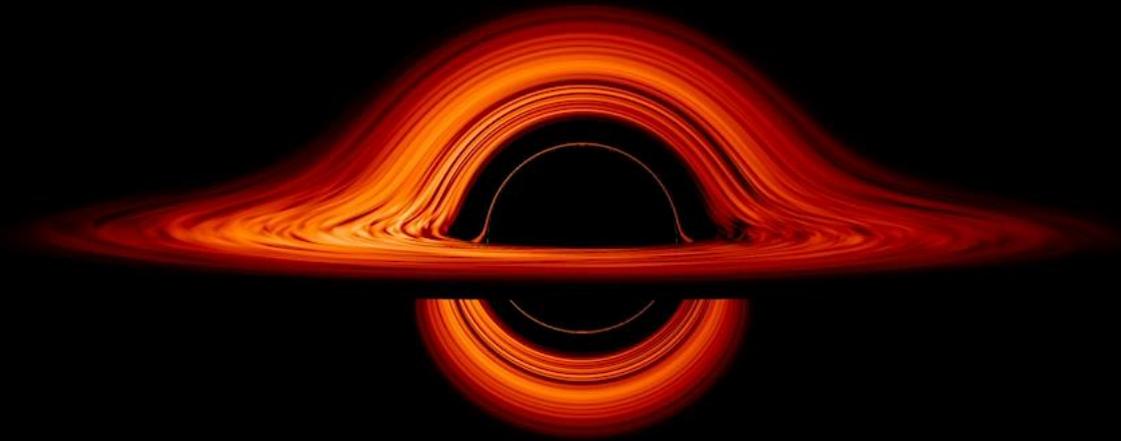
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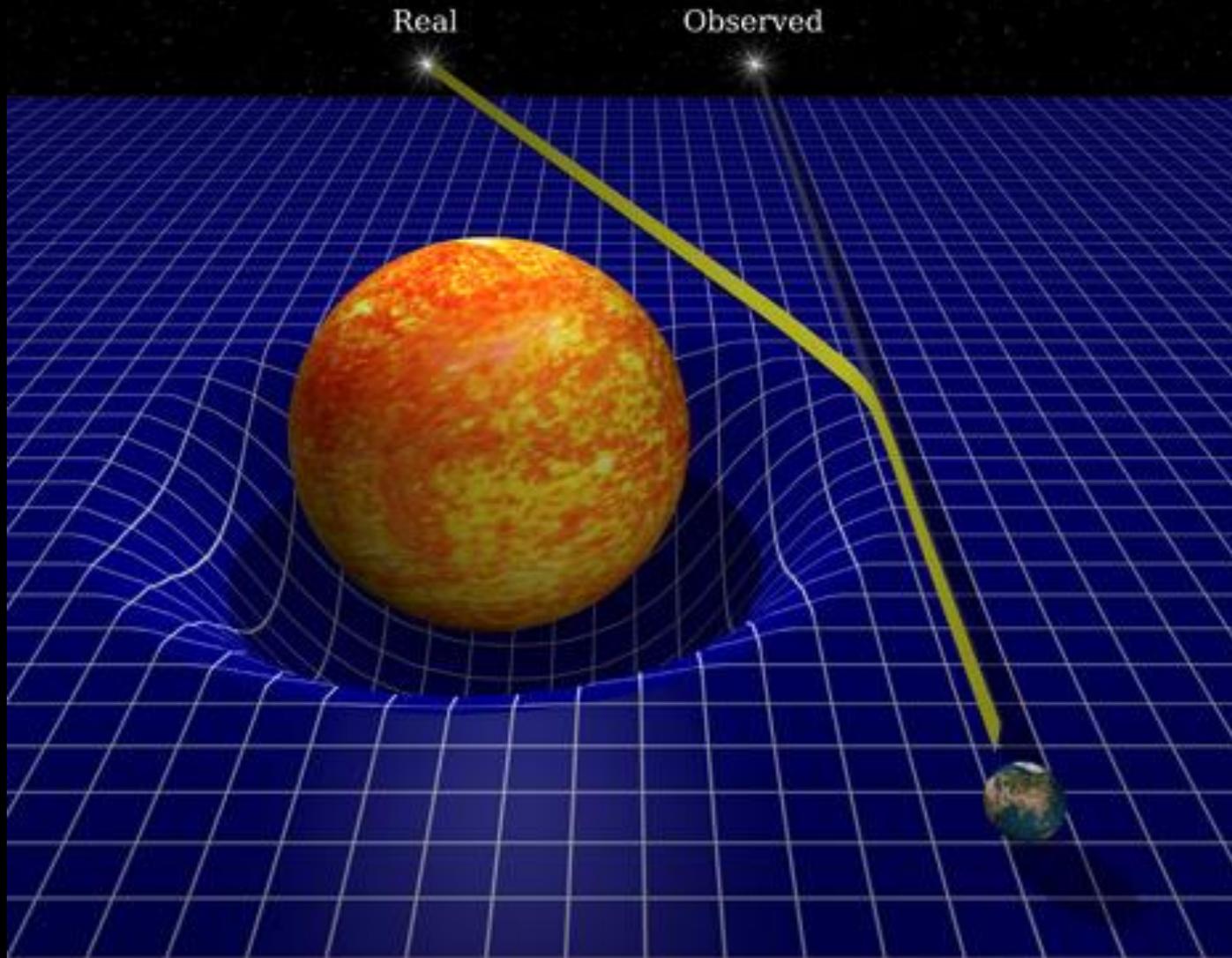
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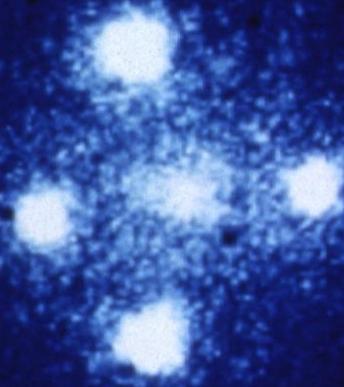
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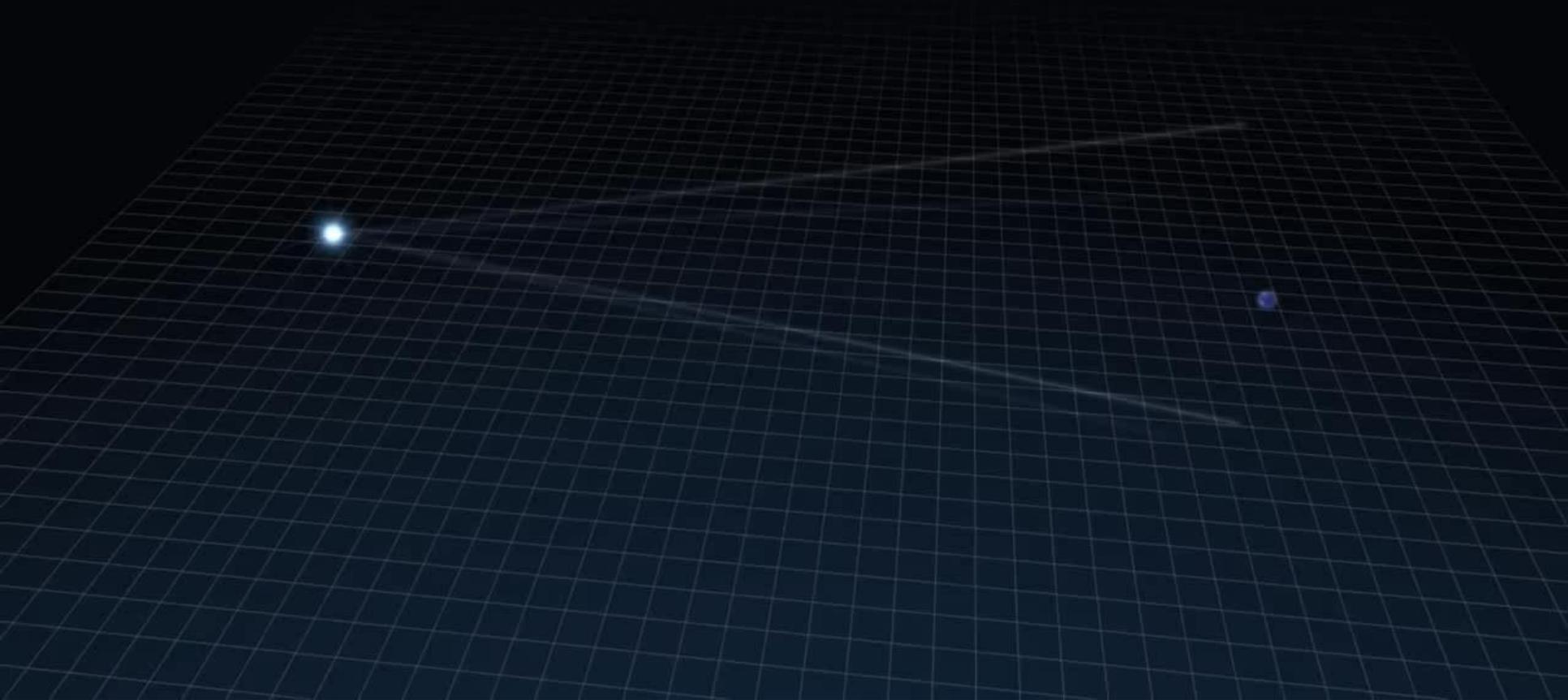
# Lenti gravitazionali



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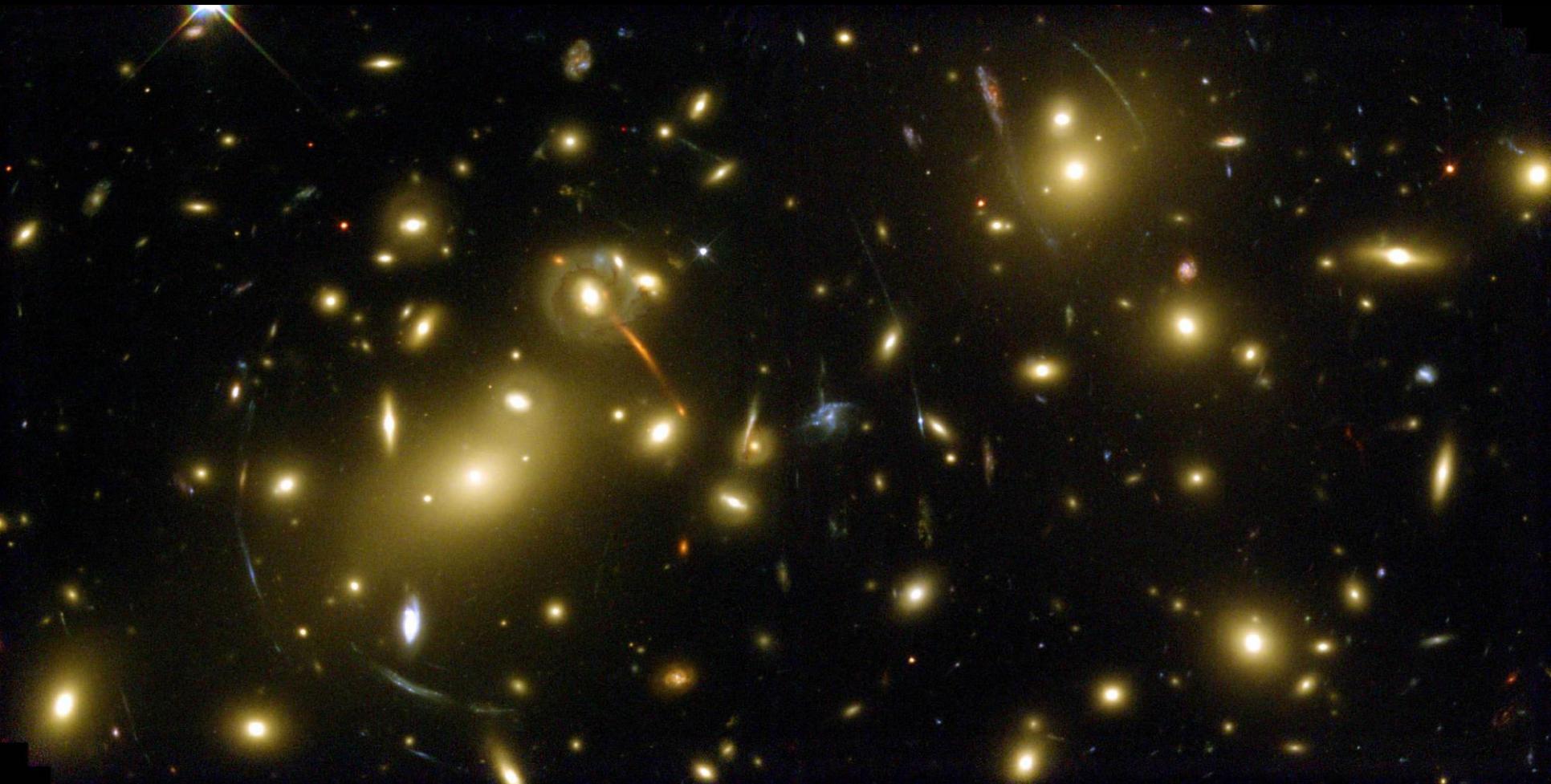
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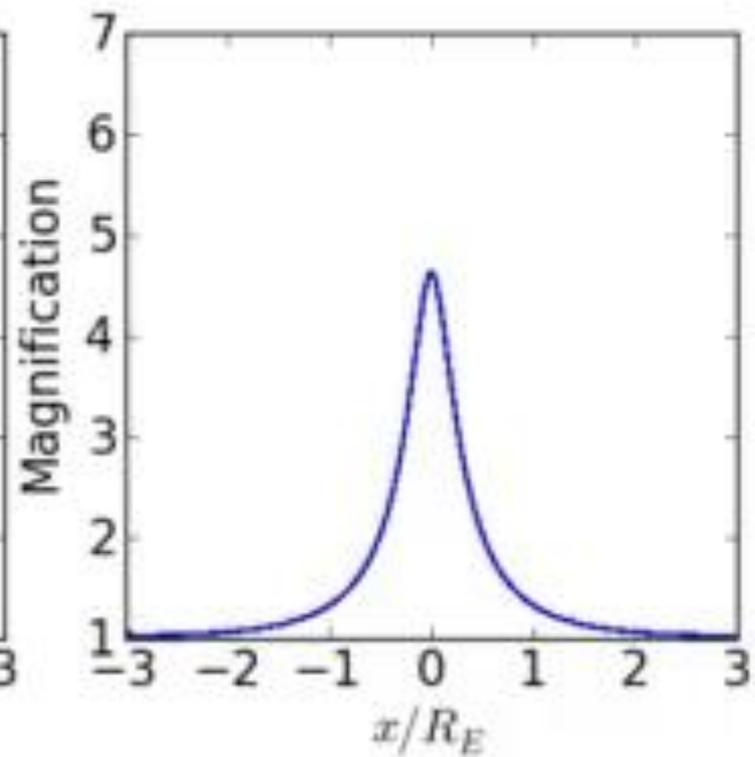
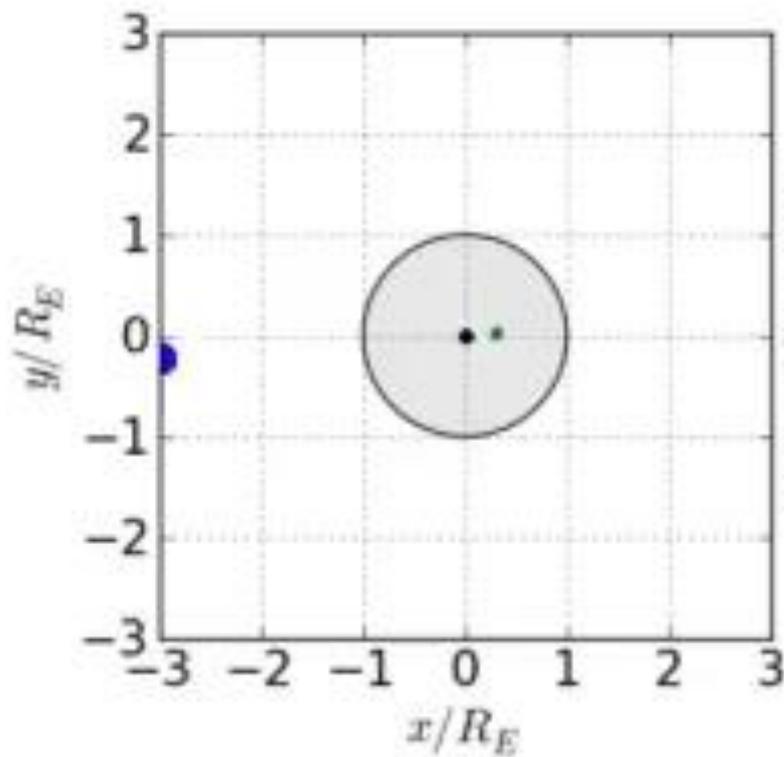


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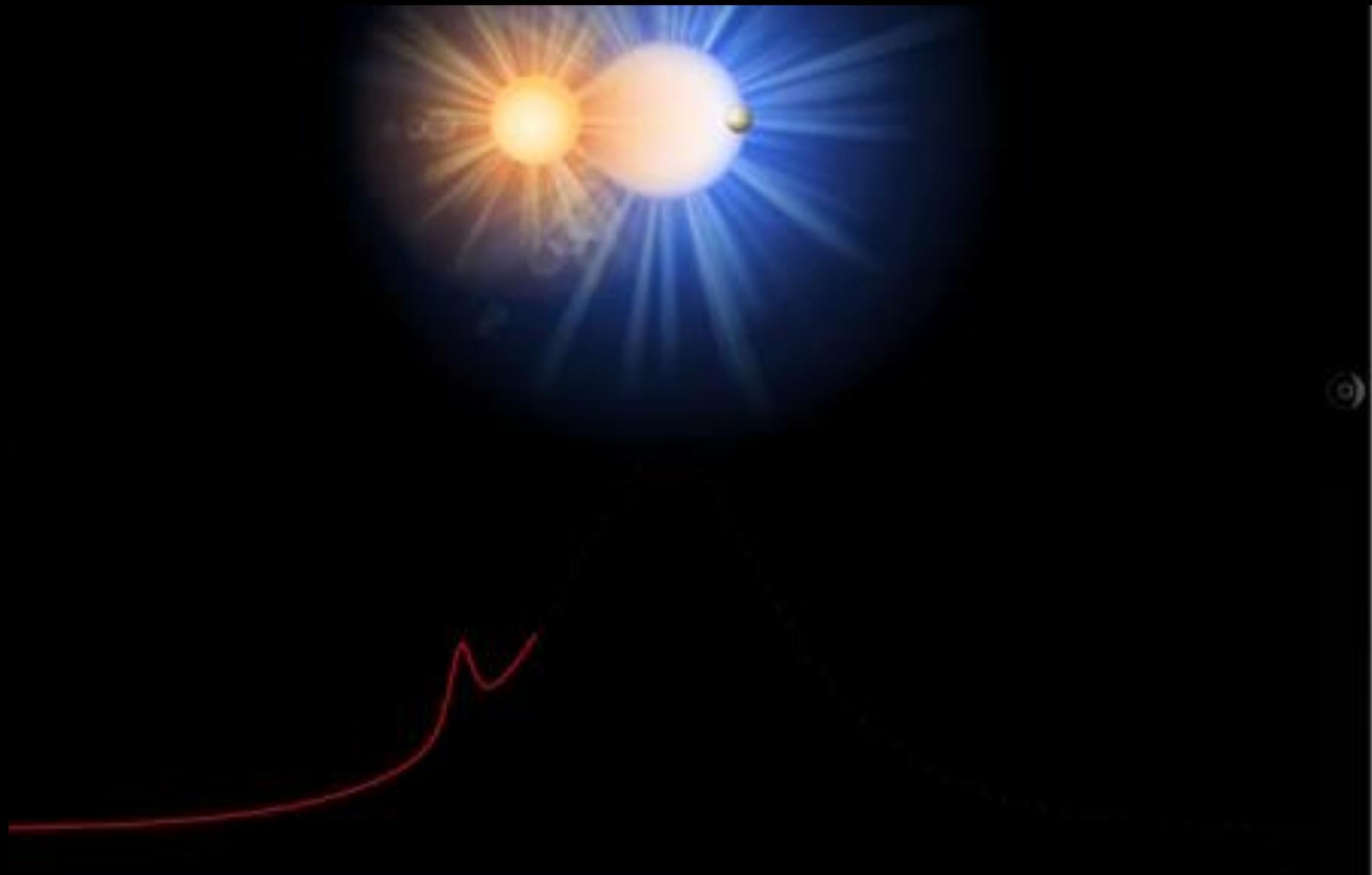


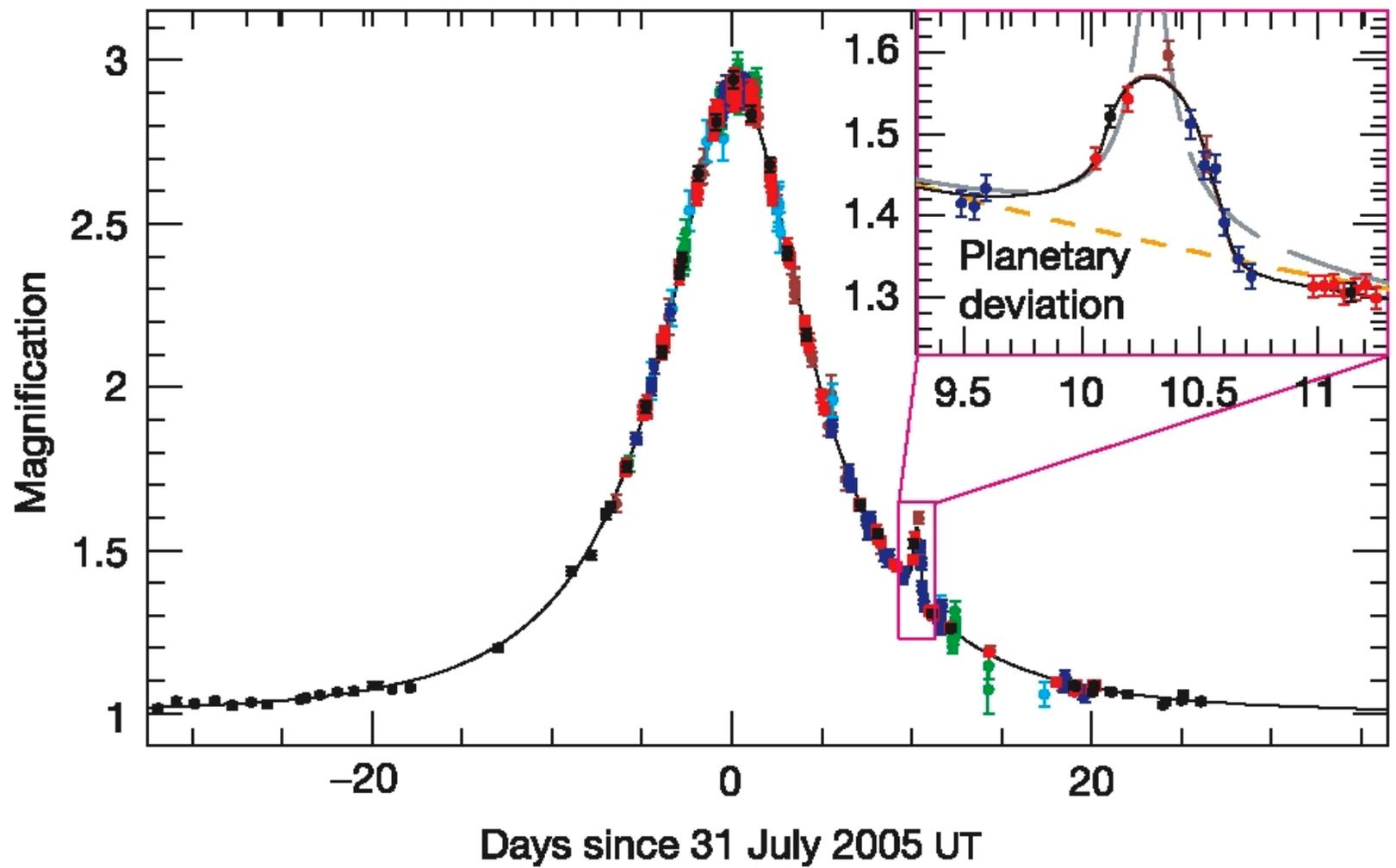
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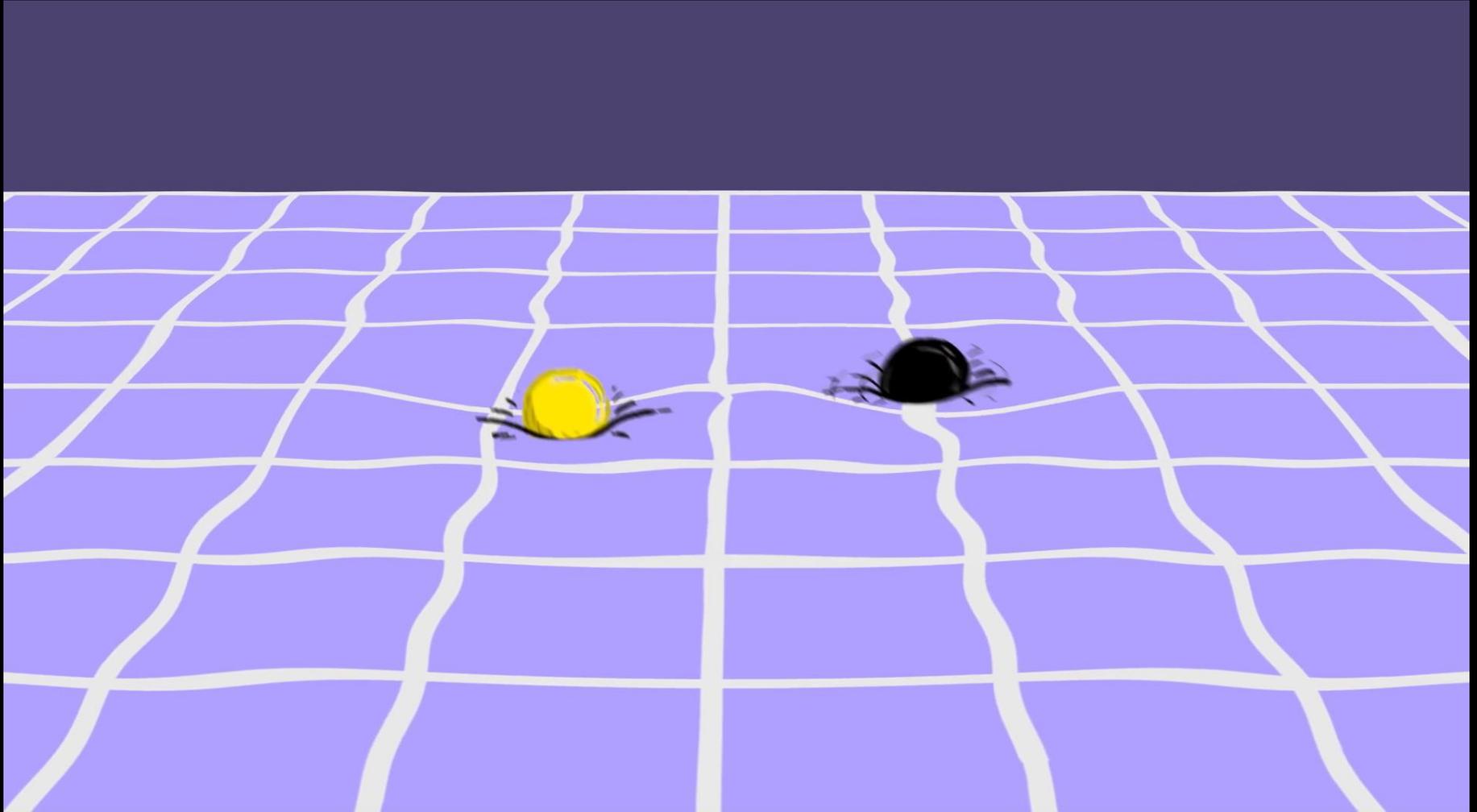


Da <http://robonet.lcogt.net/research/>





# Onde gravitazionali



# Effetto fionda

