

The background of the slide is a deep space image. It features a bright star in the upper left with a lens flare, surrounded by blue and purple nebulae. In the lower foreground, the curved horizon of a planet is visible, with a greenish, swirling pattern on its surface. The overall color palette is dark blue, purple, and green.

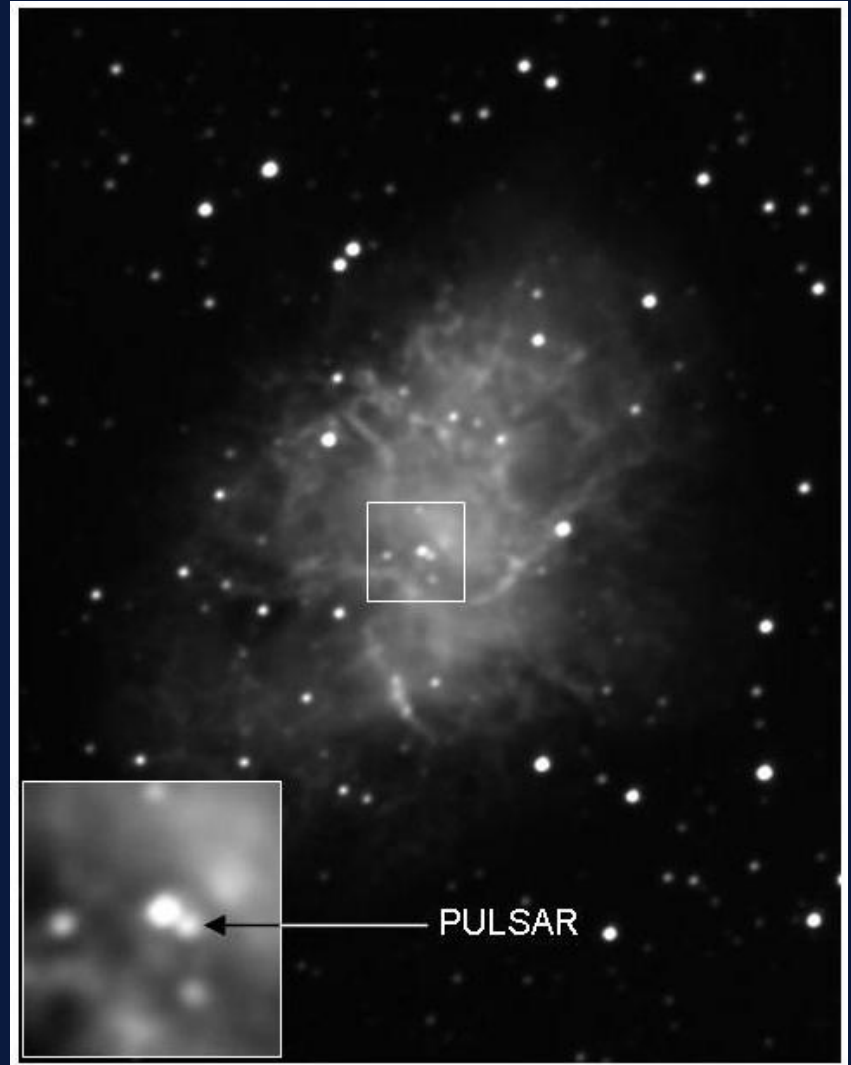
MJERENJE PERIODA PULSACIJE NEUTRONSKE ZVIJEZDE U RAKOVICI

Stella Vješnica
III. gimnazija Split

Komentor: Zoran Knez
Mentor: Nela Dželalija

PULSARI

- Neutronske zvijezde snažnog magnetskog polja i izrazito kratkog perioda rotacije, nazvane po strogo pravilnoj emisiji pulseva elektromagnetskog zračenja
- “Crab pulsar” – pulsar u maglici M1, s periodom vrtnje 33 ms, a ostatak supernove iz 1054. godine



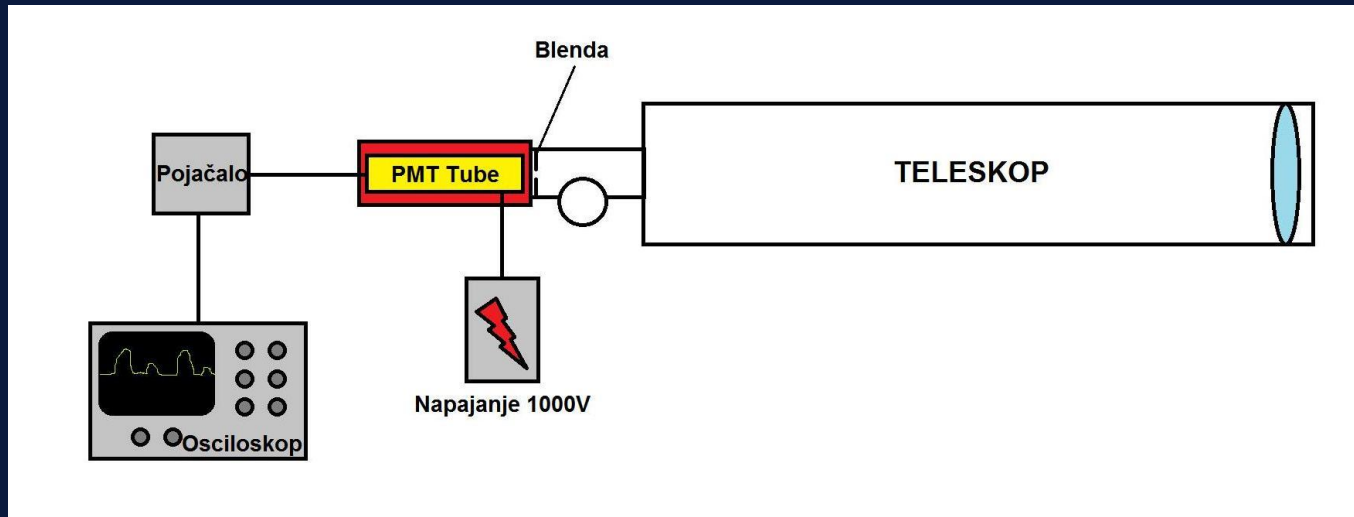


Metoda mjerenja:

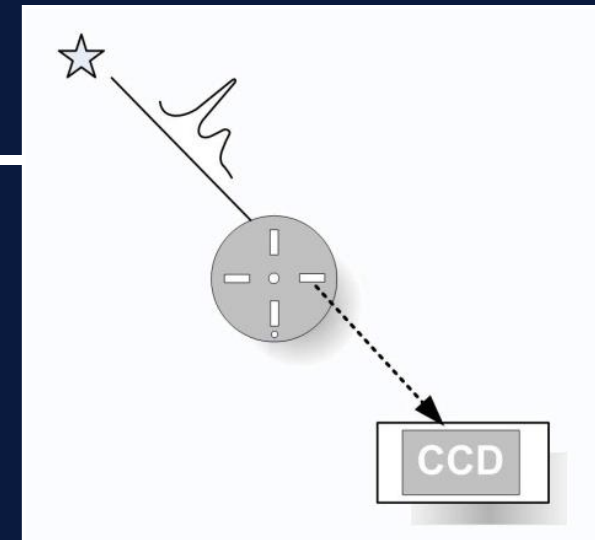
Fotoosjetljivim
fotometrom

CCD kamerom i
stroboskopom

1. METODA S FOTOSJETLJIVIM FOTOMETROM

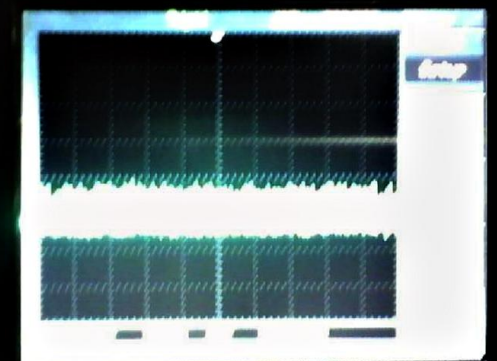
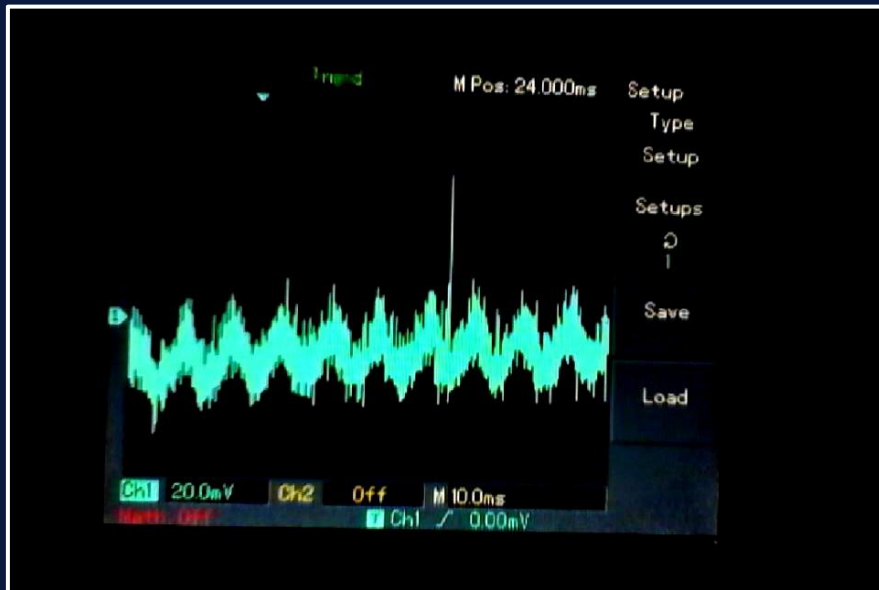


2. METODA SA STROBOSKOPOM

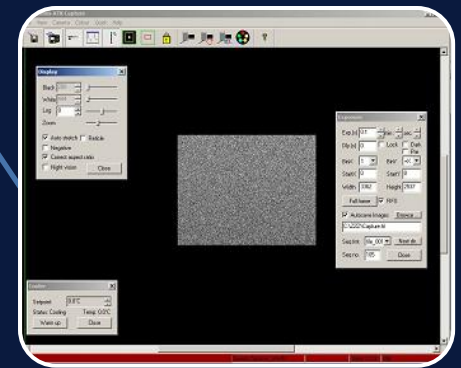


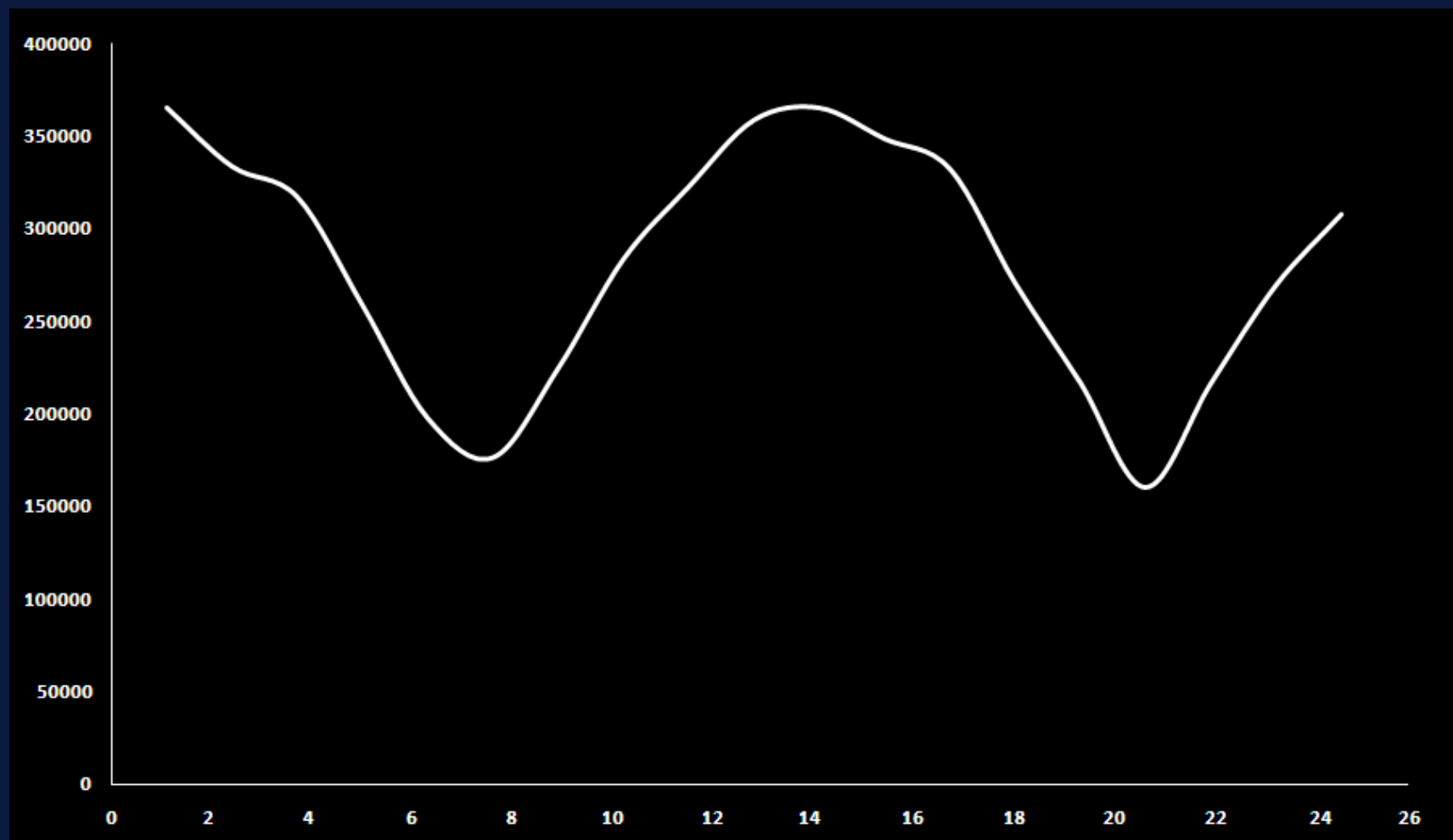
MJERENJE FOTOMETROM

- Zahtijevalo što preciznije praćenje teleskopa i ciljanje objekta
- Izoštavanje preko Jupitera
- Nemoguće razlučivanje signala pulsara od ostalih šumova



MJERENJE STROBOSKOPOM





ZAKLJUČCI:

- Dokazala sam valjanost stroboskopske metode na točkastom izvoru svjetlosti.
- Fotometar ispravno funkcionira, metoda je u teoriji dobro smišljena, ali njena primjena nije omogućila detektiranje promjene pulsacije.
- Treba nabaviti odgovarajući adapter za korišteni CCD ili posudbom novoga, prvom prilikom (kad se M1 pojavi na jutarnjem nebu) obaviti mjerenje.

M1



The background is a deep space scene. In the upper left, a bright star or galaxy core emits a powerful beam of light, creating a lens flare effect. Swirling around this light are ethereal, glowing nebulae in shades of blue, purple, and green. In the lower foreground, the dark, curved horizon of a planet or moon is visible, with a faint, glowing greenish ring or aurora-like structure on its surface. Two small, dark celestial bodies are scattered in the distance. The overall atmosphere is one of vastness and cosmic wonder.

HVALA NA PAŽNJI!