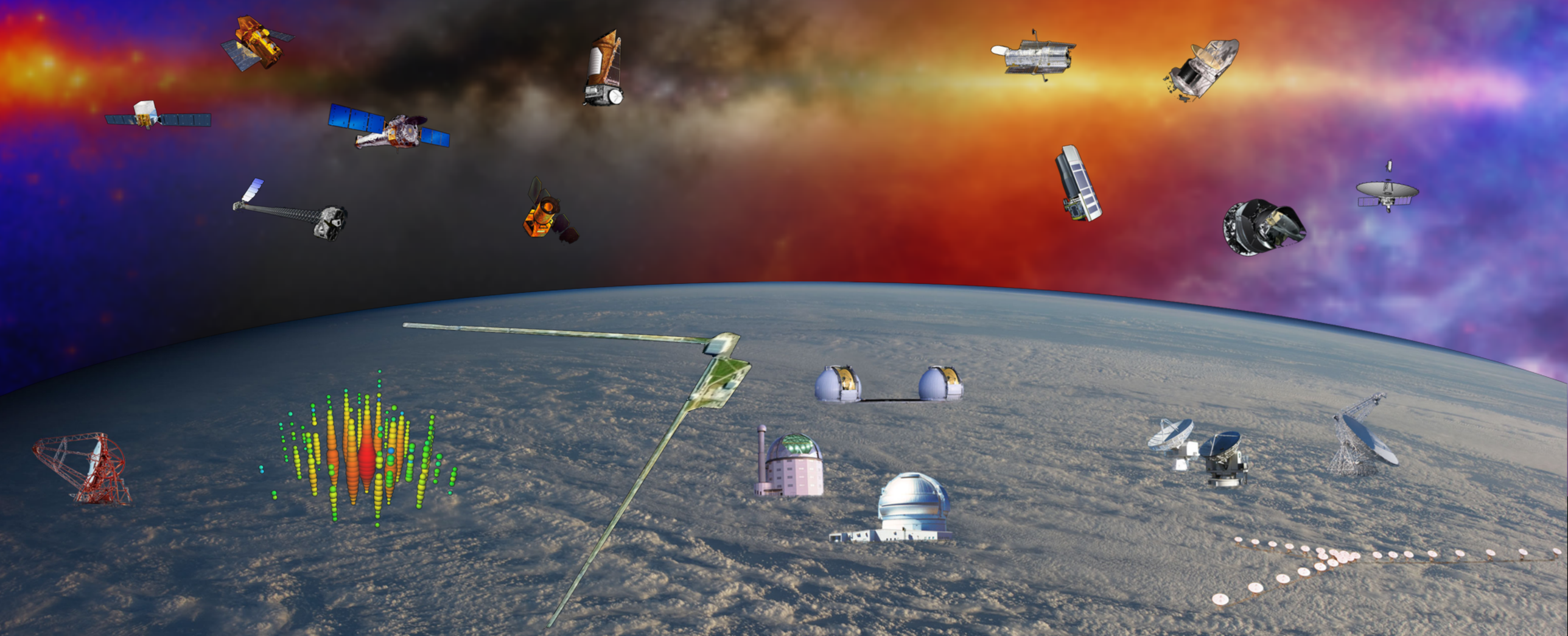
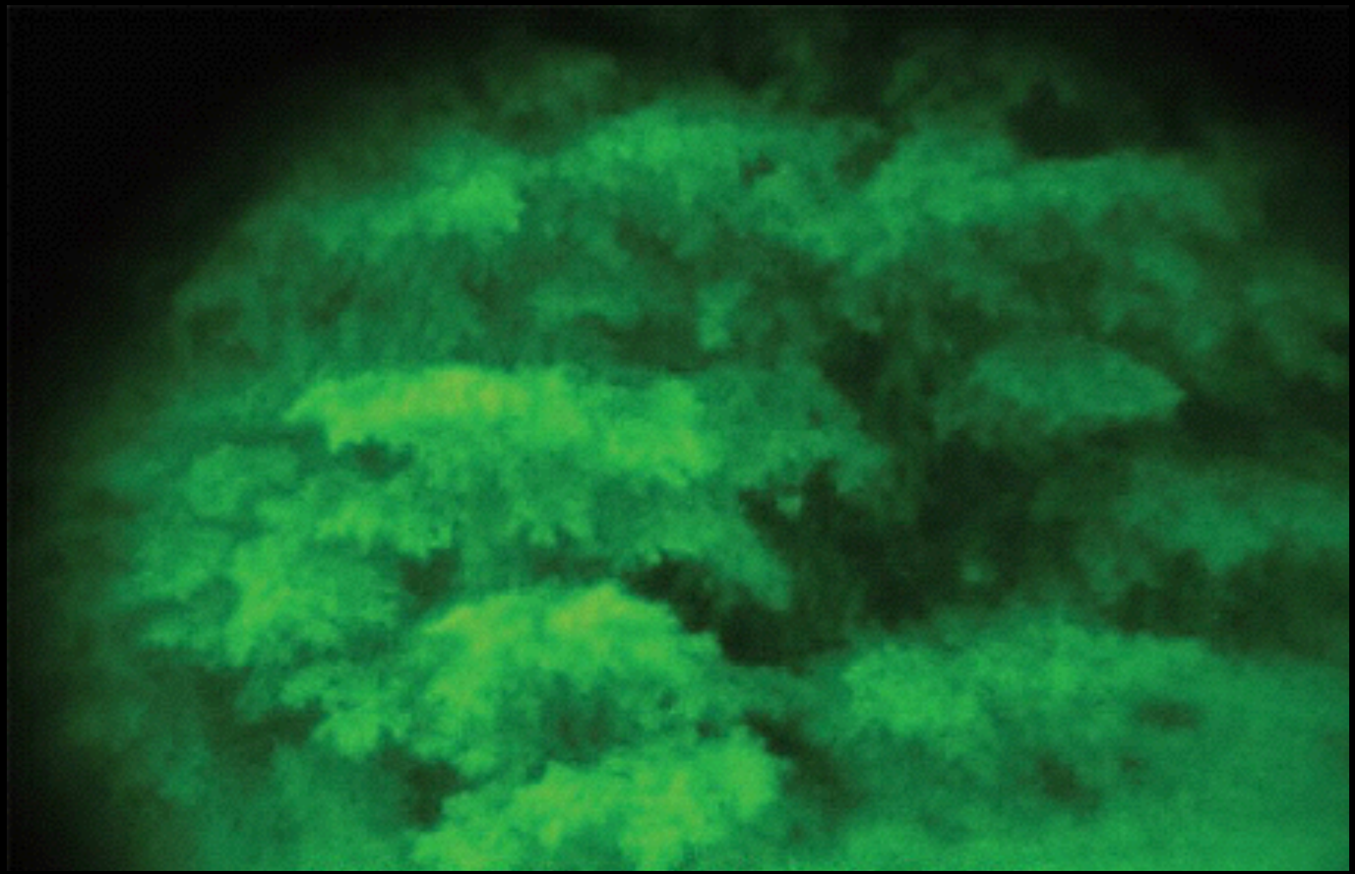
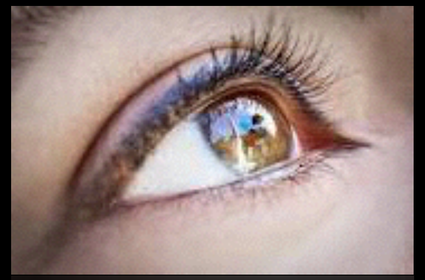
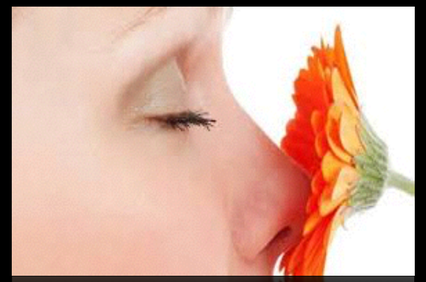
I MESSAGGERI DELL'UNIVERSO

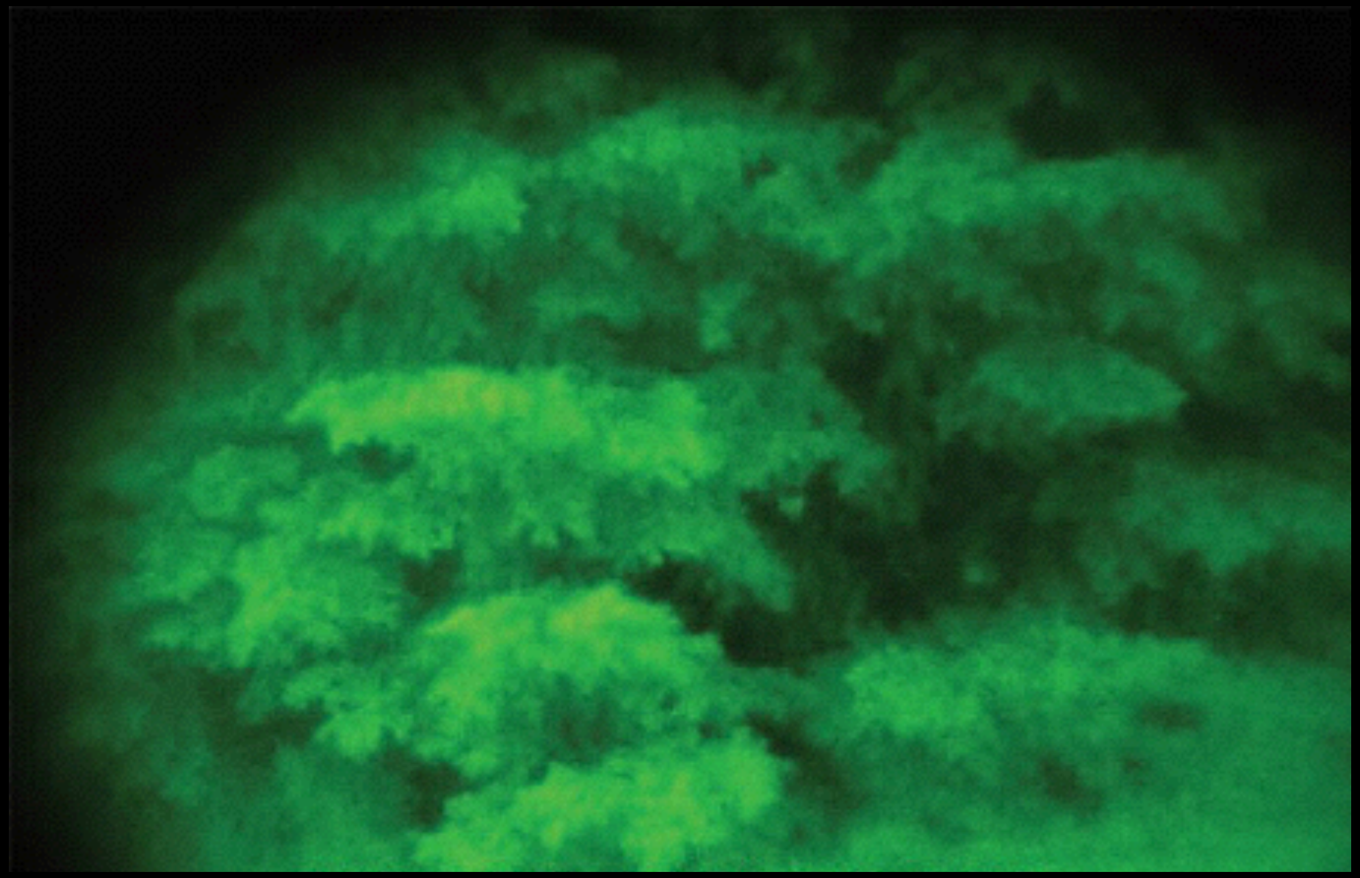
Relatori: M. Negro e F. Di Pierro

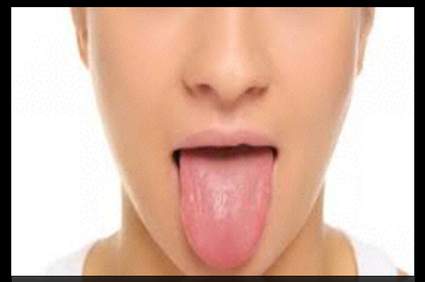


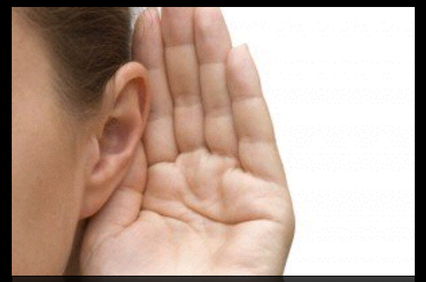






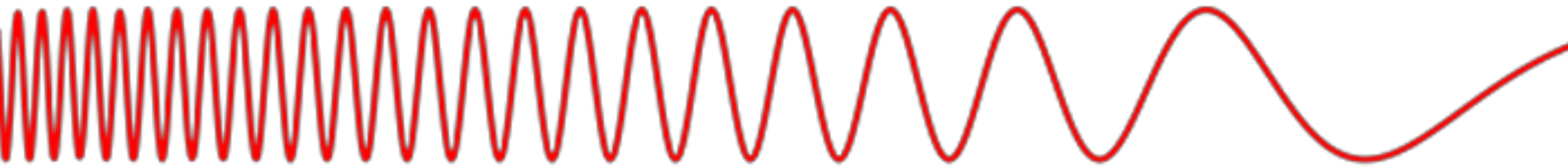


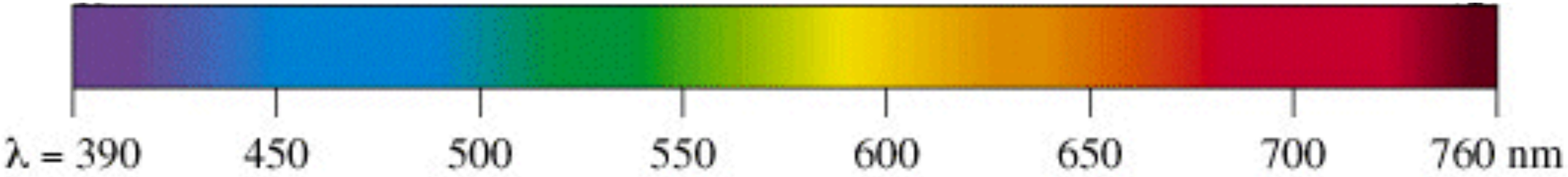




VISIONE A INFRAROSSO

LO SPETTRO ELETTORMAGNETICO





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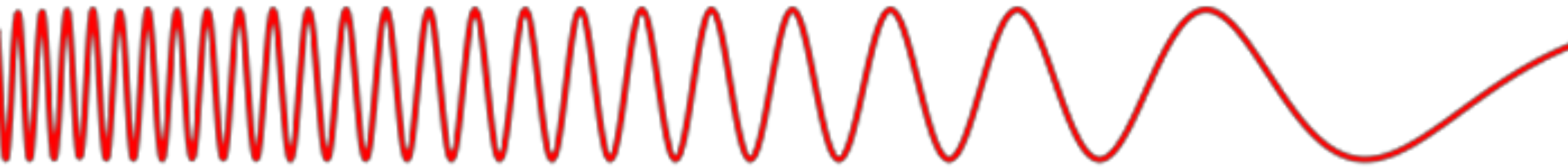

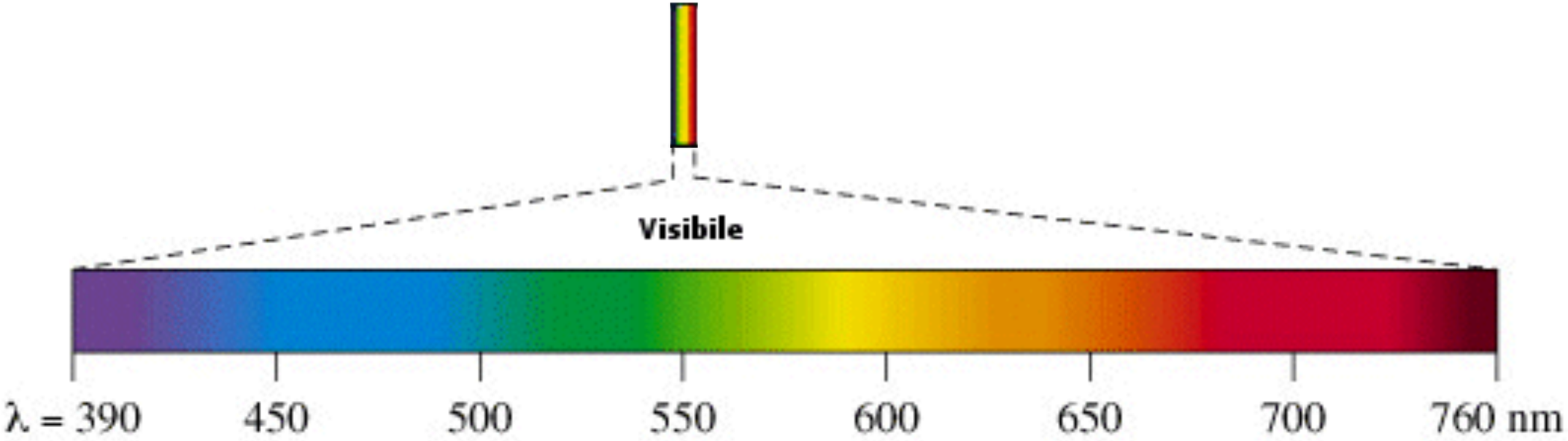

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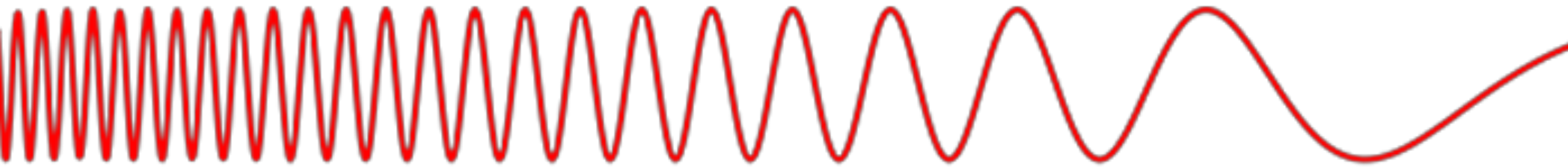

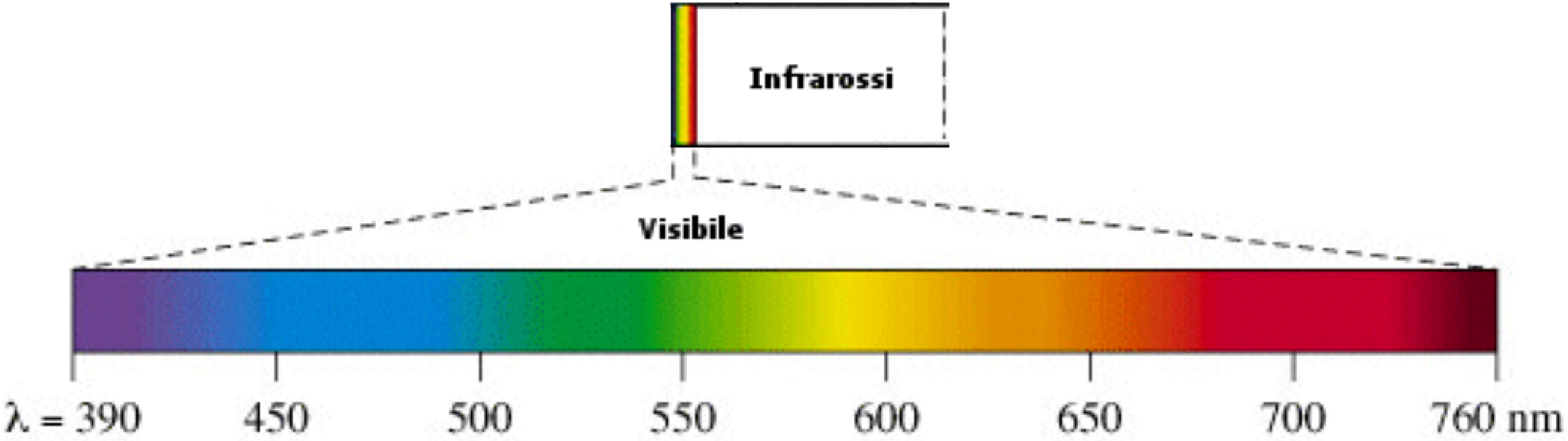

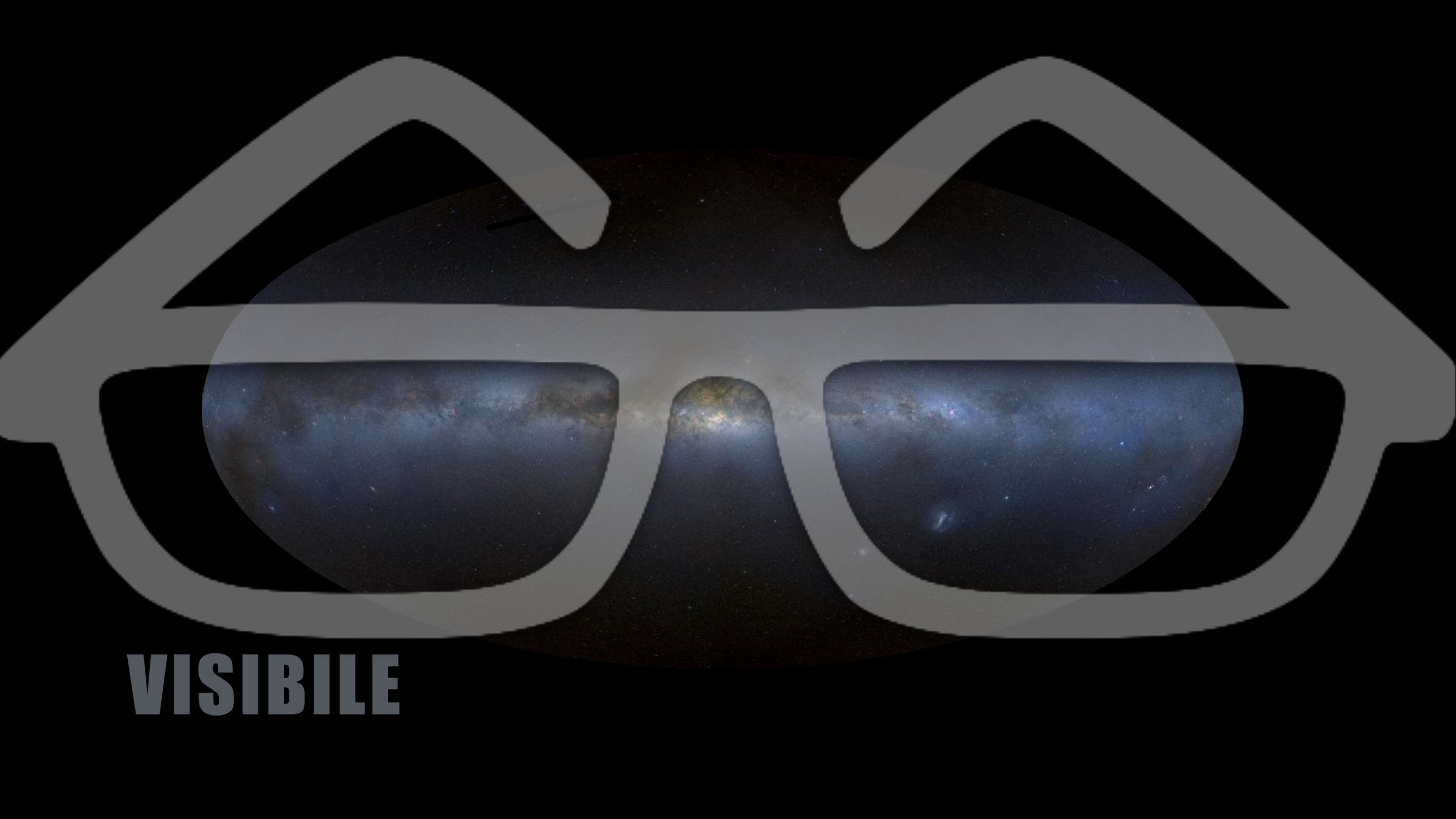
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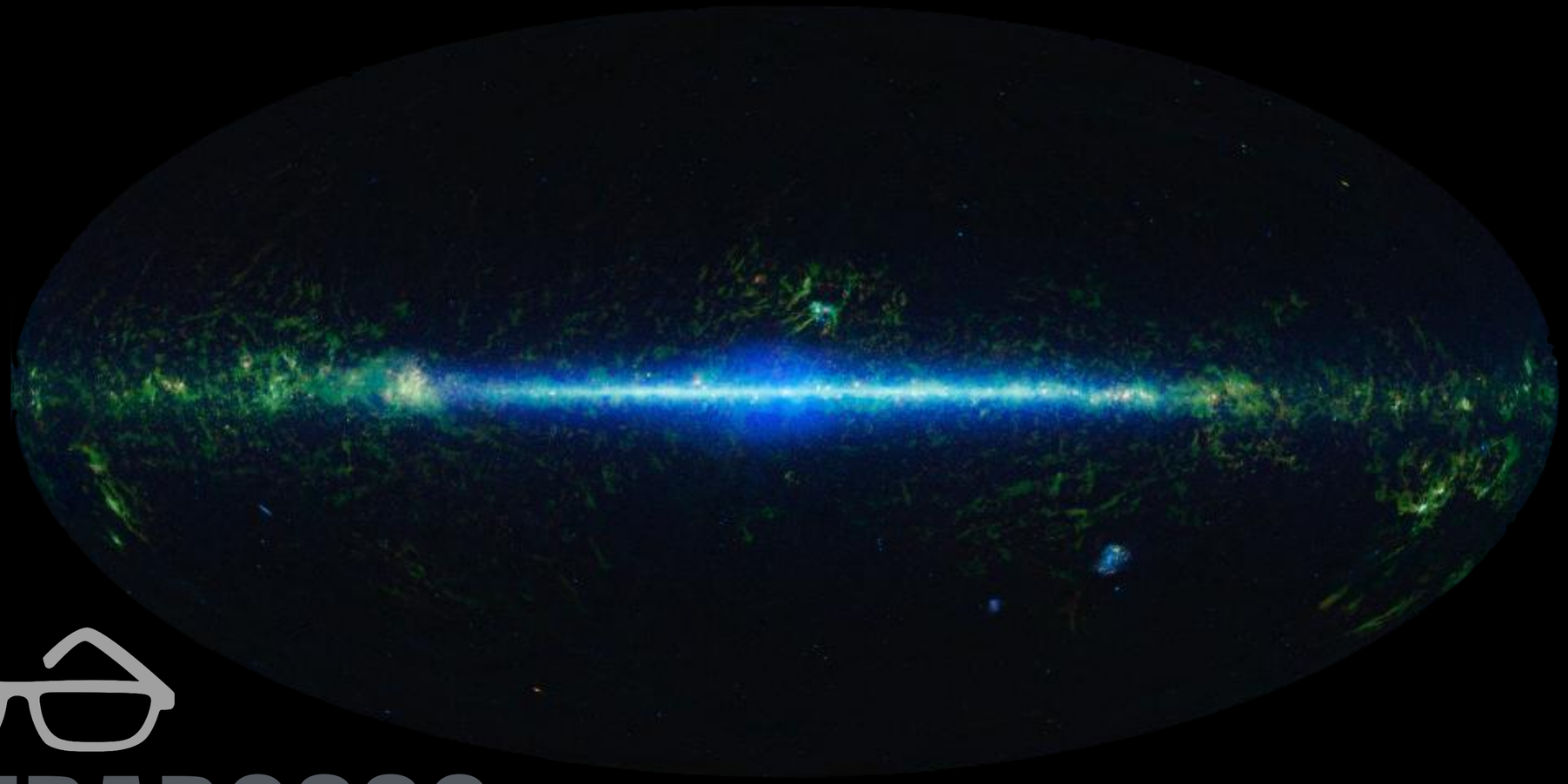
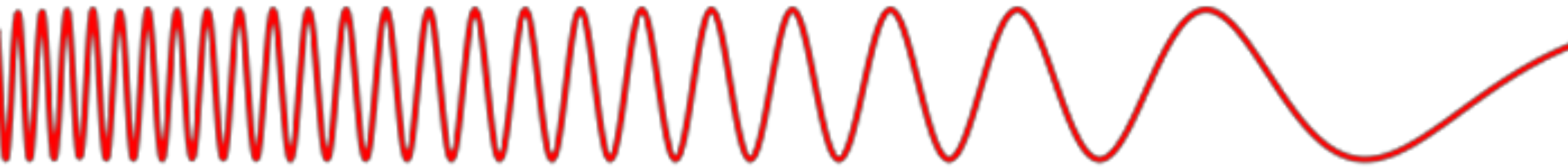
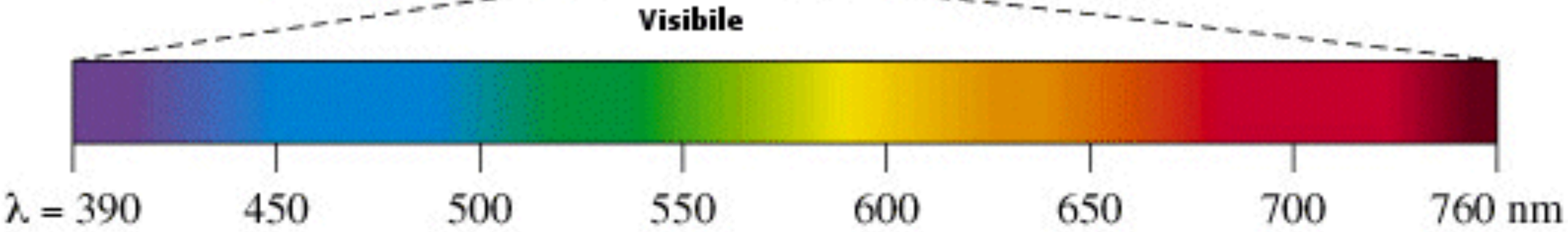
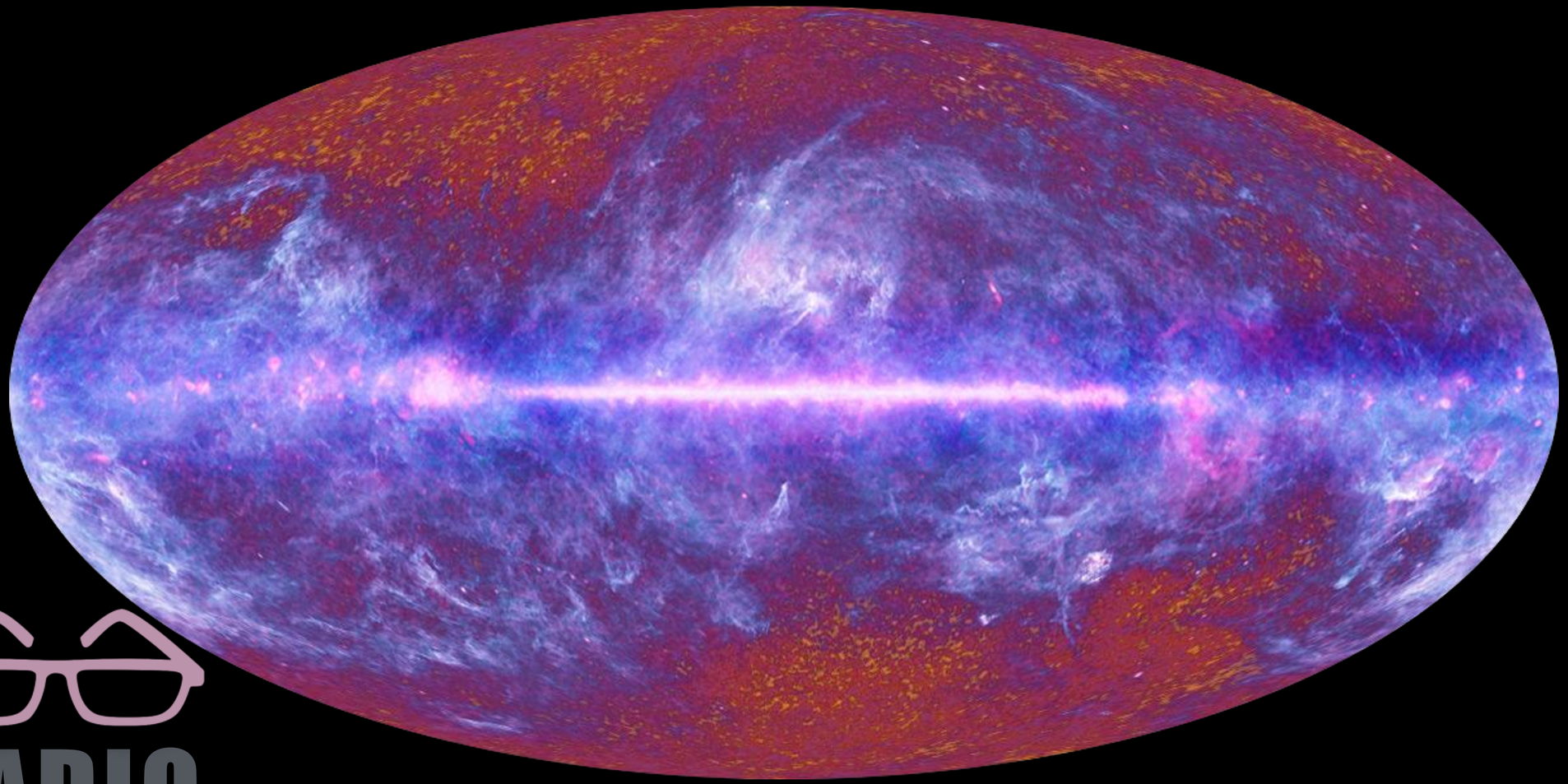


INFRAROSSO

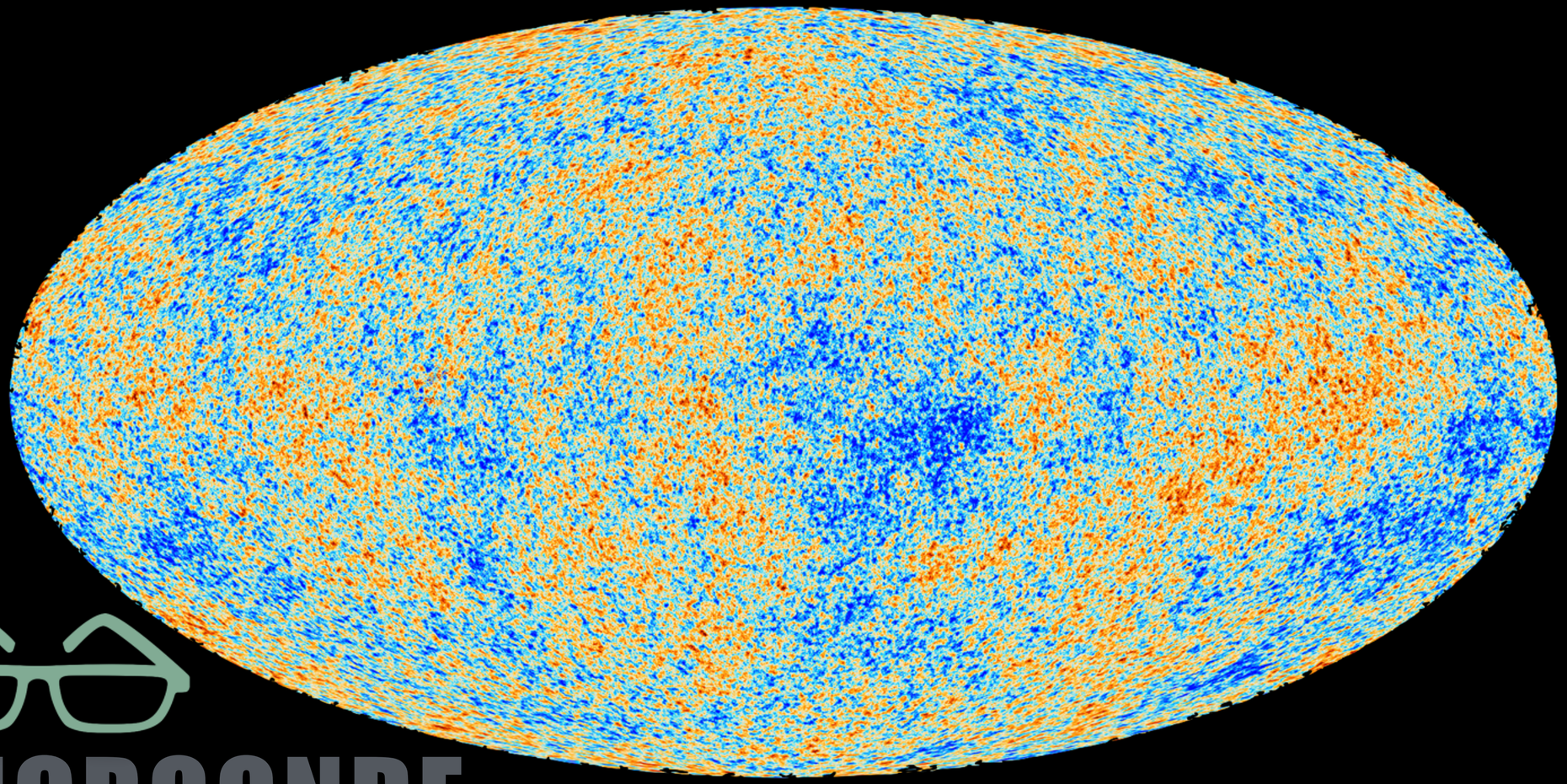
LO SPETTRO ELETTORMAGNETICO



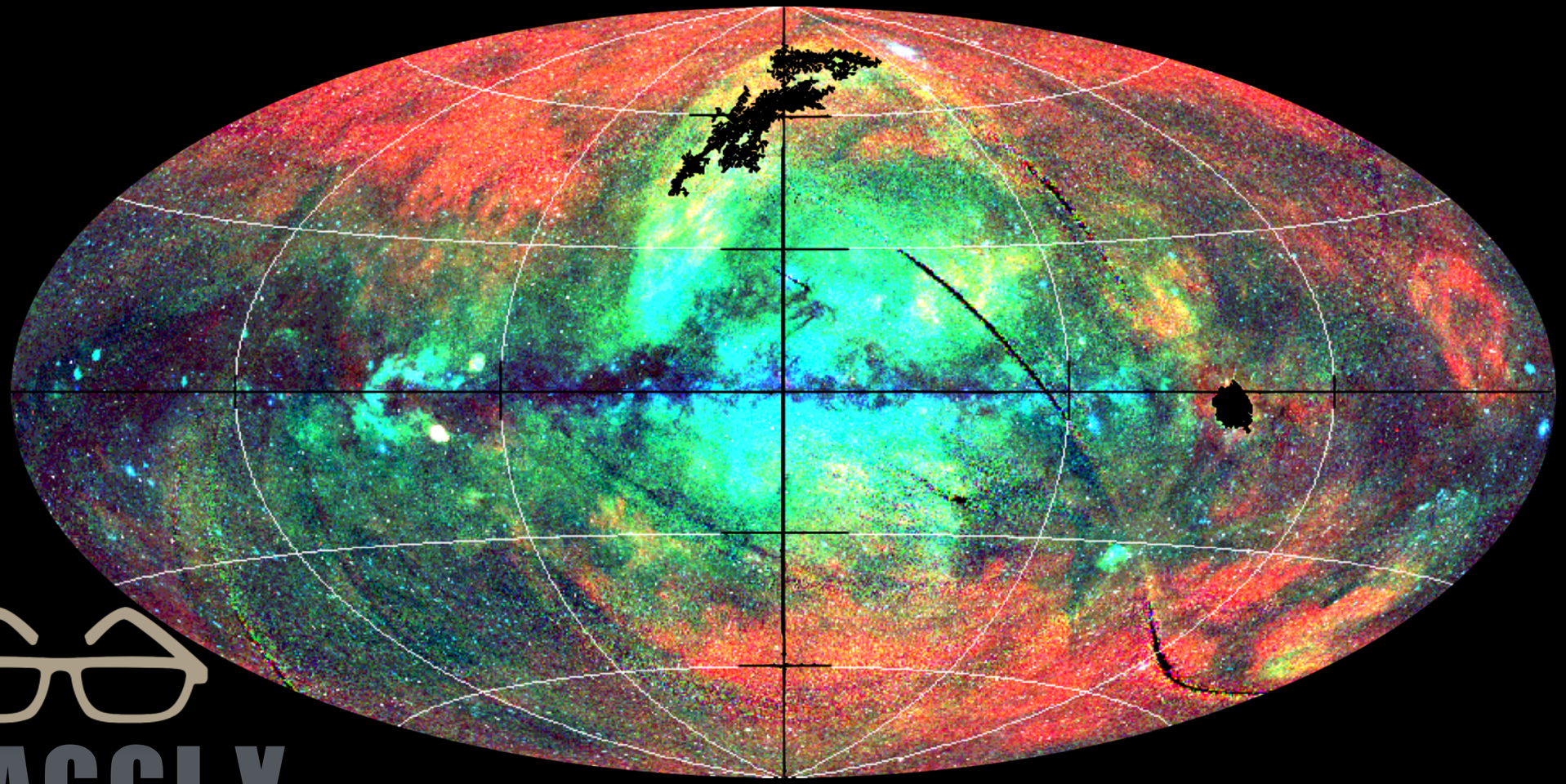




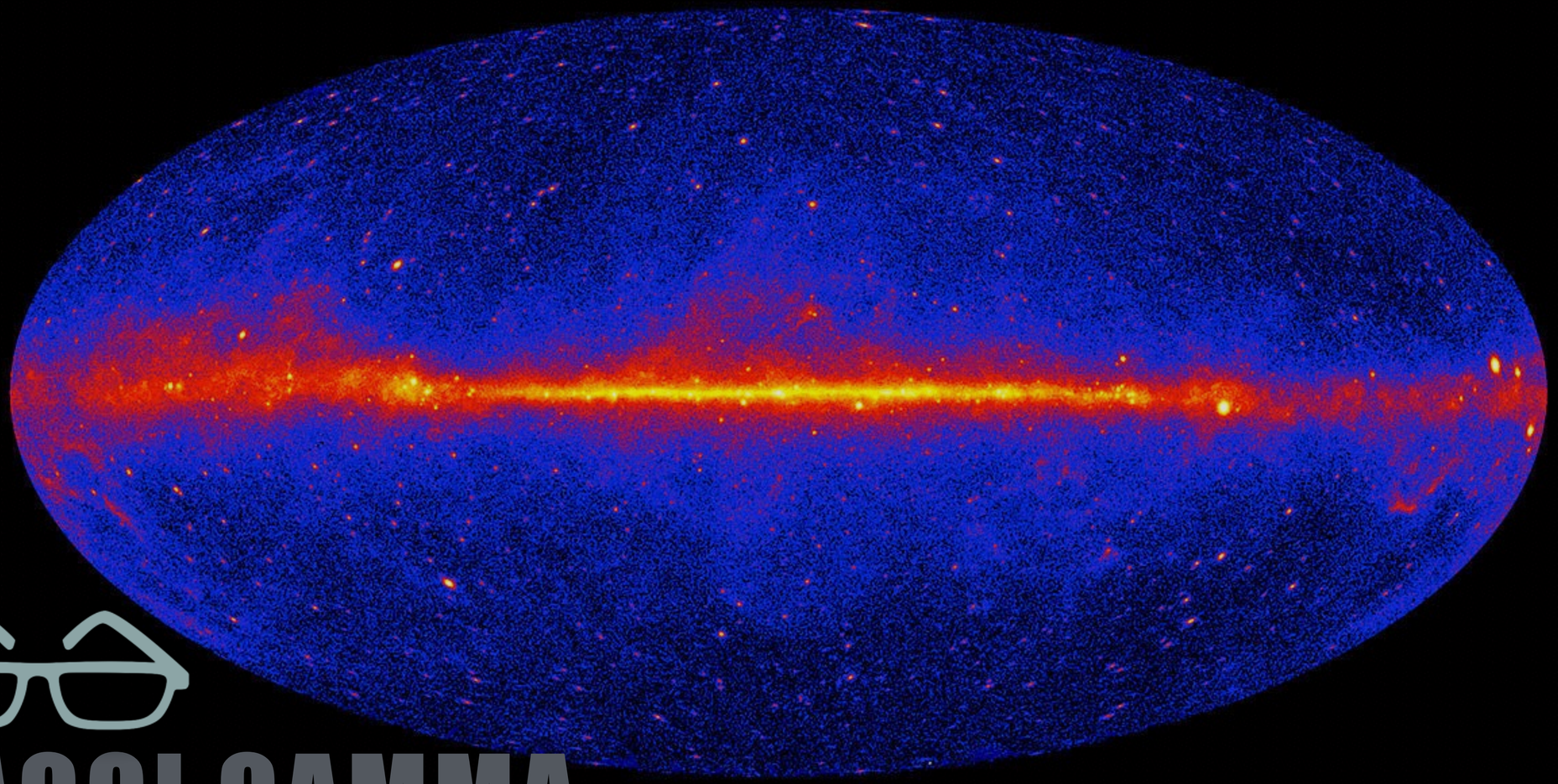
RADIO



MICROONDE

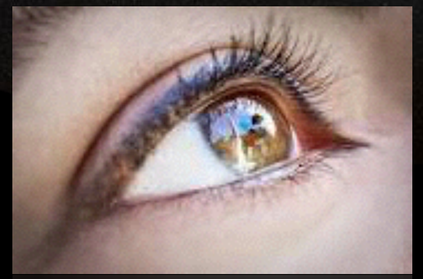


RAGGI X



RAGGI GAMMA

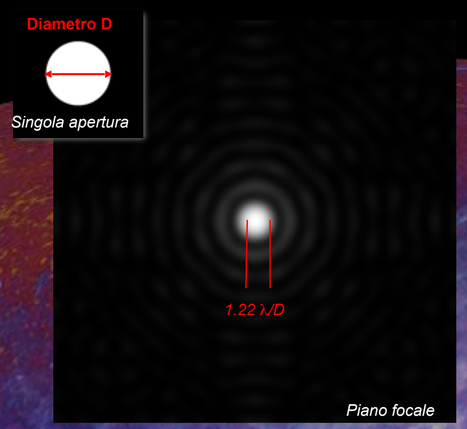
VISIBILE



Osservatorio di Kitt Peak, ARIZONA

INFRAROSSO

RADIO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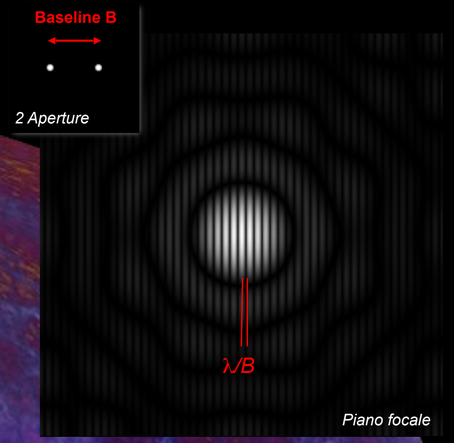
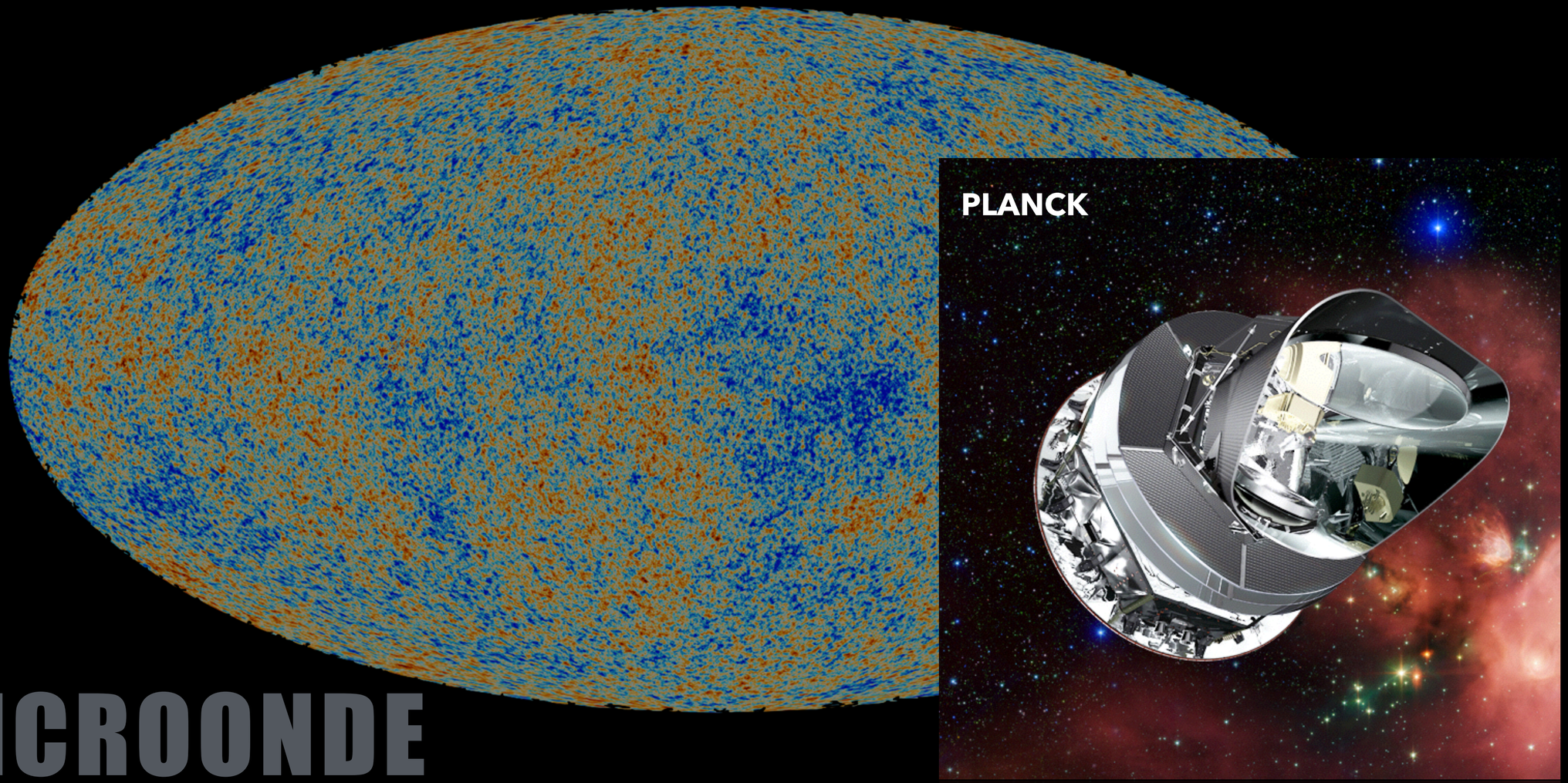
Singola apertura
1.22 λ/D
Piano focale


Baseline B
2 Aperture
λ/B
Piano focale

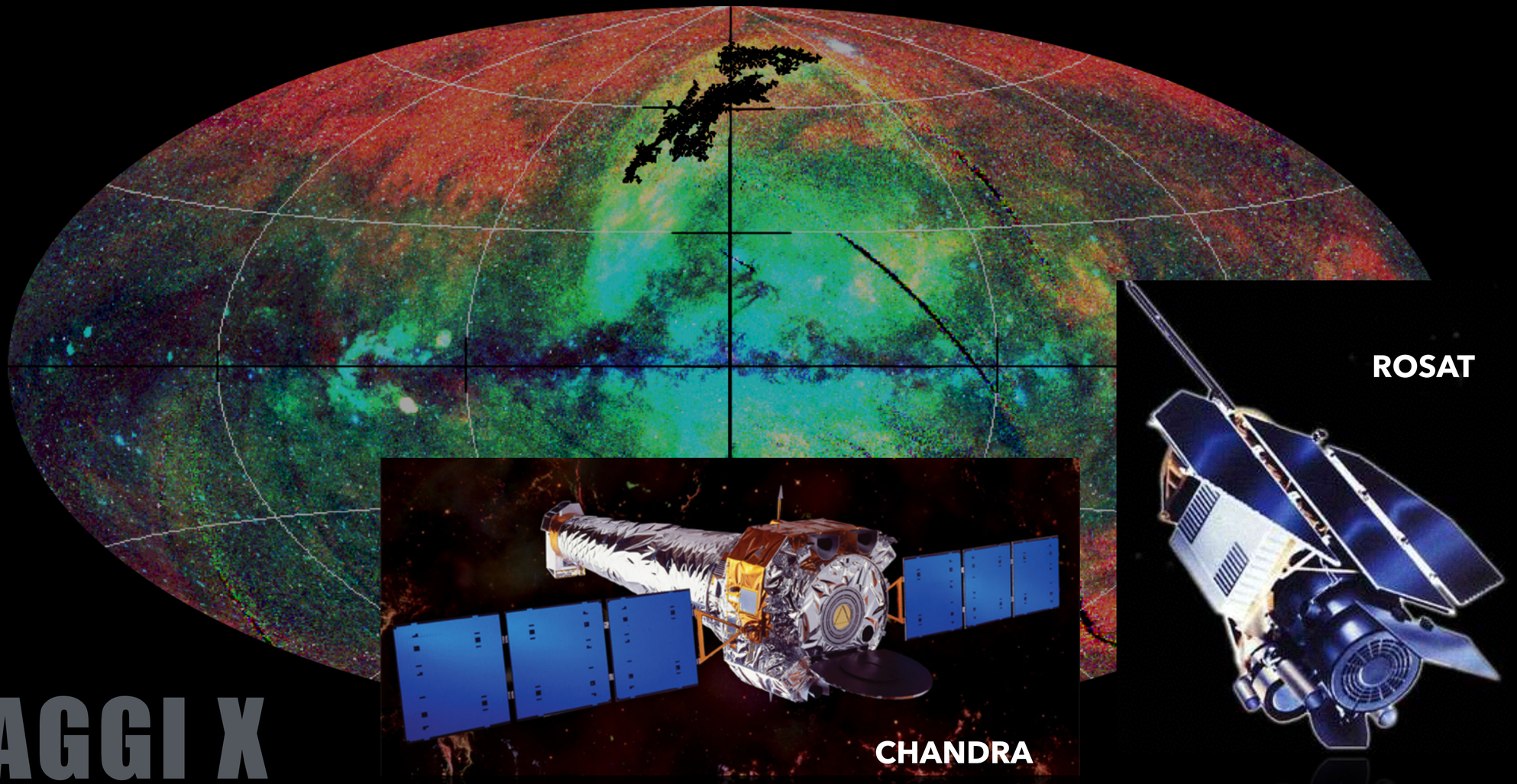
Osservatorio di ARECIBO, Puerto Rico

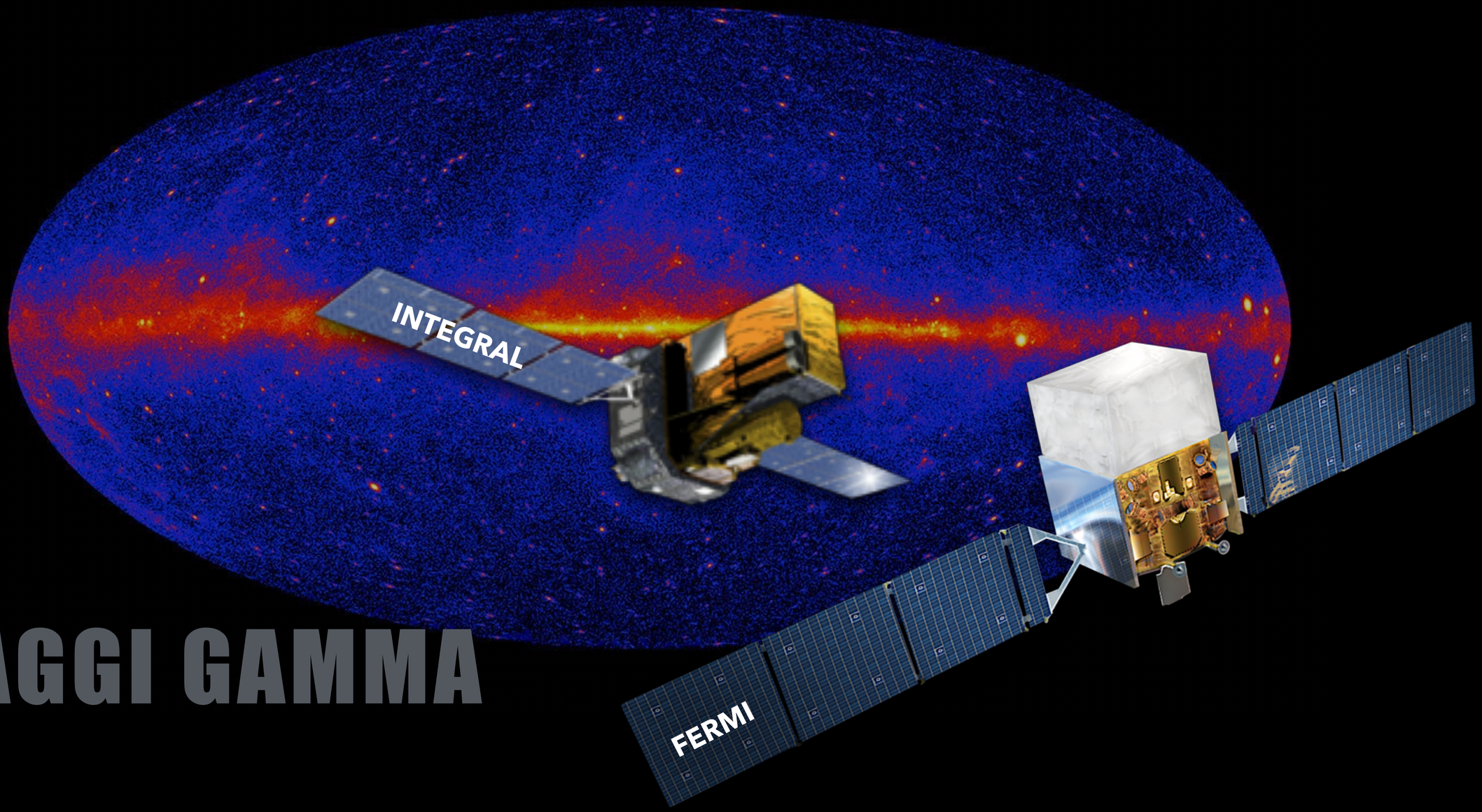
Nuovo Messico , USA



MICROONDE

RAGGI X





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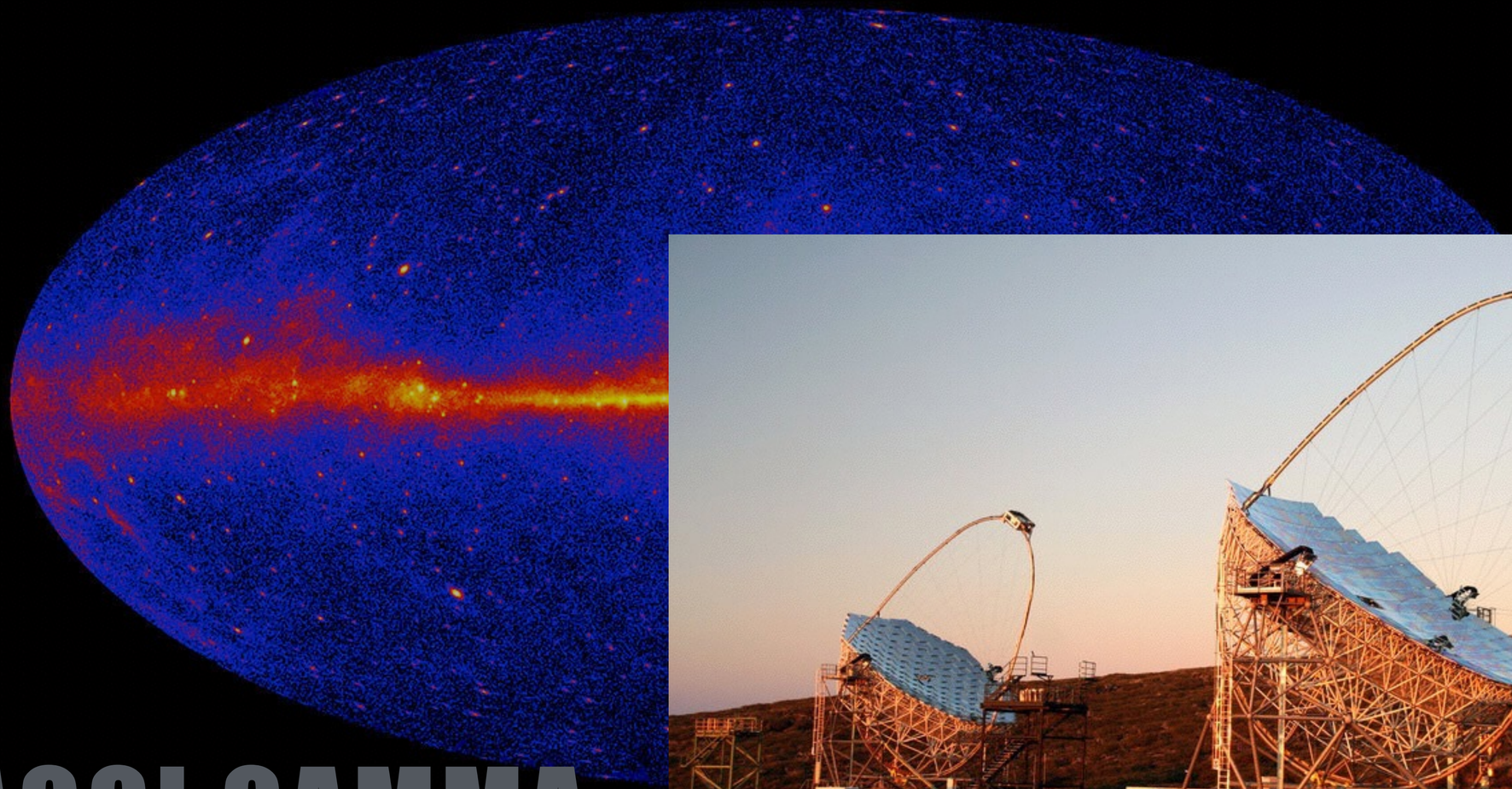

RAGGI GAMMA

MAGIC

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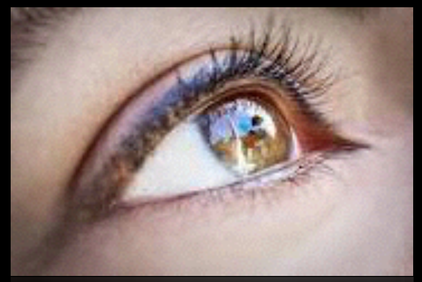
γ

IL FOTONE

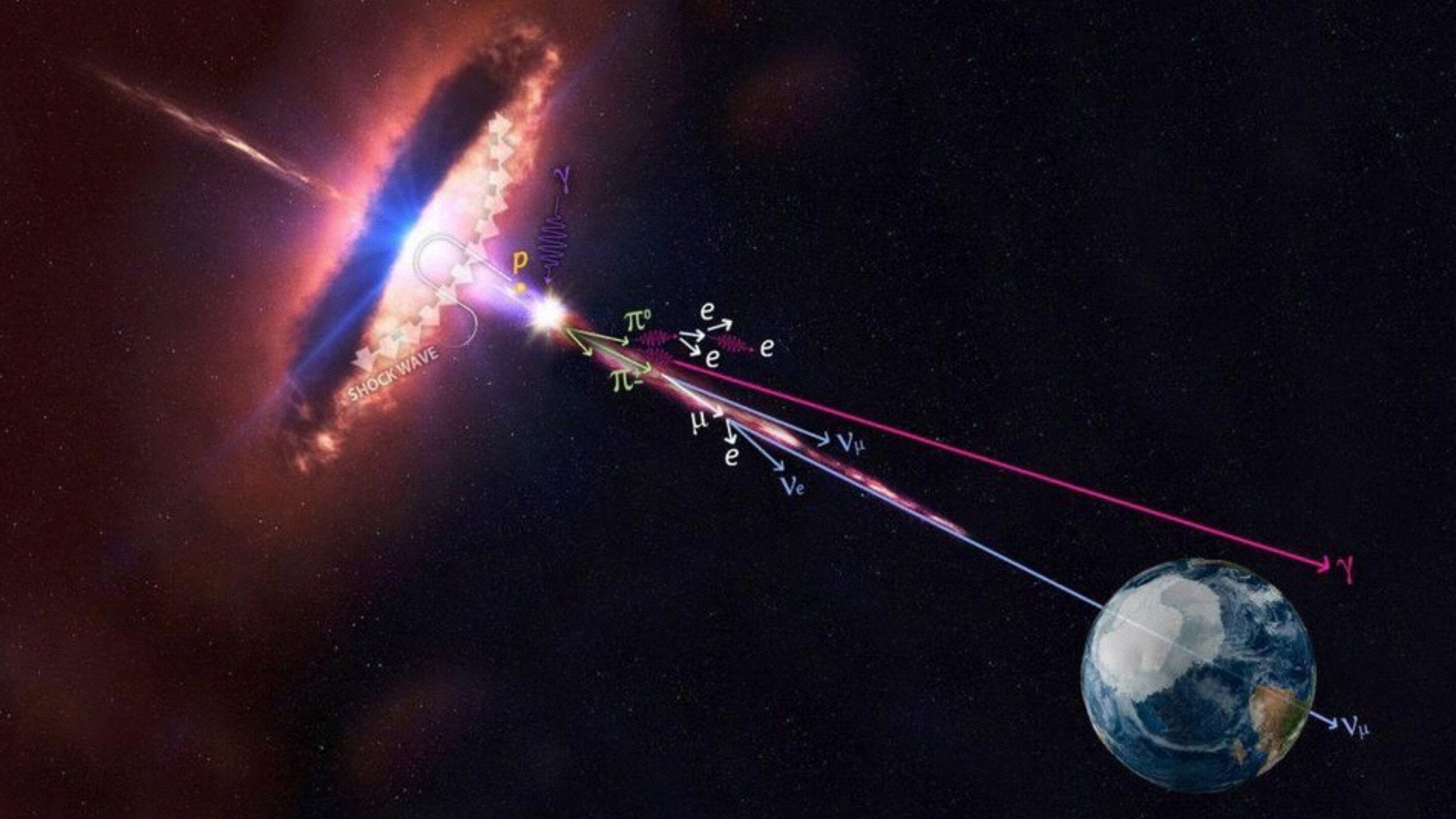


CR

I RAGGI COSMICI

ν

IL NEUTRINO


γ
p
π⁰
e
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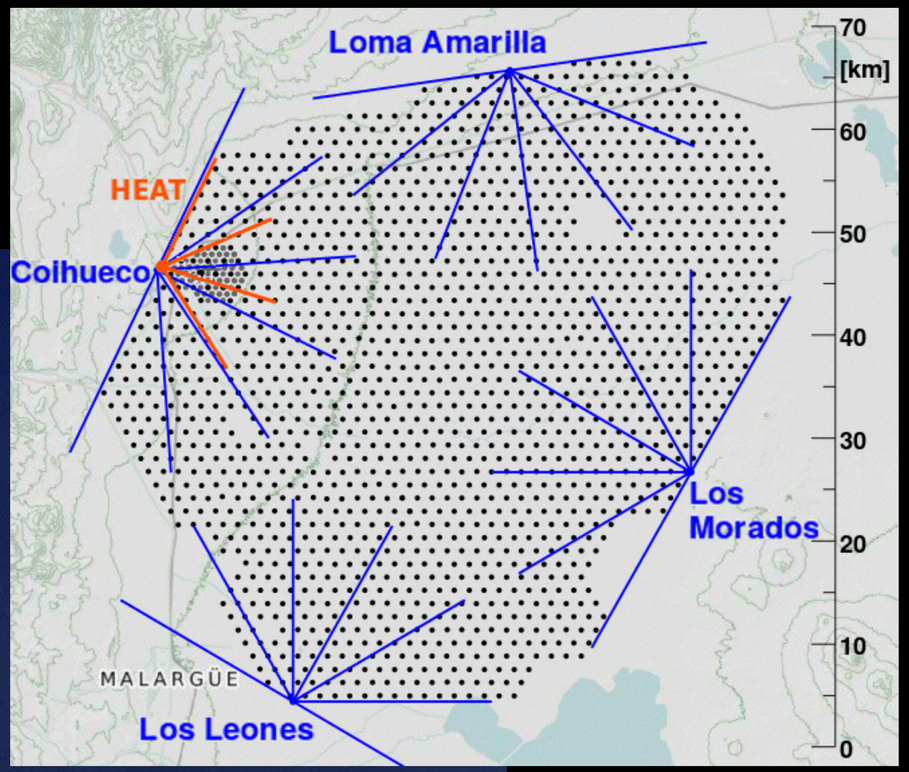
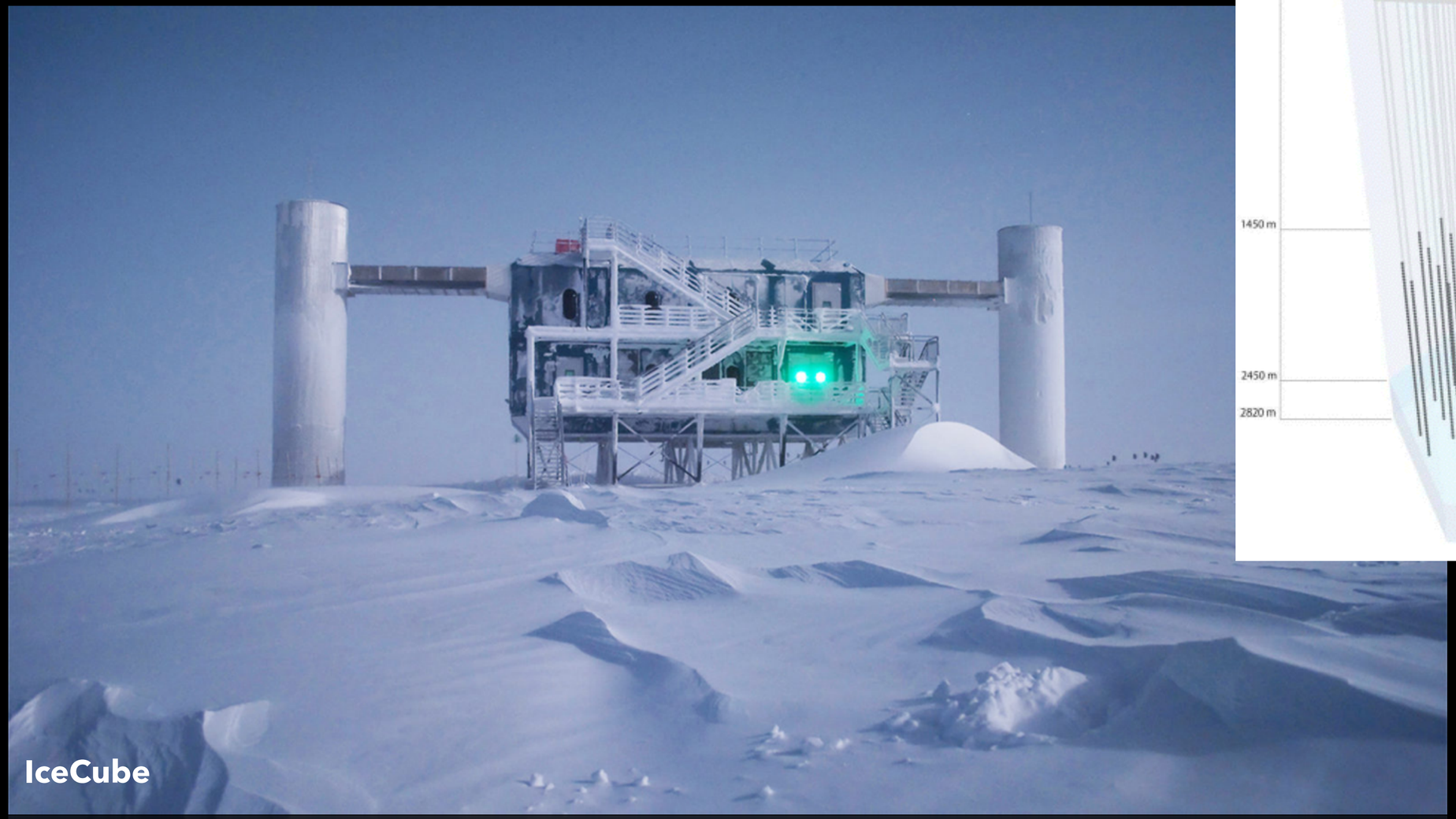
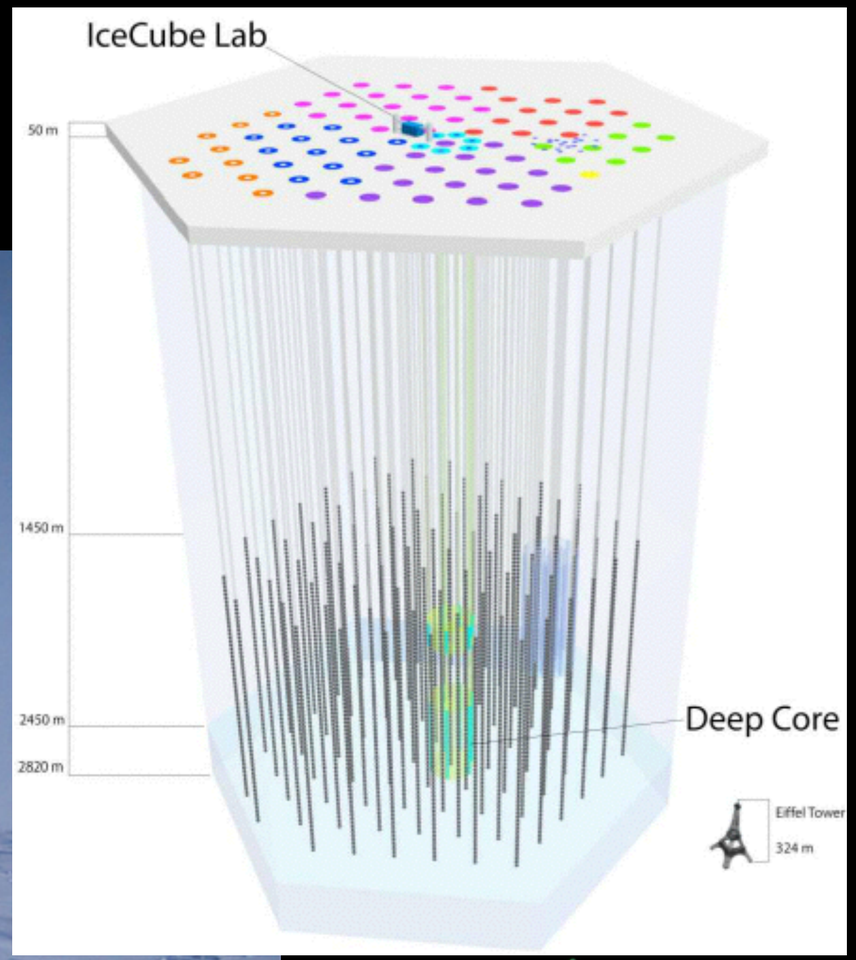
π⁻
μ
e
νμ
νe
γ
νμ
SHOCK WAVE

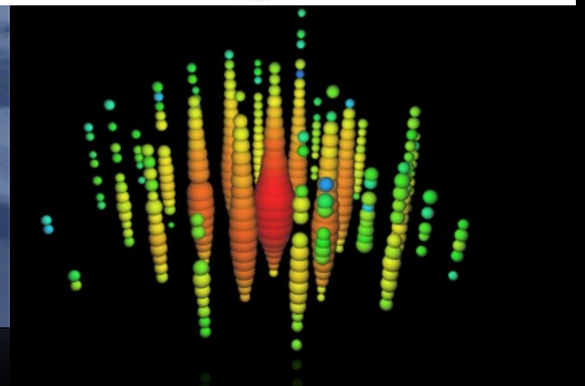
RAGGI COSMICI



NEUTRINI


IceCube


IceCube Lab
50 m
1450 m
2450 m
2820 m
Deep Core
Eiffel Tower
324 m



TXS 0506+056

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I RAGGI COSMICI

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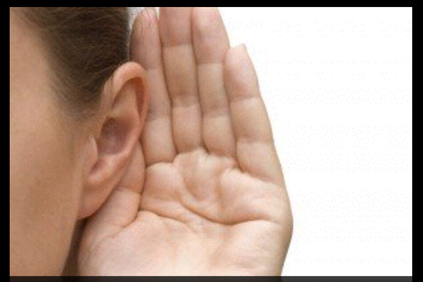
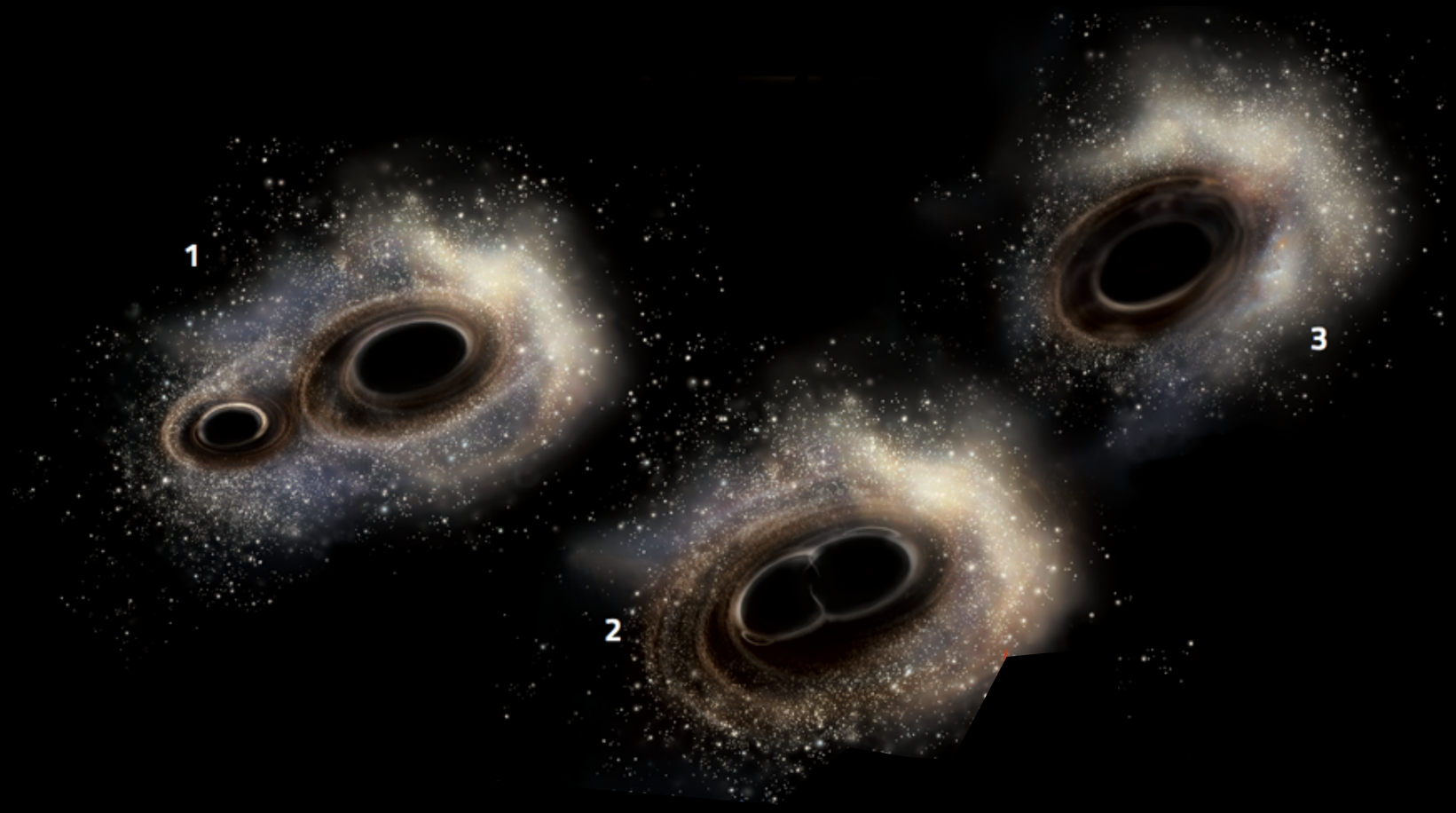
IL NEUTRINO

GW

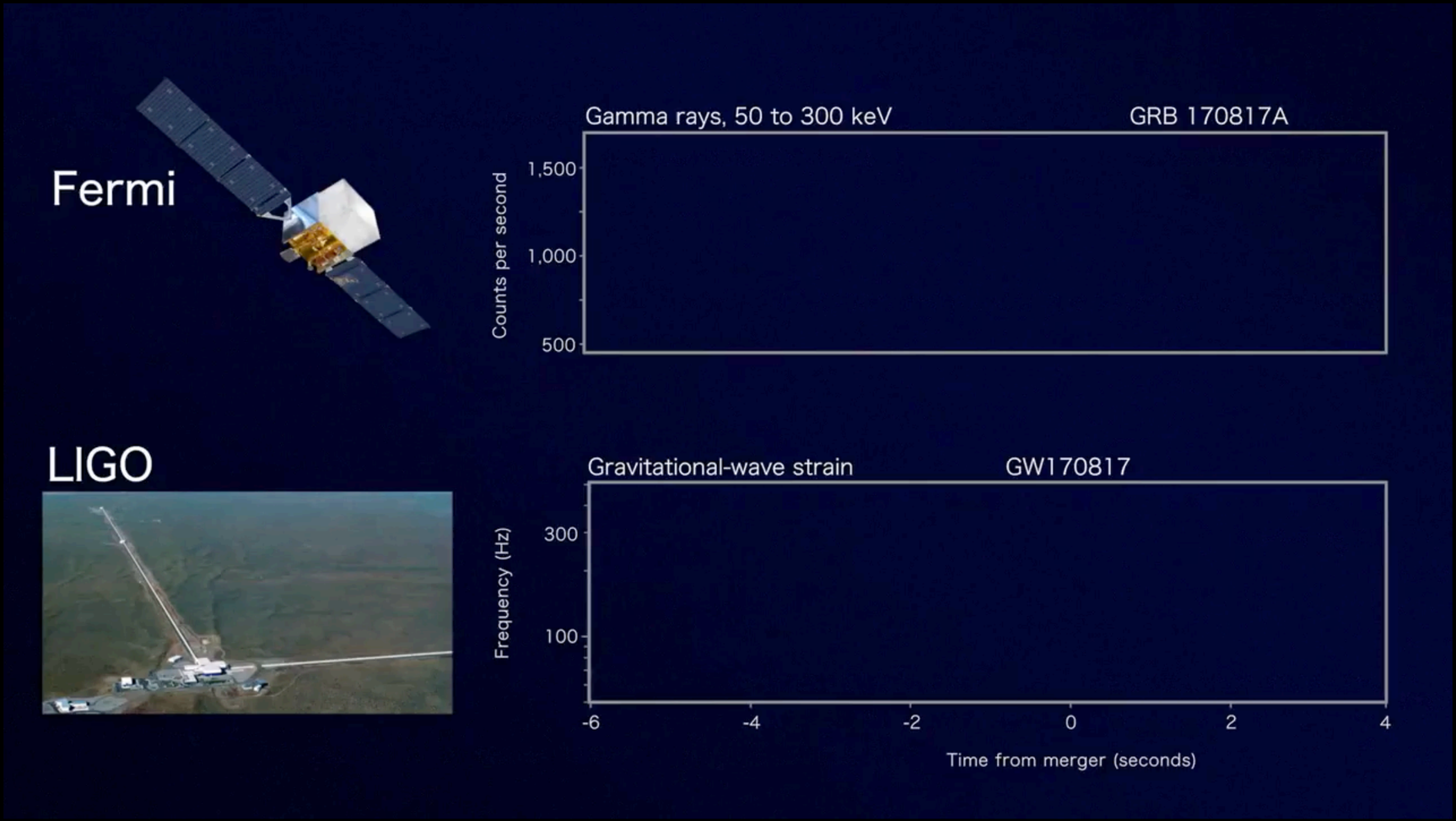
LE ONDE GRAVITAZIONALI

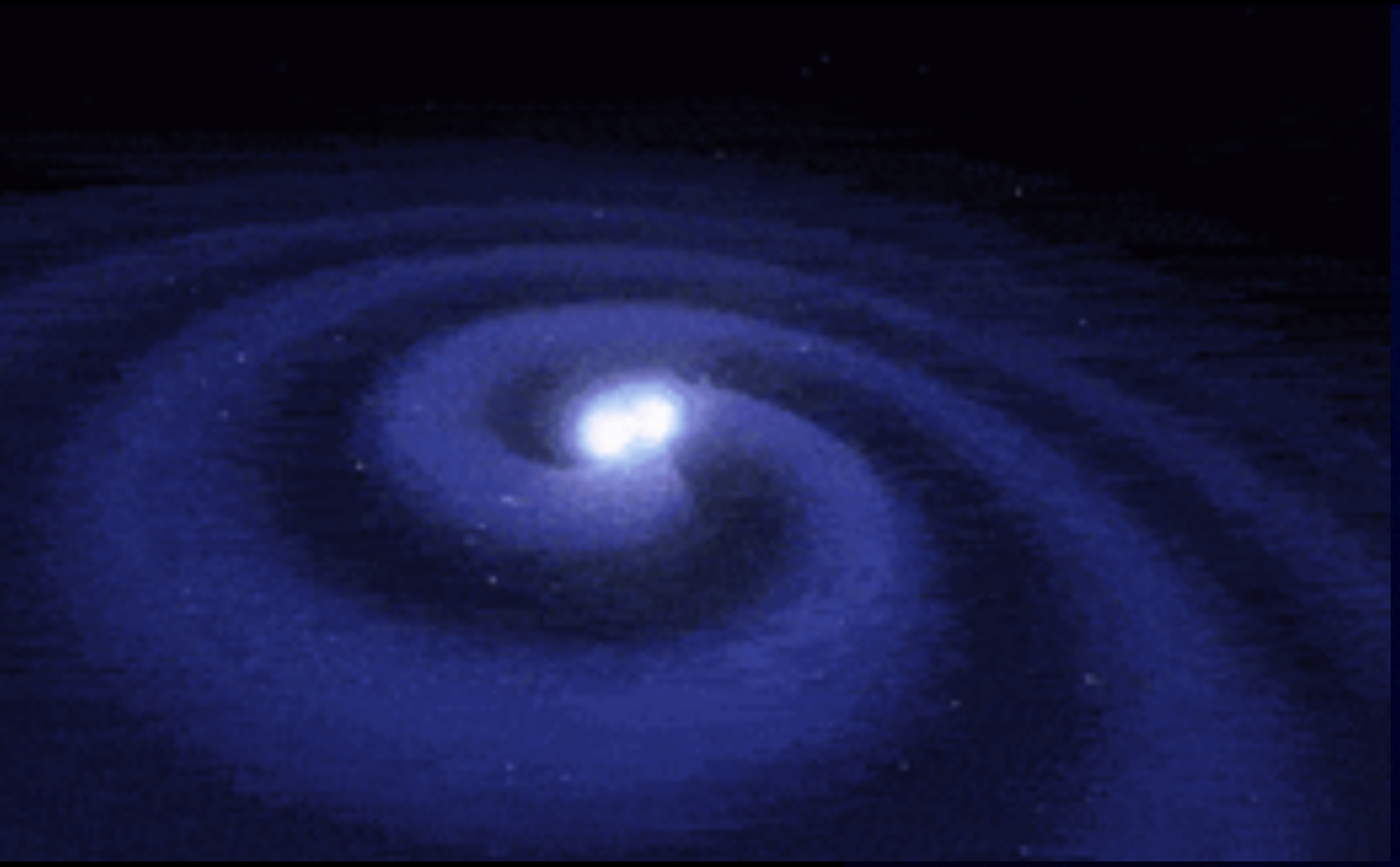


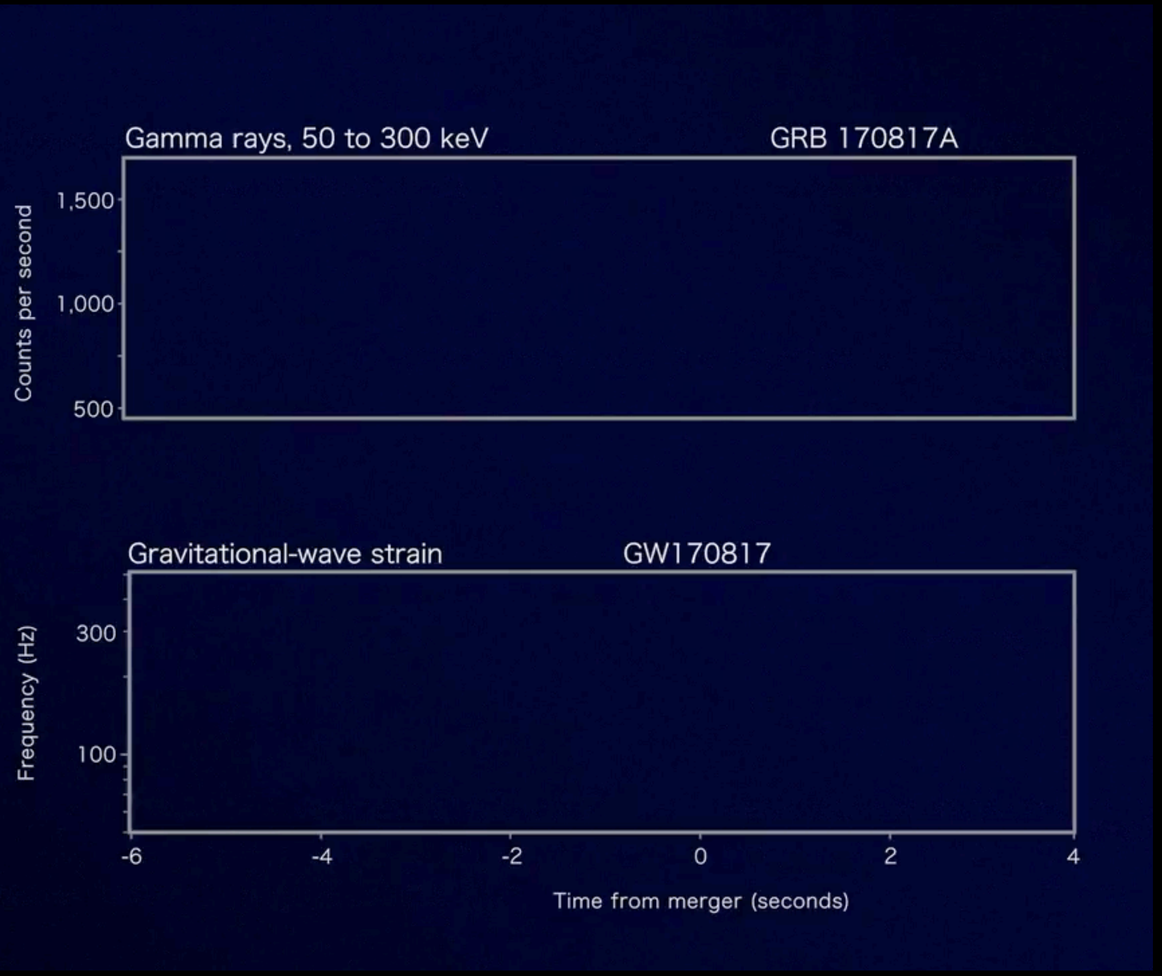


GW - COALESCENZA DI BUCHI NERI

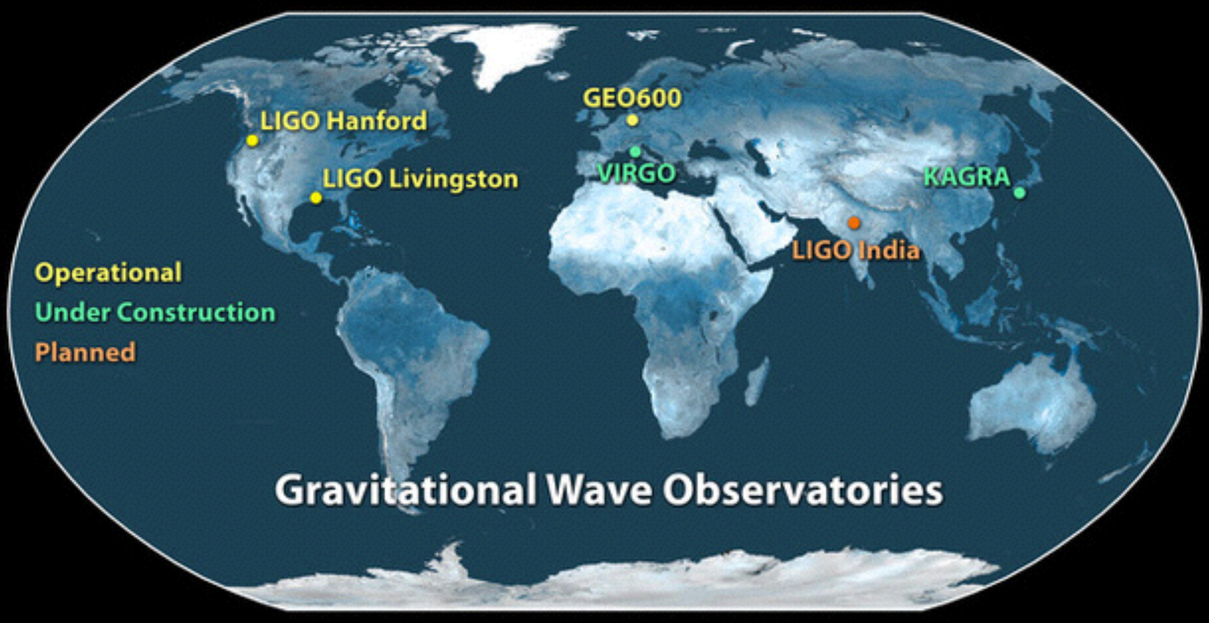
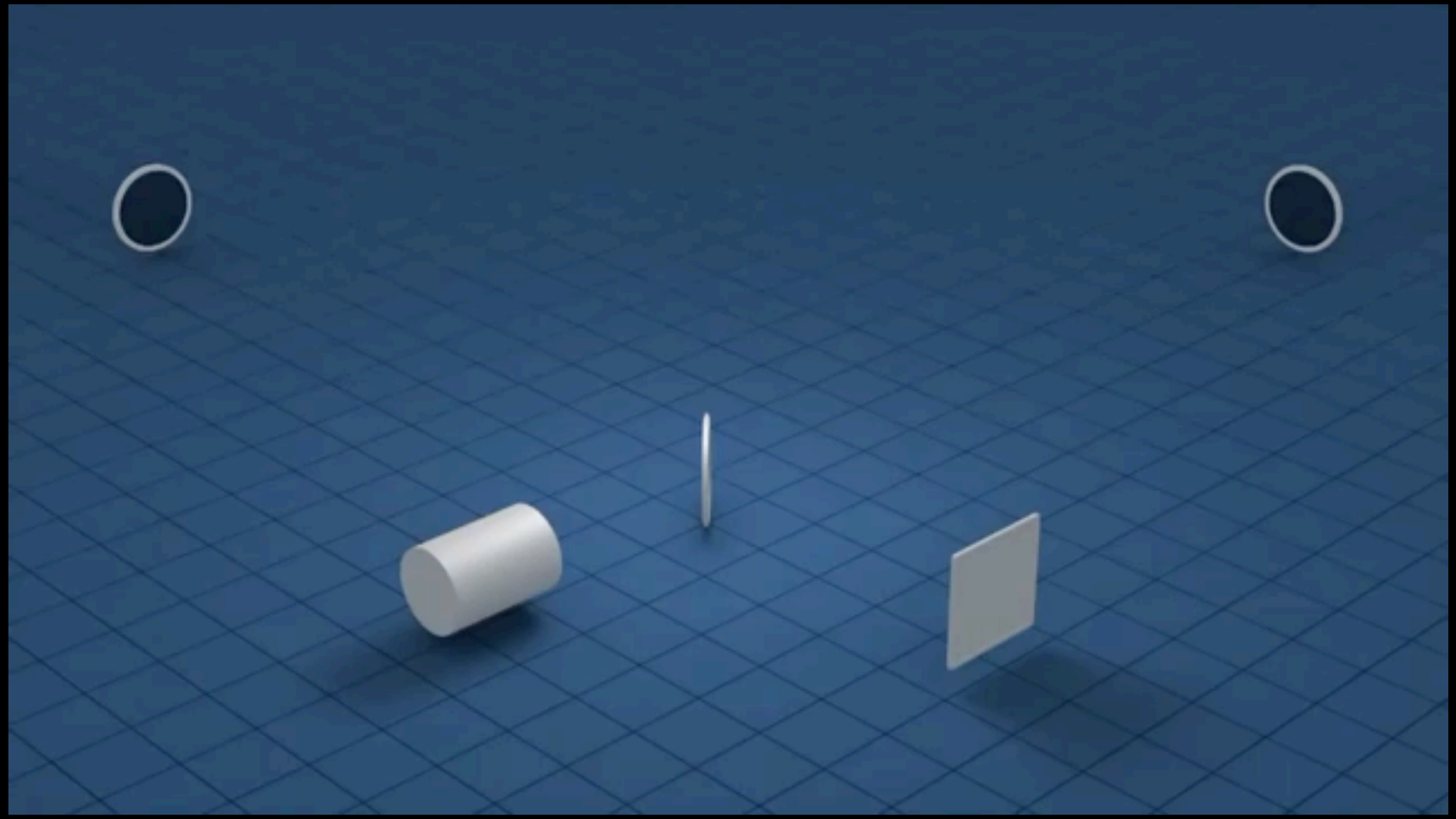
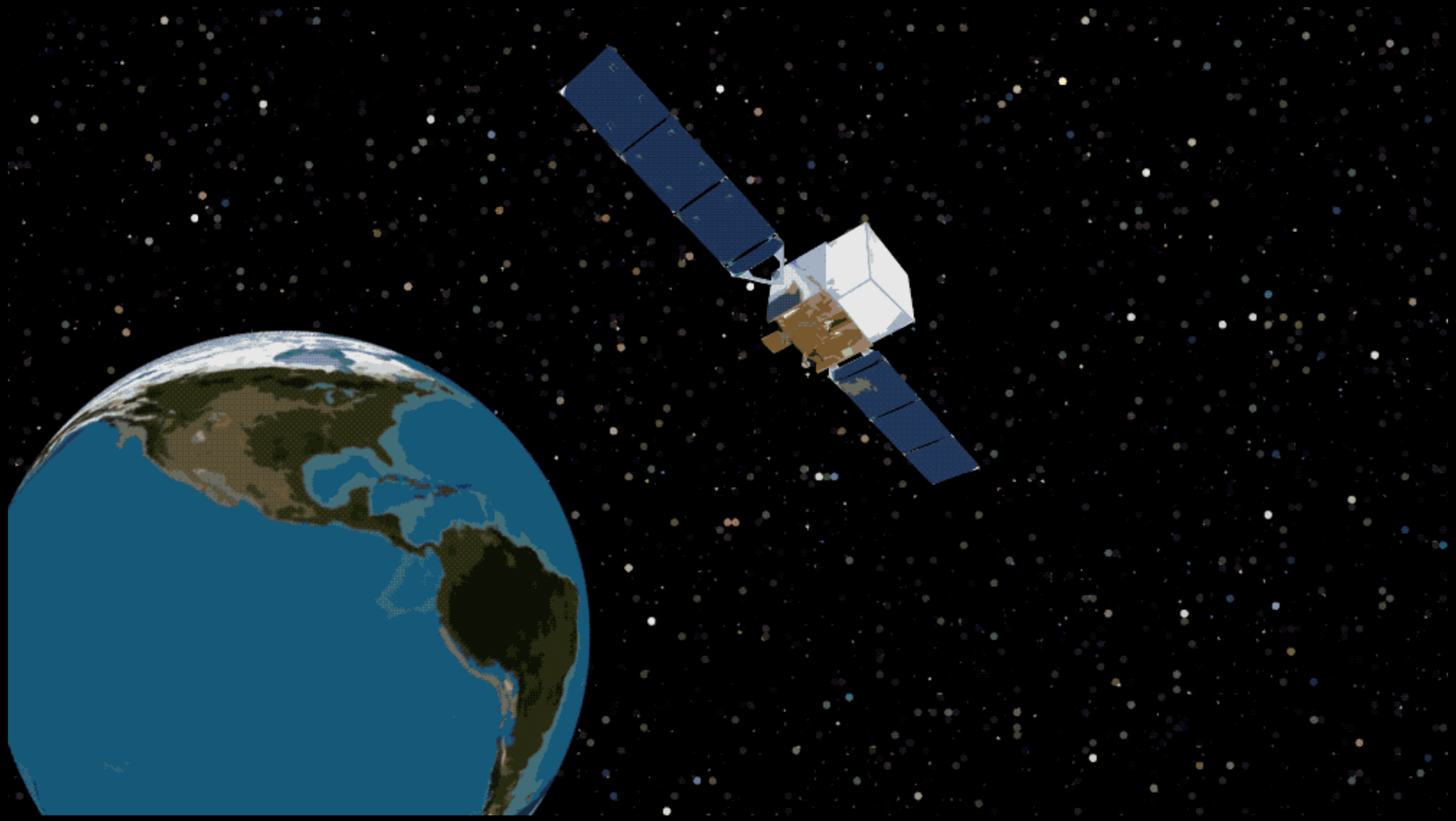
LE ONDE GRAVITAZIONALI







GW - COALESCENZA DI STELLE DI NEUTRONI



INTERFEROMETRI