

Observing the Sun with micro-interferometric devices: a didactic experiment

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For the case of the Sun:

$$\vartheta_{\text{UD}} = 1.22\lambda / B = 1.22 \cdot 0.55 / B(\mu) = 30' \times 60'' / 206265$$

$$B(\mu) = 206265 \times 1.22 \times 0.55 / (30 \times 60) = 76.9 \mu$$

$$d(\mu) = 7.2 \text{ or } 14.4 \mu \rightarrow \sigma = 2.44 \lambda / d = 7.8^\circ \text{ or } 3.9^\circ$$

See the masks!

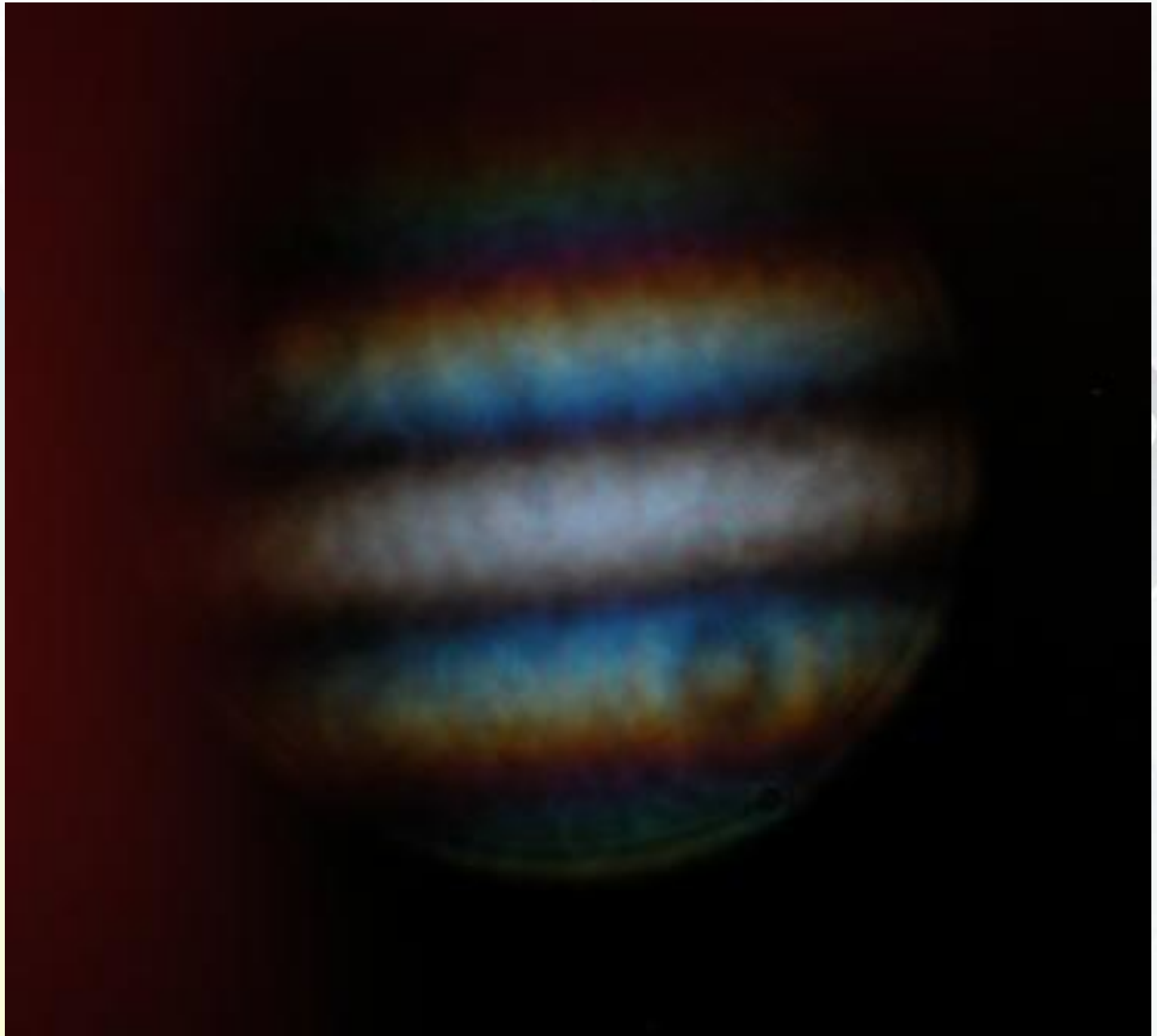


First fringes on the Sun: 9/4/2010

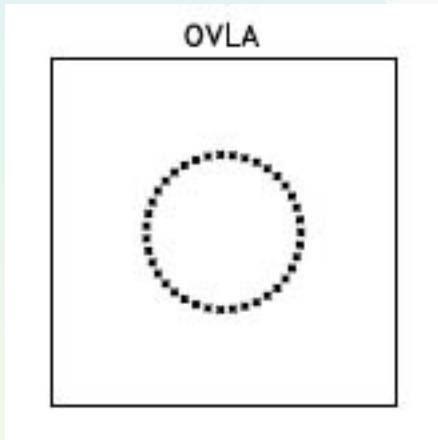
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First
fringes
on the
Sun:
9/4/2010

$$B = 29.4\mu$$
$$d = 11.8\mu$$



OVLA PSF



↔ 50μ

• 14μ



OVLA_Sun_2

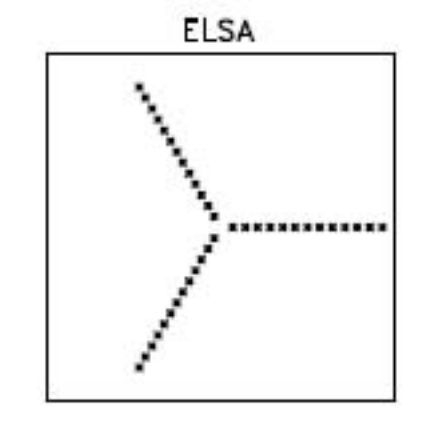
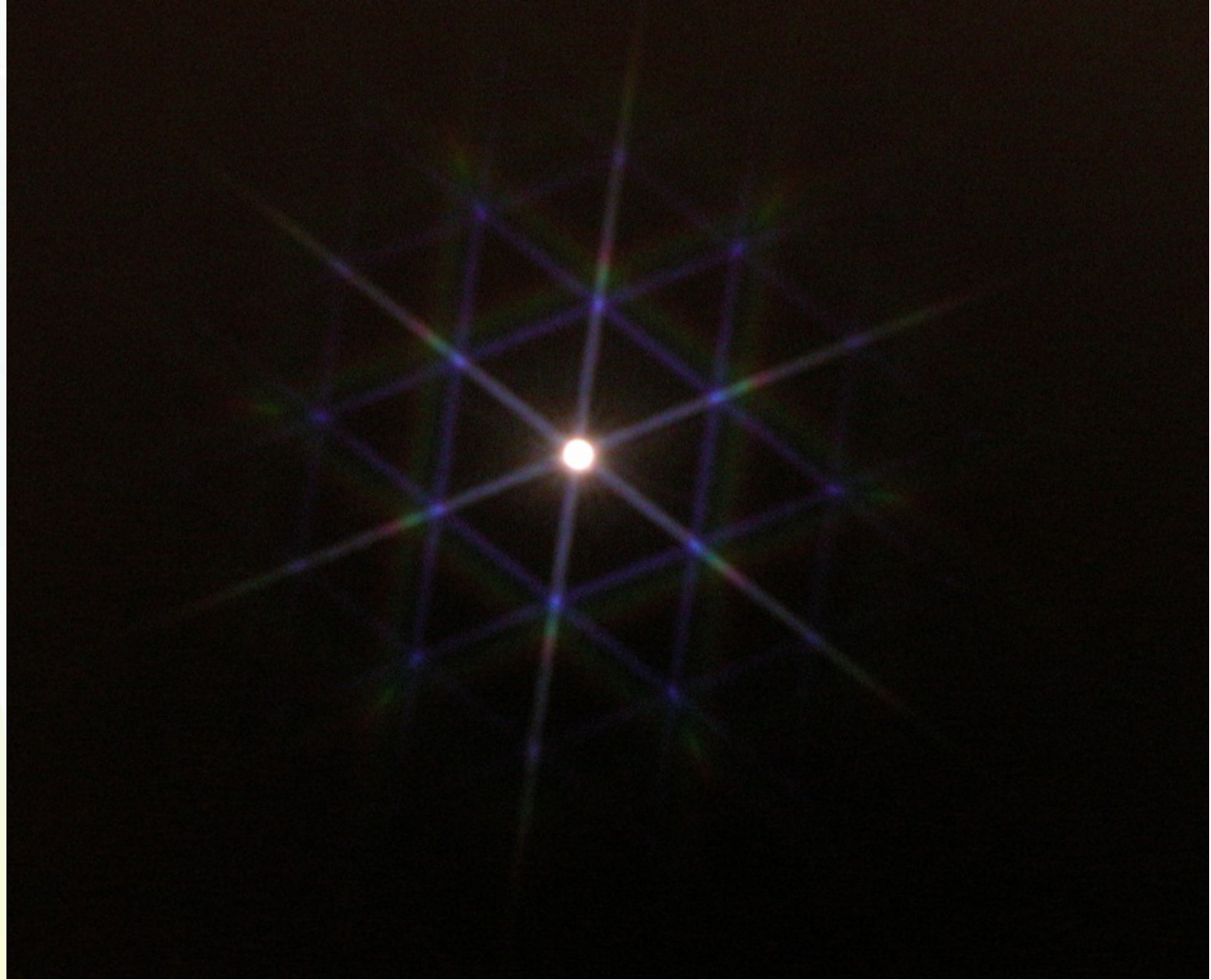


24/9/2013

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ELSA PSF



↔ 50 μ

. 14 μ