

Keplér Alem Téléskopi we Tashqiy Planétalar

Erkin Sidiq

Uyghur Akadémiyisi 3-Nöwetlik Ilmiy Muhakime Yighinida Sözen'gen
2012-Yili 5-Ayning 5-6-Künliri, Istanbul, Türkiye



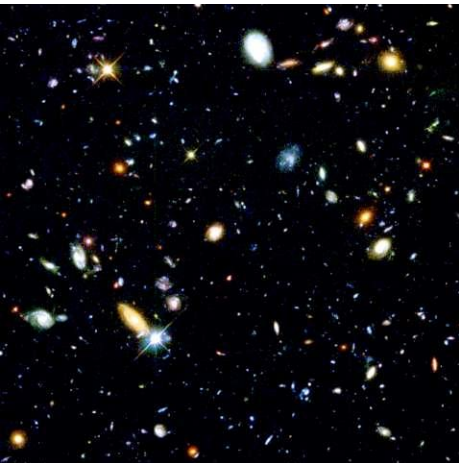
Keplér Alem Téléskopi

- 2009-3-6-küni qoyup bérilgen
- Saman Yoli Galaksi ning bir qismini tekshürüp, yer sharigha oxshap kétédighan planétalarni, yeni üstide su we hayatliq bar bolush éhtimalliqi bar planétalarni izdeydu
- Bu ilmiy qürülushning meqsidi, Saman Yoli Galaksi diki planétalarning ichide Yer Sharigha oxshap kétédighan planétalar texminen qanche pirsentni igileydighanlighini aydinglashtürüp, Yer Sharigha yéqin rayondin uninggha oxshap kétédighan, hayatliq mewjut bolalaydighan planétadin birni tépishning éhtimalliqi qanchilik ikenlikini éniqlap chiqish



Kainatta Texminen 200 Milyard Galaksi Bar

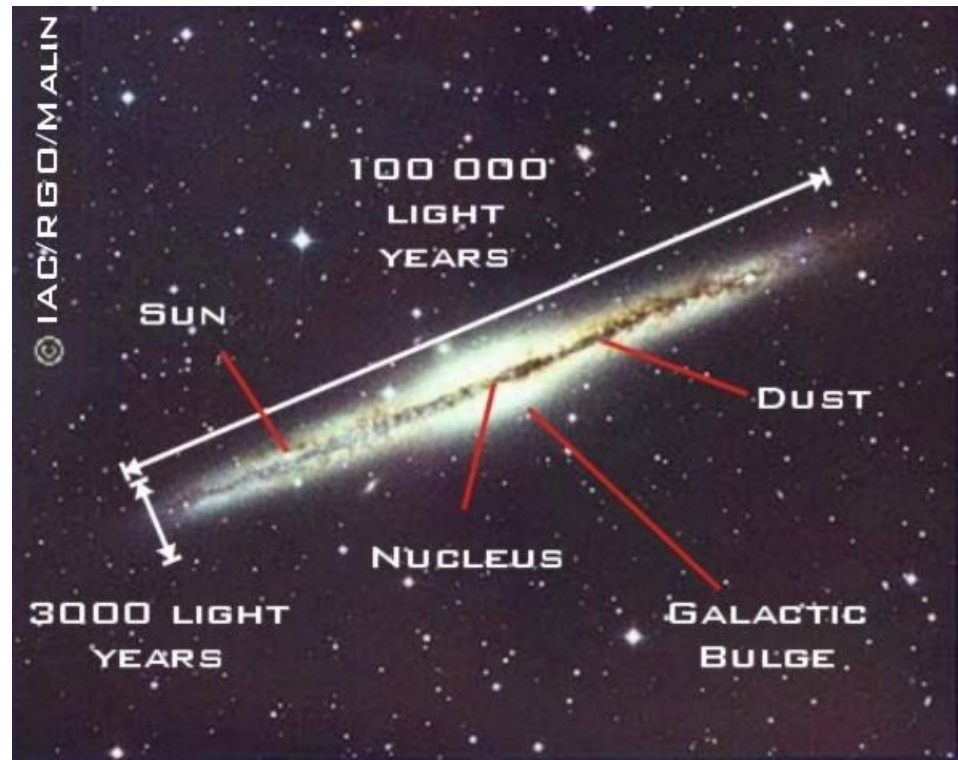
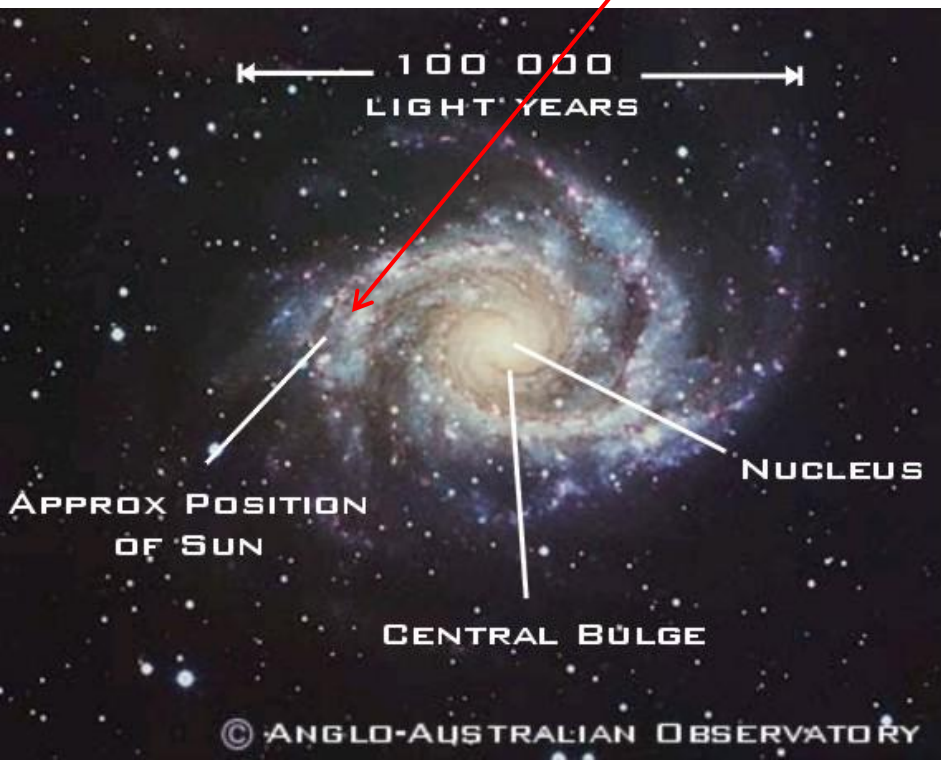
- Kainatta texminen 200 milyart Galaksi bar
- Biz yashawatqan quyash sistémisi jaylashqan Saman Yoli Galaksi ashu 200 milyard Galaksining biri
- Bu bettikisi Habul (Hubble) alem téléskopi tartqan resimler



Saman Yoli Galaksi de 200 Milyard Yultuz Bar

- Salam Yoli Galaksi texminen bir texsige oxshaydu—Dairisi chong, emma népiz
- Texsining kengliki 100,000 nur yili kélidu
- Texsining qélinliqi 3000 nur yili kélidu
- Bir nur yili = (300,000 Km) x (365 kün) x (24 saet) x (60 minut) x (60 sékont) = 9,460,800,000,000 Km (Km = Kilométir)

Künning orni

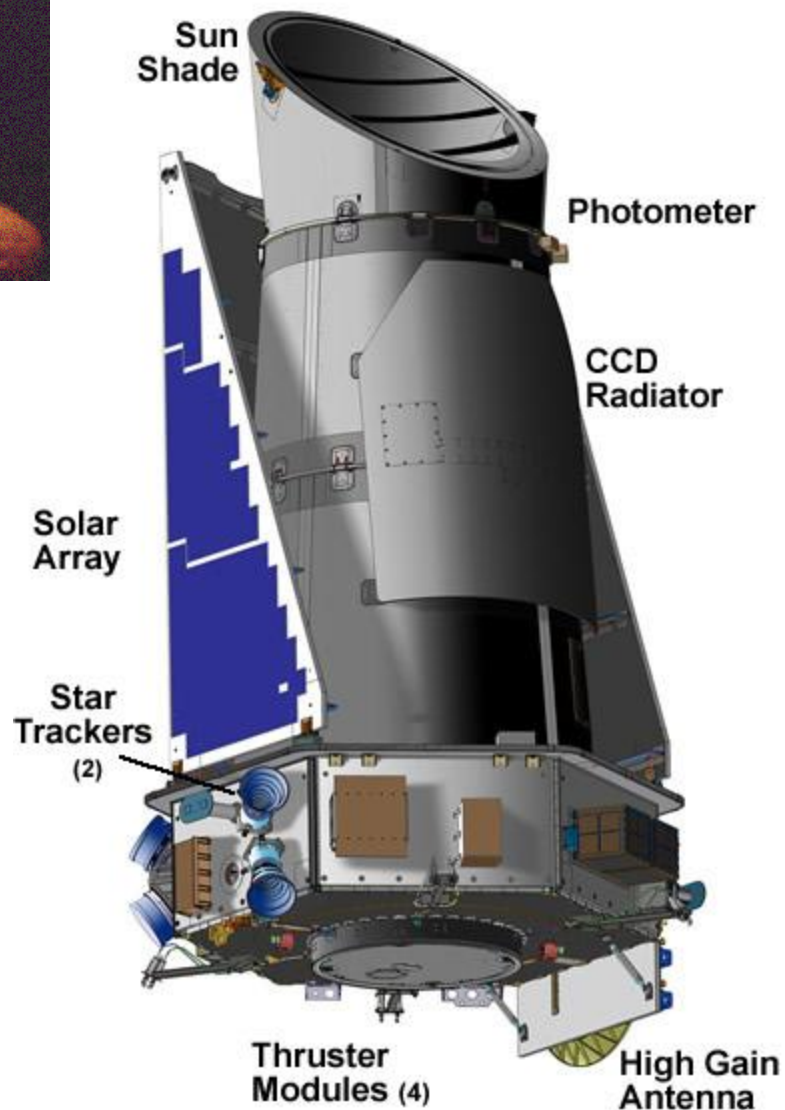


“Kepler” Dégen Isimning Kélip Chiqishi

- Bu isim Germaniye alimi Johannes Kepler (1571—1630) ning namida qoyulghan
- Kepler Mars ning orbitisining shekli bir Éllipis ikenlikini tunji qétim bayqighan
- Astronomiyige uningdin bashqimu nurgun töhpilerni qoshqan
- Kepler téléskopining asasliq eyniking di’amétiri $D=1.4\text{m}$ (Hubble $D = 2.4\text{m}$)
- Kepler téléskopining wezipe ötesh mudditi 3.5 yil bolup, 2012-4-5-küni uning mudditi 2016-yilighiche uzartildi

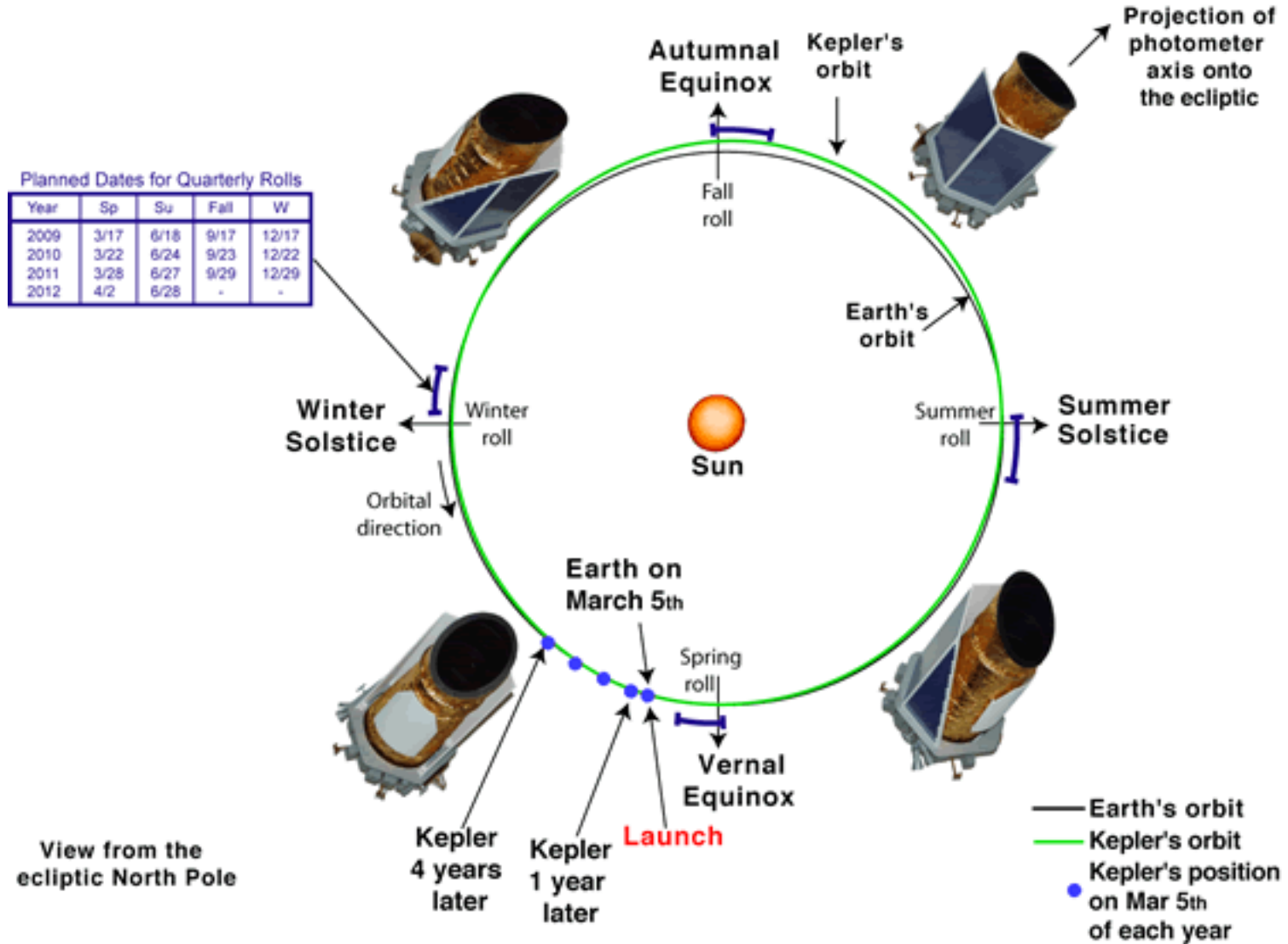


Kepler Téléskopining Asasiy Tüzülishi

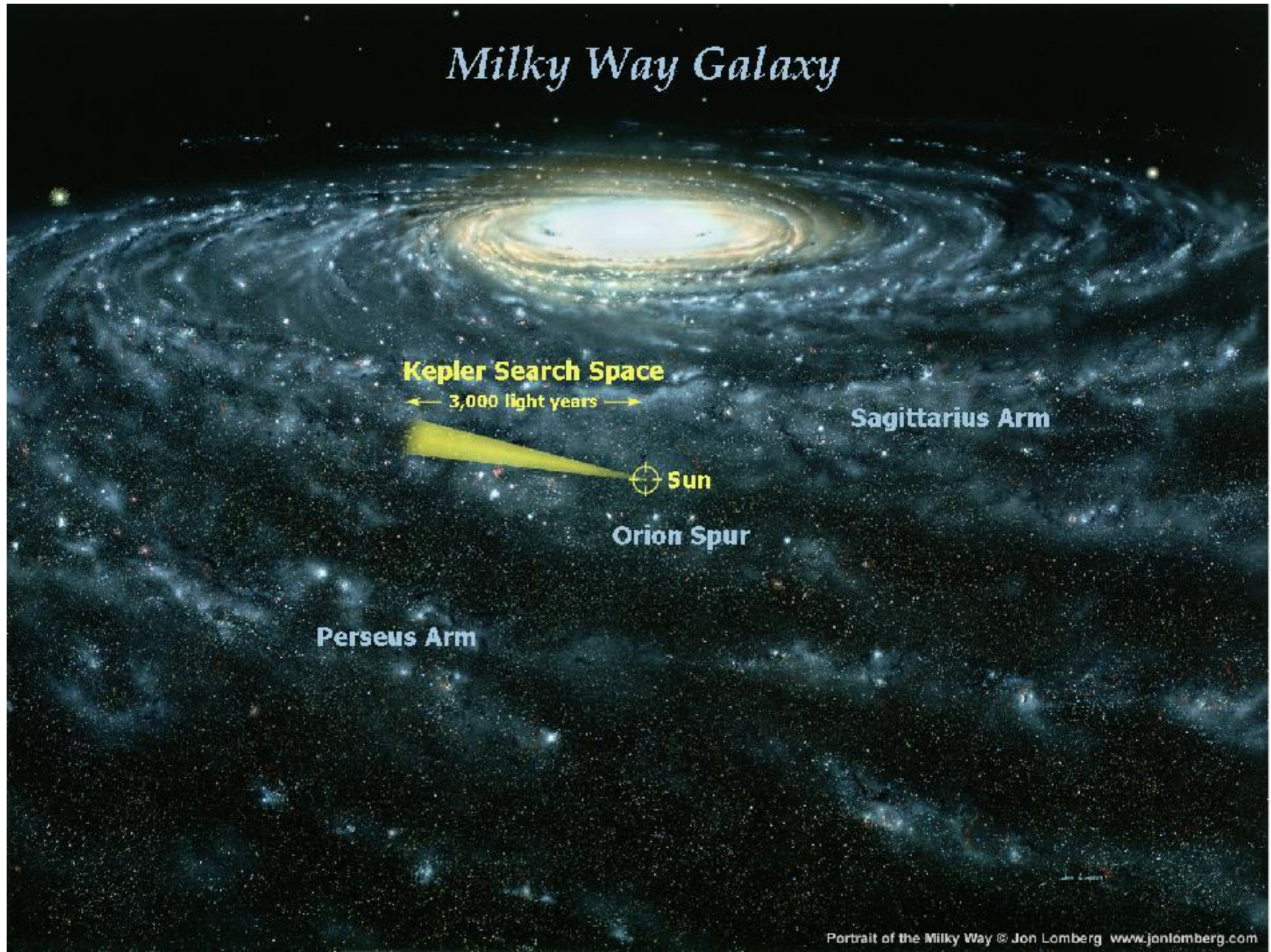


Kepler Télioskopining Orbiti

- Yer Shari bilan oxshash orbitta, yer sharidin sel astiraq aylanidu

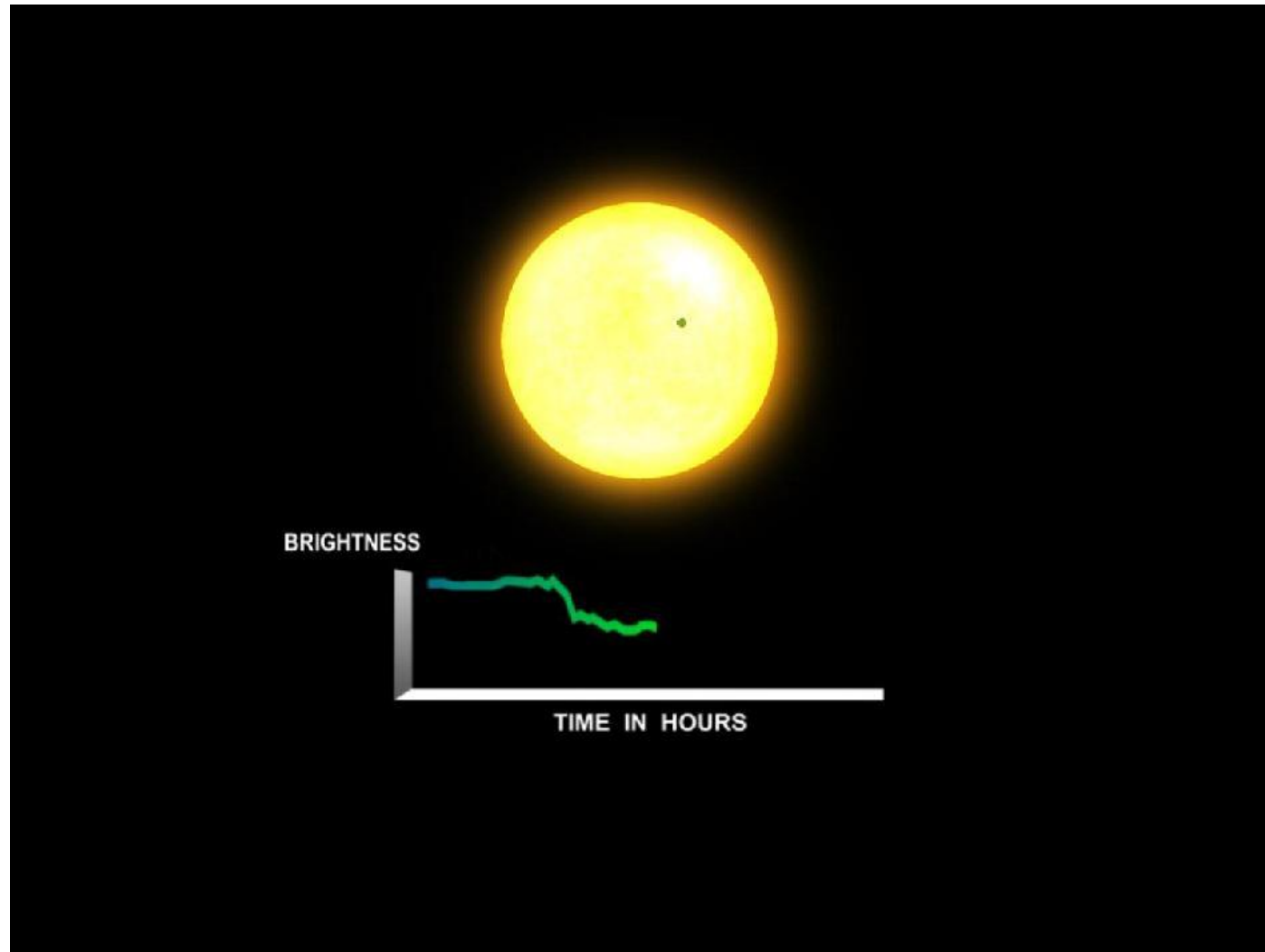


Kepler Télioskopining Tekshürüş Rayoni—3000 Nur Yili



Planéta tépish Usuli—Otkunche Usul (Transit Method)

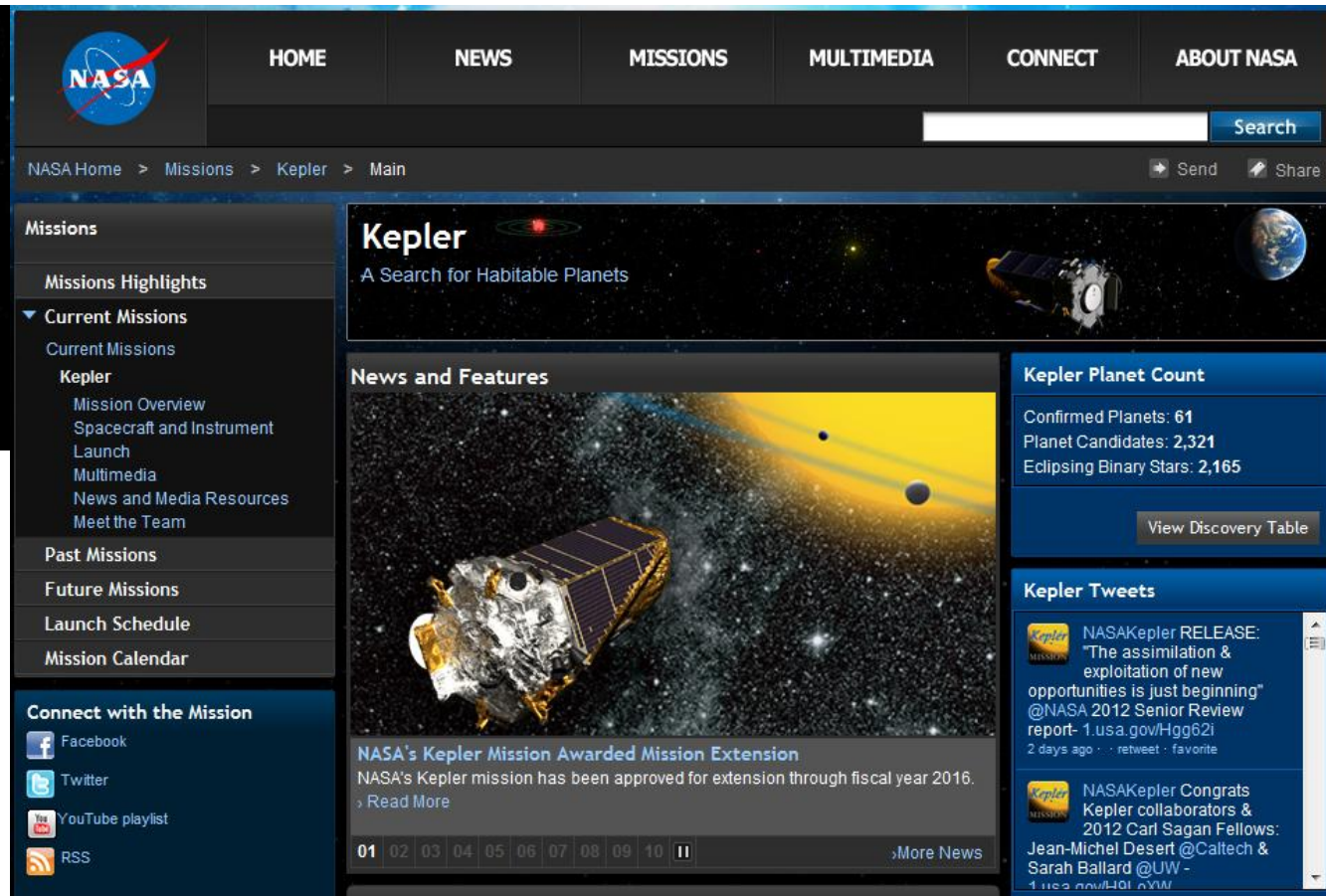
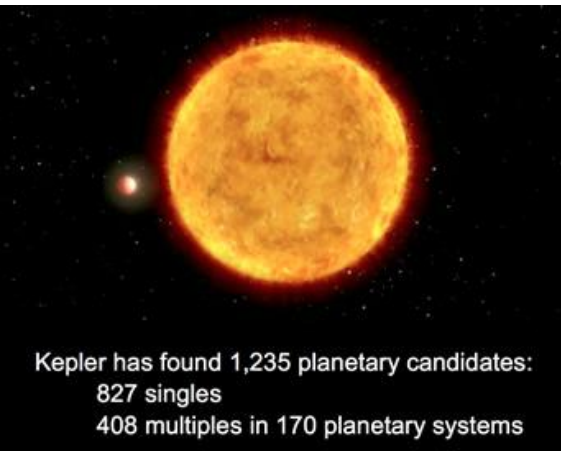
- Yultuzning aldidin bir planéta ötkende, téléskop bilen ölçewatqan ashu yultuzning nuri bir az ajizlaydu
- Bundaq planét yultuzning yüzidiki bir chékittek körinidu
- Mushu chékitning peyda bolush we yoqulush waqti qatarliq uchurlardin planétaning
- Orbiti
- Chong-kichiklikli
- Témperaturisi
- Qatarliqlarni hésablap chiqqili bolidu.
- Bulardin bu planétada hayatliq saqlash mumkinmu-emesmu dégenni bilgili bolidu
- Bu hésablash “Kepler ning 3-planéta heriket qanuniyiti” (Kepler’s 3rd Law of planetary motion) arqiliq élip bérilidu



Kepler Hazirgiche 61 Planéta Tapti

- Yer Sharigha oxshap kétidighan planéta din 61 si tépildi
- Tapmaqchi bolghan planétalarning jemi kandidat sani 2,321
- Hazirgiche tépilghan kandidatlarning sani 1,235
- Ularning ichide 827 danisi yalghuz planétalar, qalghan 408 danisi köp-planéta sistémisida bolup, ular jemi 170 yultuz sistémisigha tarqalghan

2012-4-7 elan qilin'ghan



The screenshot shows the NASA website's Kepler mission page. The top navigation bar includes links for HOME, NEWS, MISSIONS, MULTIMEDIA, CONNECT, and ABOUT NASA. The main content area features a large image of the Kepler spacecraft in space, with the text "Kepler A Search for Habitable Planets". Below this, there is a "News and Features" section with a headline "NASA's Kepler Mission Awarded Mission Extension" and a "Kepler Planet Count" section showing 61 confirmed planets and 2,321 candidates. A "Kepler Tweets" section is also visible at the bottom right.

Missions

- Missions Highlights
- Current Missions
 - Kepler
 - Mission Overview
 - Spacecraft and Instrument
 - Launch
 - Multimedia
 - News and Media Resources
 - Meet the Team
- Past Missions
- Future Missions
- Launch Schedule
- Mission Calendar

Connect with the Mission

- Facebook
- Twitter
- YouTube playlist
- RSS

Kepler Planet Count

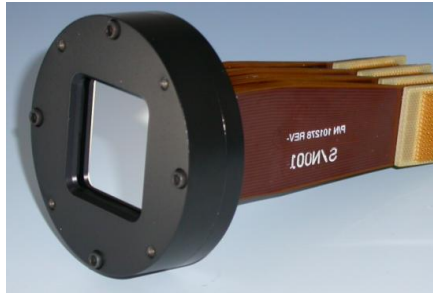
Confirmed Planets: 61
Planet Candidates: 2,321
Eclipsing Binary Stars: 2,165

[View Discovery Table](#)

Kepler Tweets

NASA's Kepler Mission Awarded Mission Extension
NASA's Kepler mission has been approved for extension through fiscal year 2016.
[Read More](#)

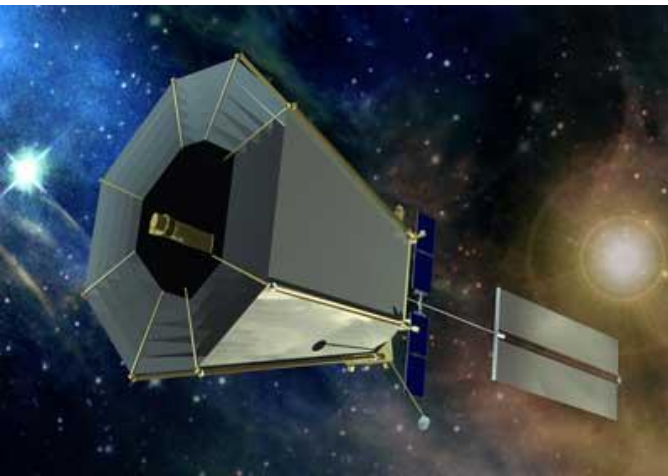
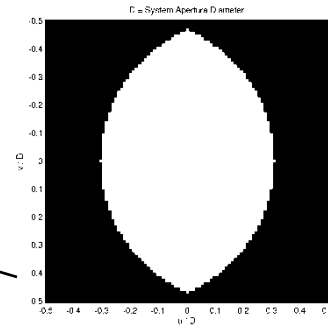
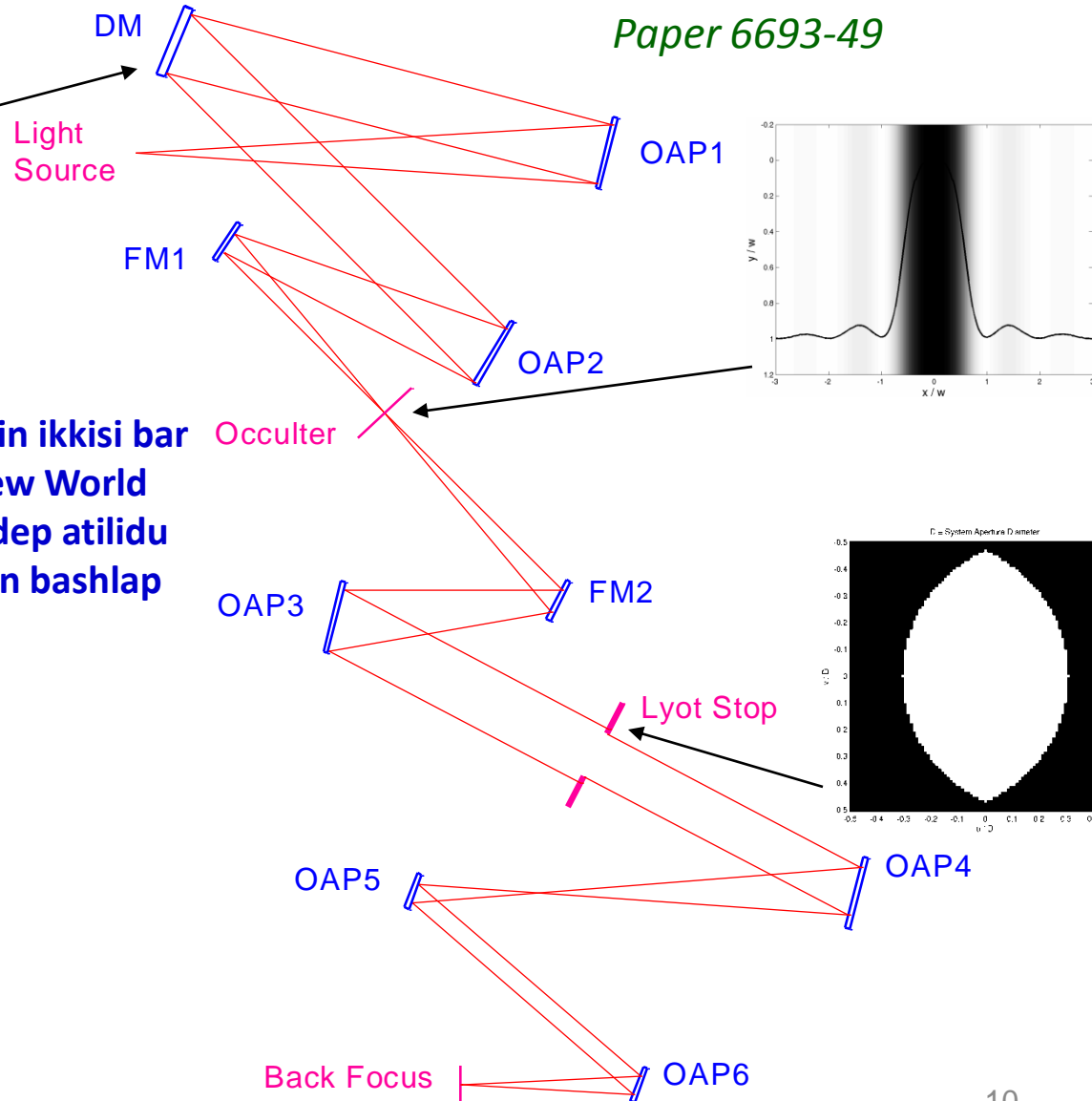
Tashqiy Planétalarni Biwaste Körüdighan Téléskop: In'glizche “Terrestrial Planet Finder (TPF)”



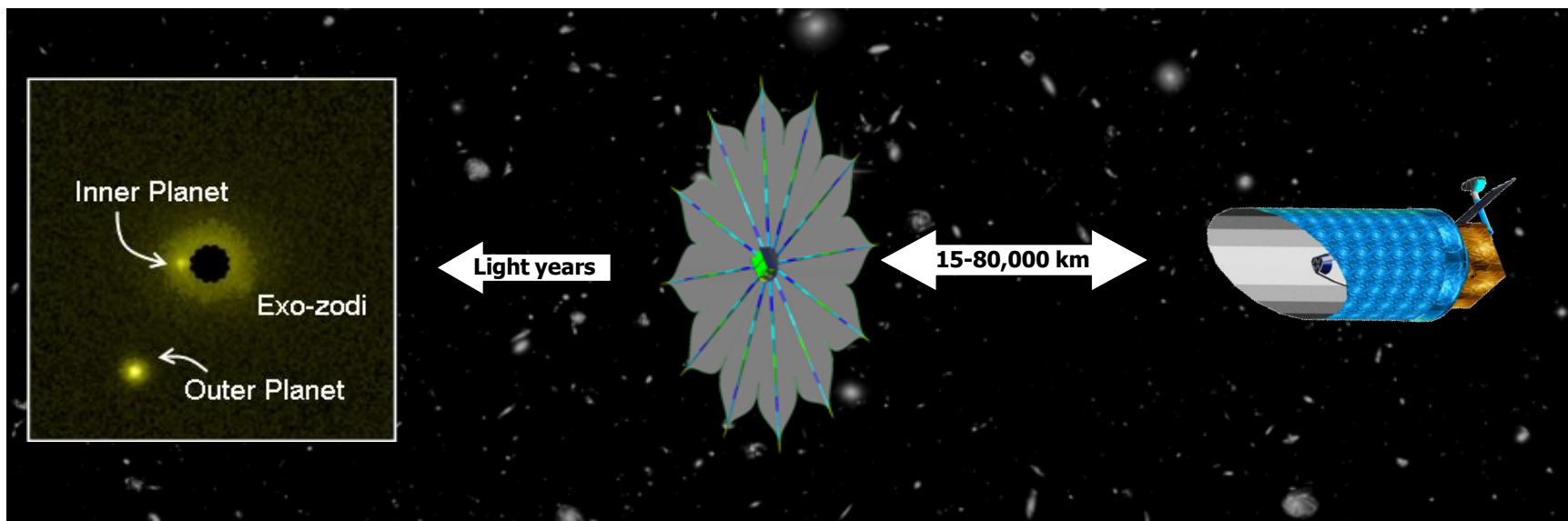
Deformable-Mirror (DM)
with 32x32 actuators

- Hazir tetqiqat élip beriwatqan lahiyidin ikkisi bar
- Biri “TPF-Coronagraph”, yene biri “New World Observer” (Yéngi Dunya Küzetküchi) dep atilidu
- Bu bettikisi TPF-C, menmu 2005-yilidin bashlap mushu qurulushqa qatnishiwatimen

*Sidick et al., SPIE 07
Paper 6693-49*



“Yéngi Dunyani Kúzetküchi” ning Bir Kórinishi



- Bir alahide lahiylen'gen, alem téléskopi bilen tashqiy yultuz ariliqida turidighan maska yultuzning nurini tosup qélip, tapmaqchi bolghan planétaning nurini tosmaydu

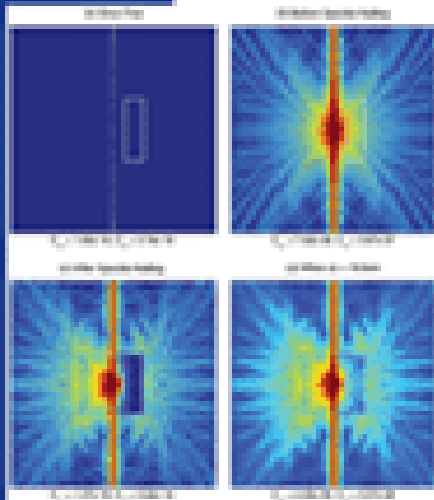
Méning Ilmiy Maqalilirimdin Bir Misal

Requirements on optical-density and phase dispersion of imperfect band-limited occulting masks in a broadband coronagraph

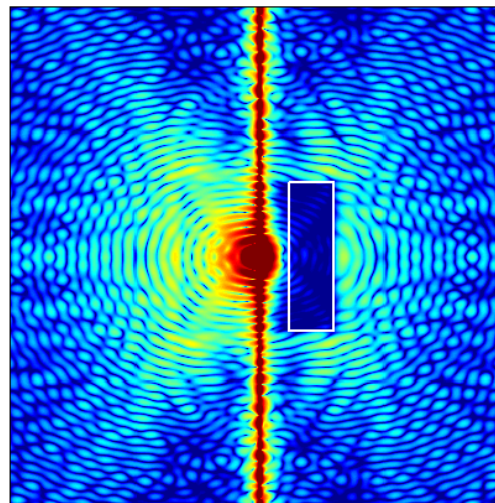
Erkin Sidick

Applied Optics, Vol. 46, No. 30, October 20, 2007

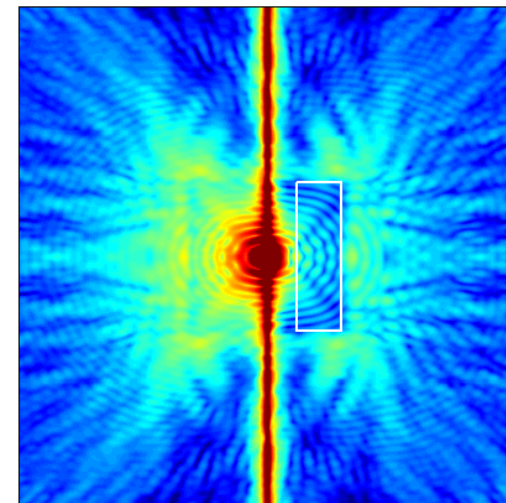
Contrast Map (Log-Scale)



(c) After Speckle-Nulling



(d) When $\Delta\lambda = 78.5\text{nm}$



Applied Optics

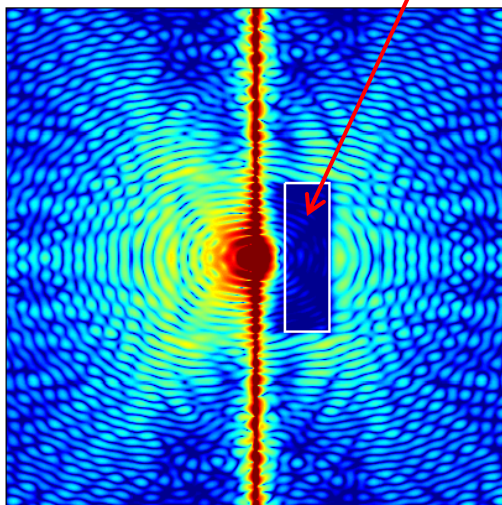


October 2007

Eng Yéngi Netijilerdin Bir Misal

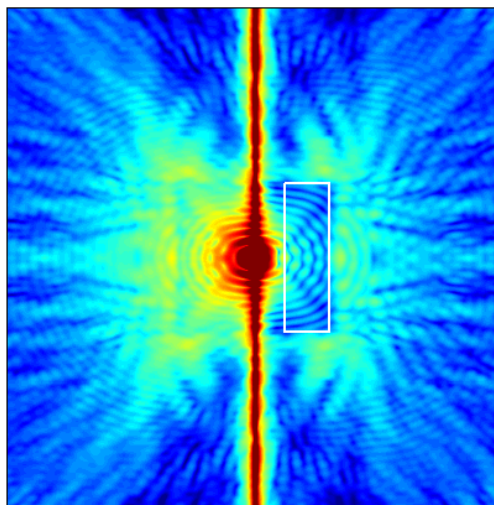
Hésablighan “qarangghu töshük”—Erkin Sidiq

(c) After Speckle-Nulling



$C_m = 1.27e-10$, $C_4 = 3.46e-10$

(d) When $\Delta\lambda = 78.5\text{nm}$



$C_m = 4.26e-09$, $C_4 = 3.27e-08$



2012-2-17



Paydilinsh Matériyalliri

- <http://kepler.nasa.gov/Mission/QuickGuide/>
- <http://www.slashgear.com/nasa-extends-kepler-earth-a-like-search-until-2016-05221697/>
- http://www.nasa.gov/mission_pages/kepler/multimedia/images/kepler-target-in-the-milkyway.html
- Erkin Sidiqning “Space Télésopes for Direct Detection of Exo-Planéts” dégen dokladi