



BLAZAR

J0648.7+1516

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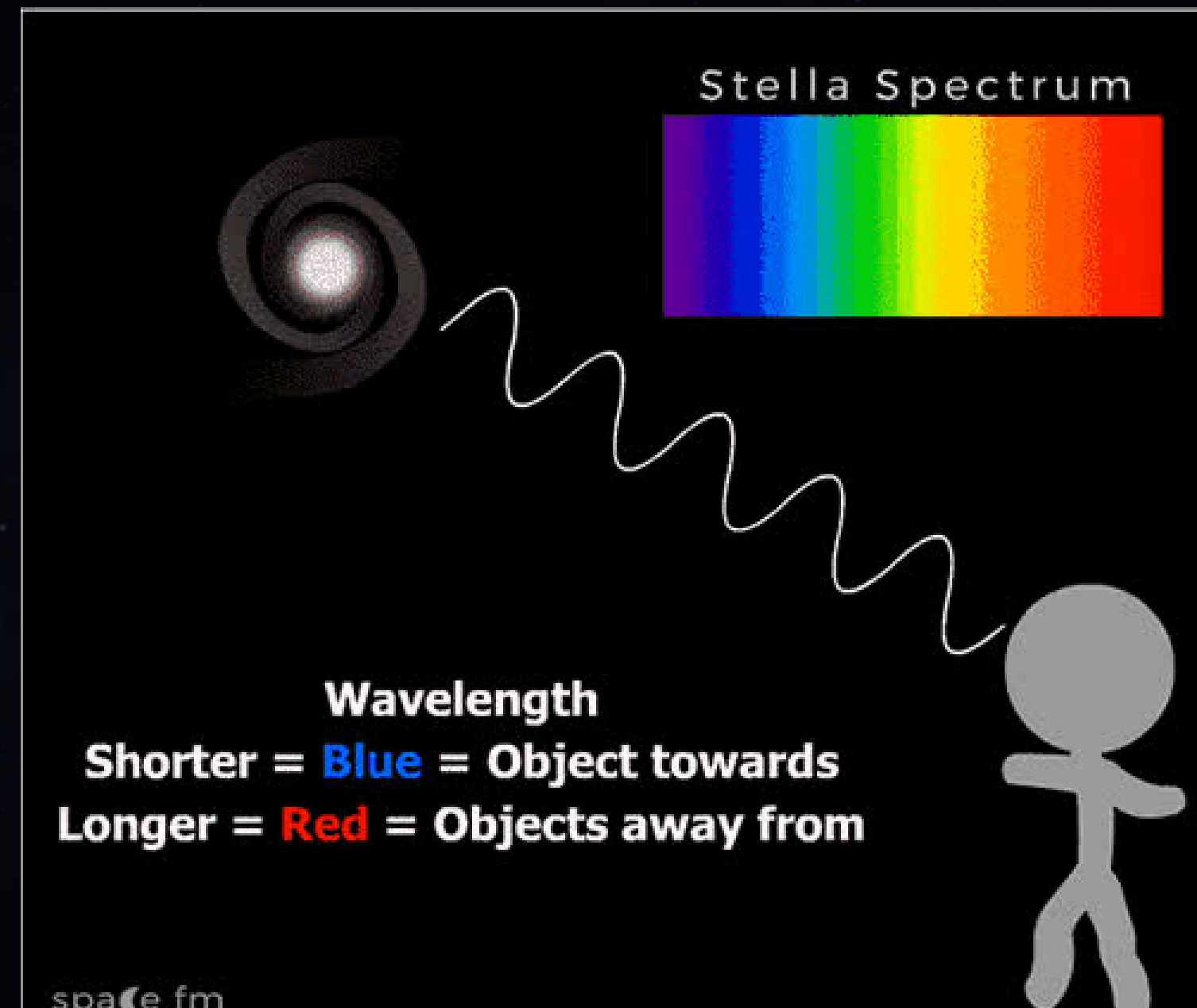
POSIZIONE

The blazar J0648.7+1516 is located in the constellation of Cancer, precisely at the ascending coordinates of 06h 48m 45.6s and declination of $+15^{\circ} 16' 12''$. This position in the sky makes the blazar accessible for observation with various telescopes both on the ground and in orbit.

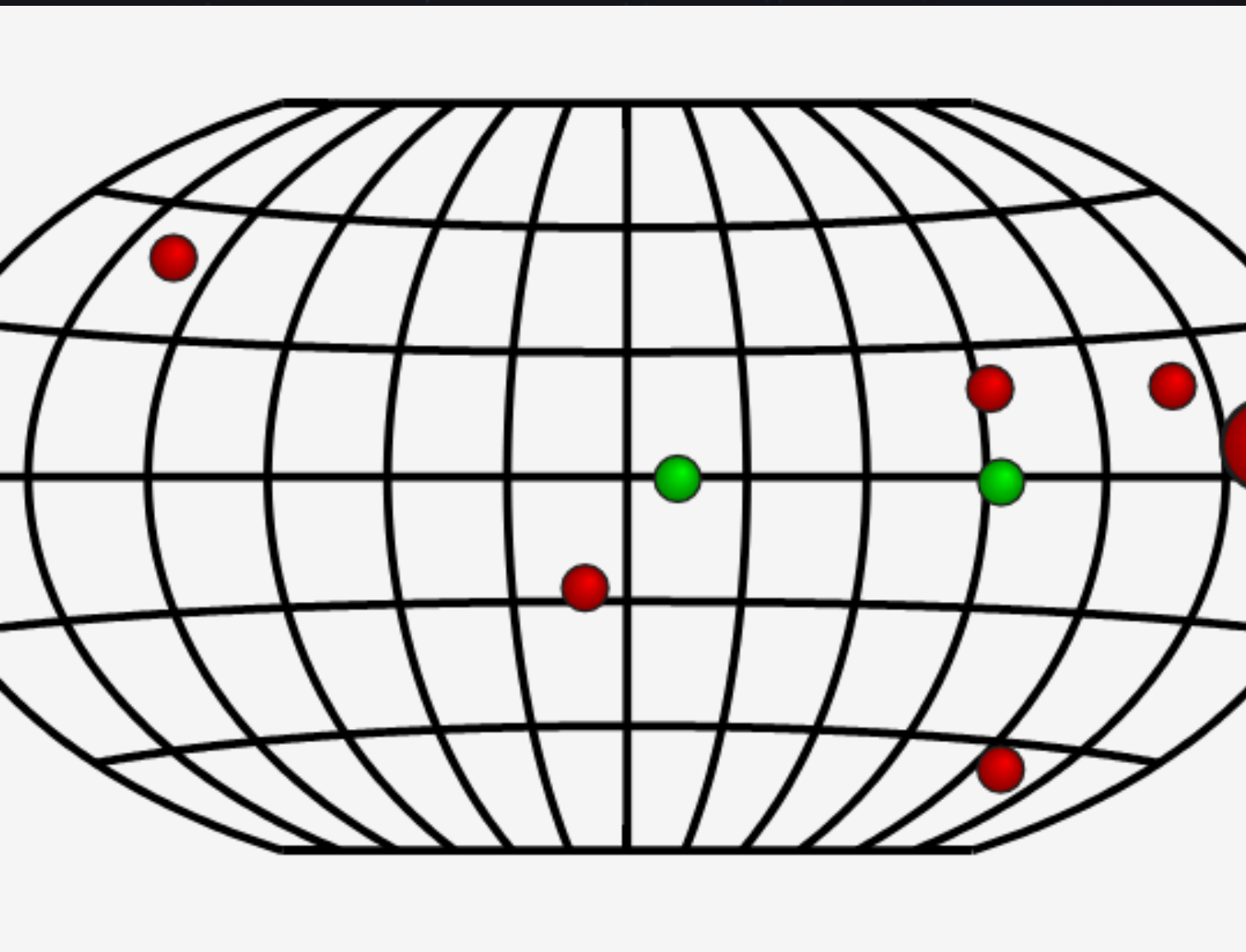


REDSHIFT E DISTANZA GALATTICA

The redshift (z) of J0648.7+1516 has been measured to be 0.179, indicating that it is a relatively nearby object in cosmological terms. Galactic distance is a measure of the separation between two points within a galaxy, often expressed in light-years. It is used to understand the size and structure of galaxies, this source is located at a galactic distance of about 26 million light-years from Earth. The redshift measurement is crucial because it provides information on how the light has been affected by the object's motion and the expansion of the Universe.



DESCRIZIONE DELLA SORGENTE



J0648.7+1516 is characterized by emission of radiation in several bands, including radio, optical, X-rays and gamma rays. Its particular structure is associated with a supermassive black hole at the center of a galaxy. The brightness of the blazar is extreme, with emissions that vary over time, showing a flaring behavior that is typical of blazar objects. This is due to the presence of a jet of charged particles accelerated to speeds close to that of light, which interact with the surrounding material and produce radiation.

ANALISI ENERGETICA

Energy analysis of blazar J0648.7+1516 has revealed significant gamma-ray emission. The data suggest that much of its energy is emitted in the high end of the spectrum, typically associated with particle acceleration events. Modeling studies of the emitted radiation indicate that the total energy emitted can be estimated in several quantities, with peaks expected at flaring events. Additionally, the X-ray emission has been studied in relation to synchrotron and inverse Compton radiation, providing insights into the particle acceleration mechanism.

```
[ ] import matplotlib.pyplot as plt
```

```
df.plot("freq.", "flux", "scatter")  
plt.xscale("log")  
plt.yscale("log")
```

