

Target for Subaru Telescope

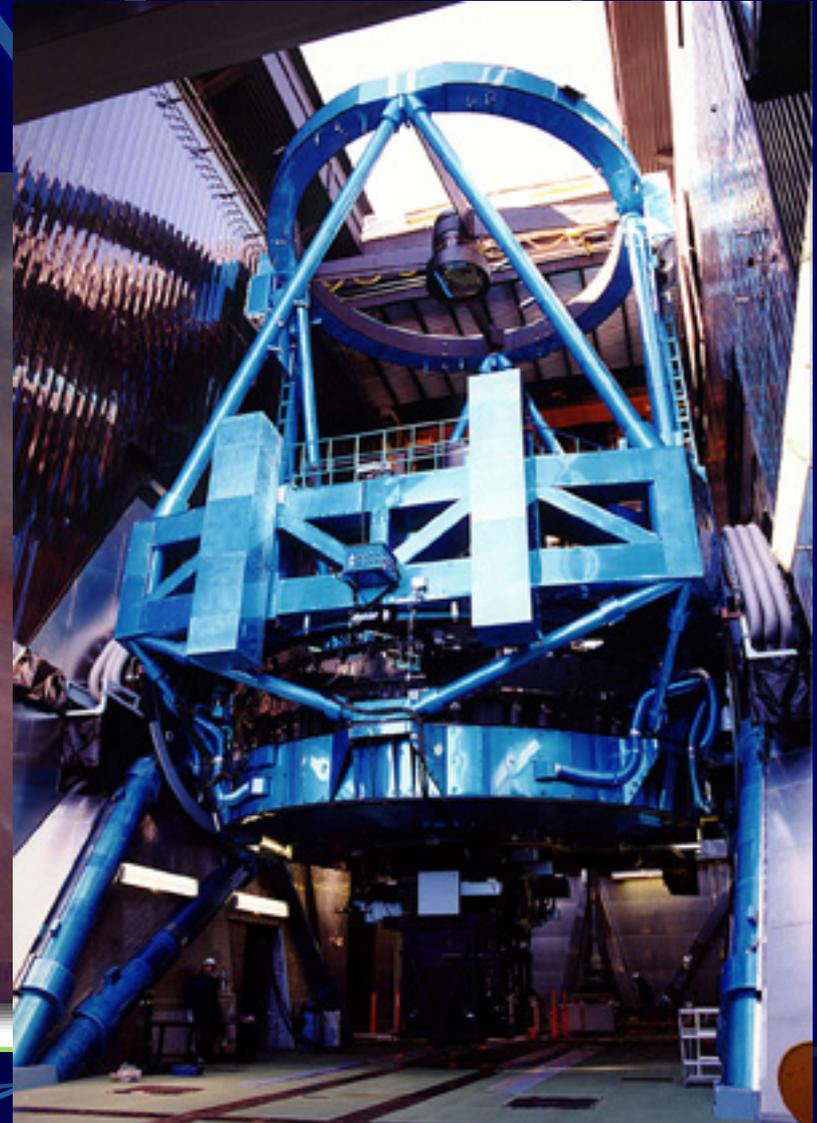


Semester S10B:

August 1, 2010 -- January 31, 2011

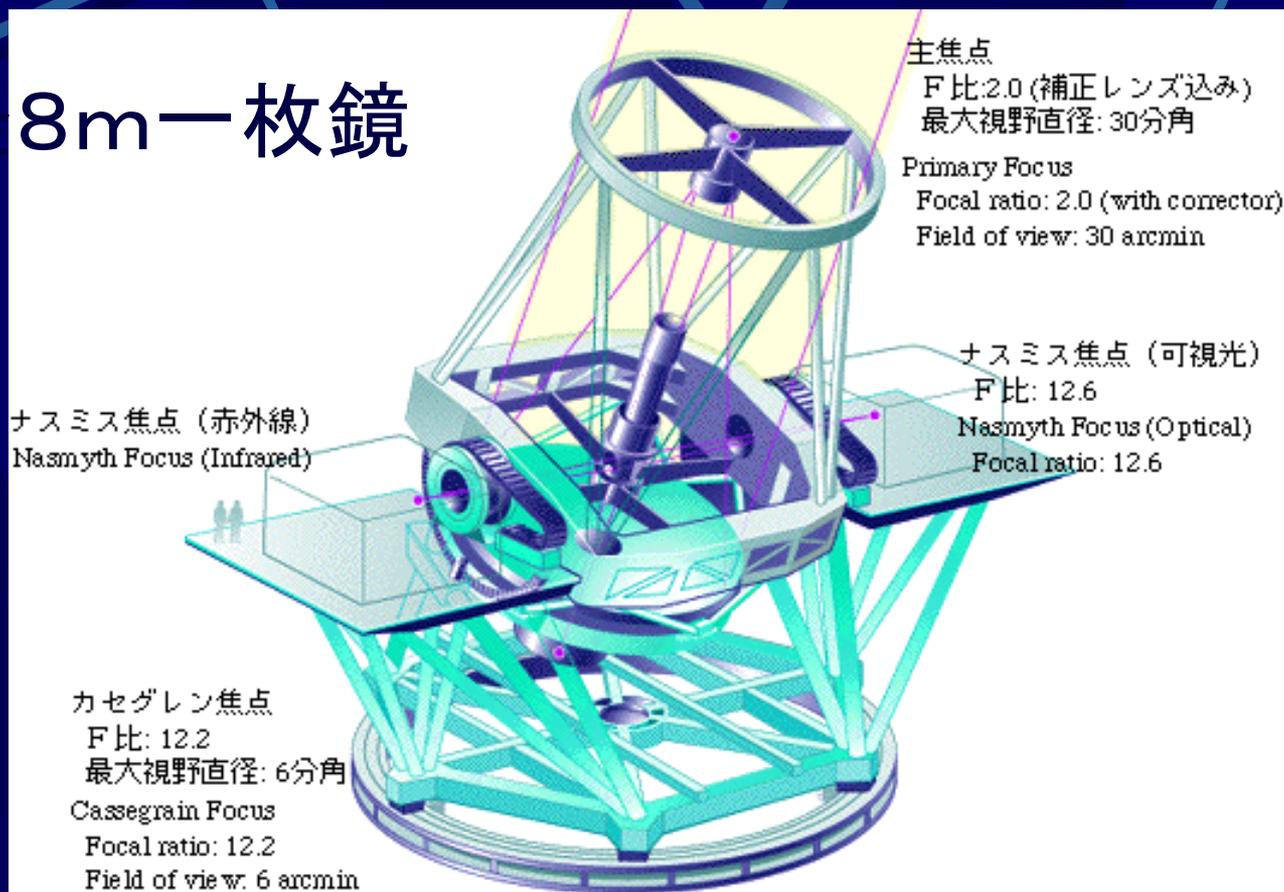
Junichi Watanabe(NAOJ)

Subaru Telescope



Subaru Telescope

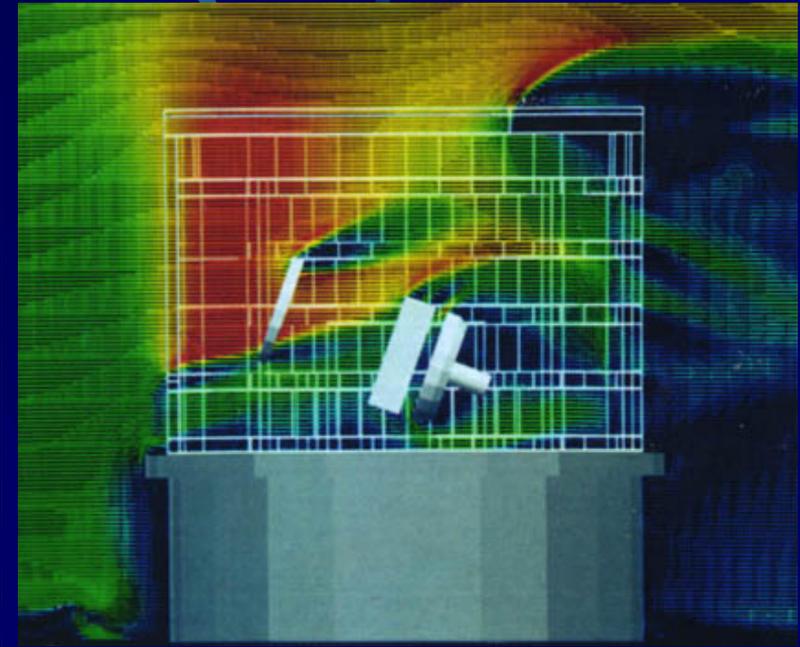
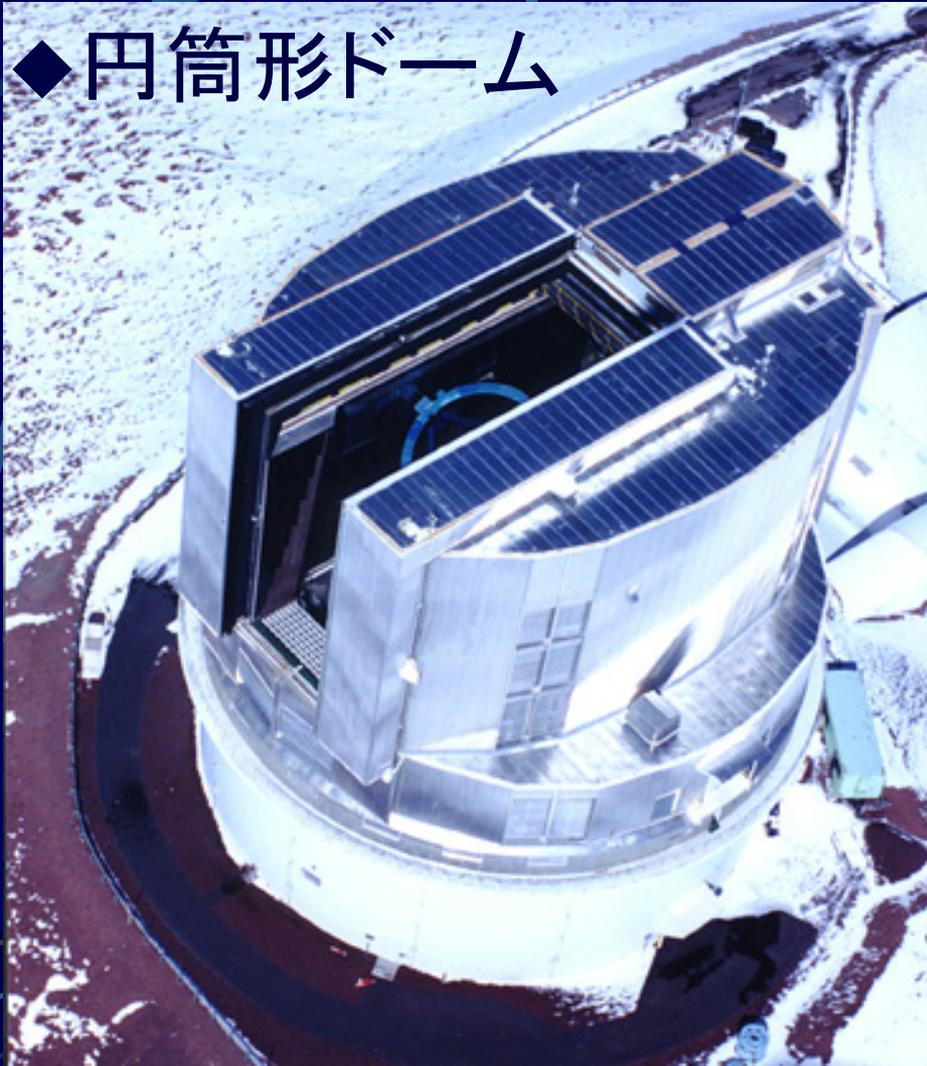
◆口径8m一枚鏡



速藤孝悦・画 日経サイエンス1996年2月号より
Illustration by Takaetsu Endo, taken from Nikkei Science 1996

すばる望遠鏡のしくみ

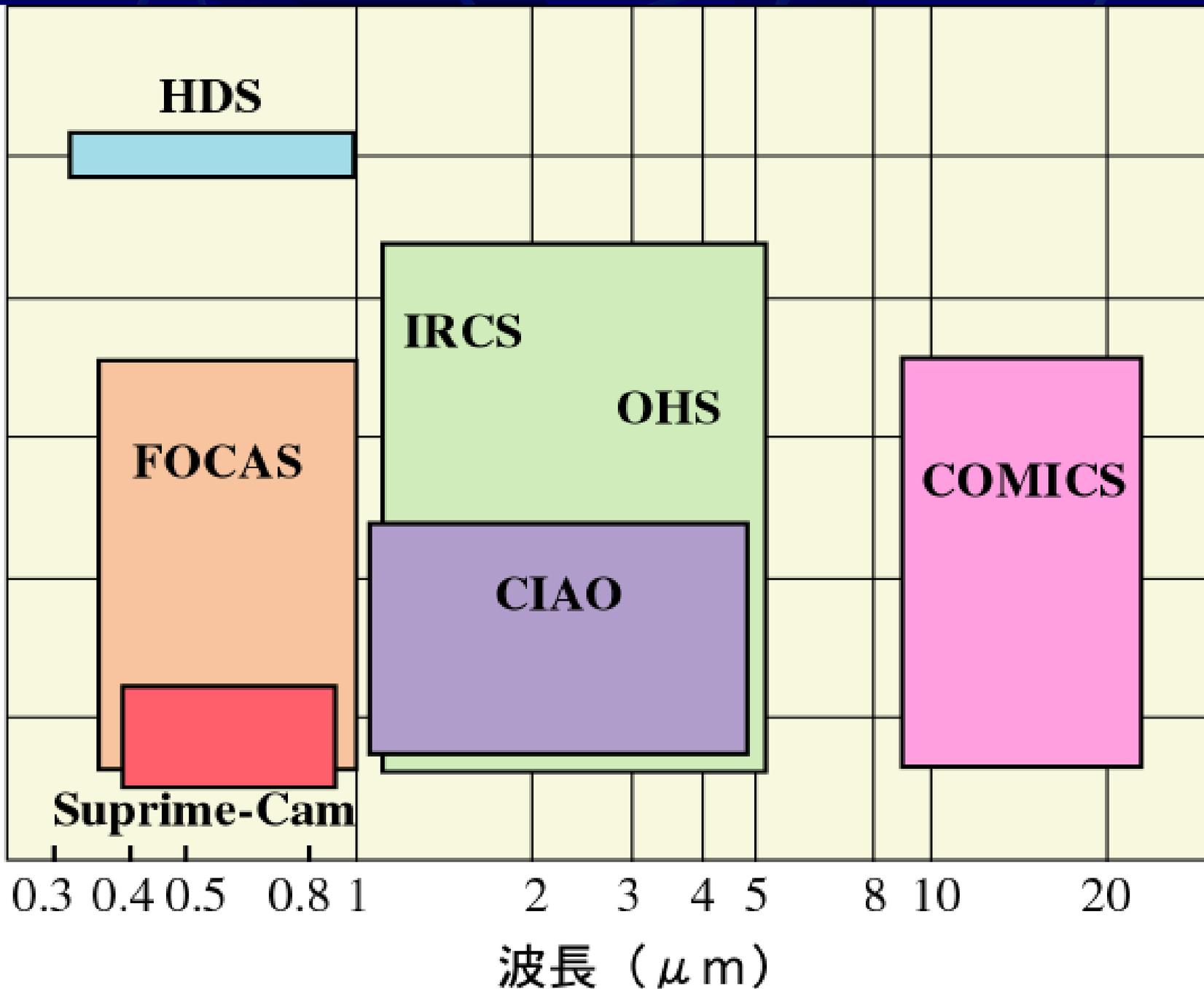
◆円筒形ドーム



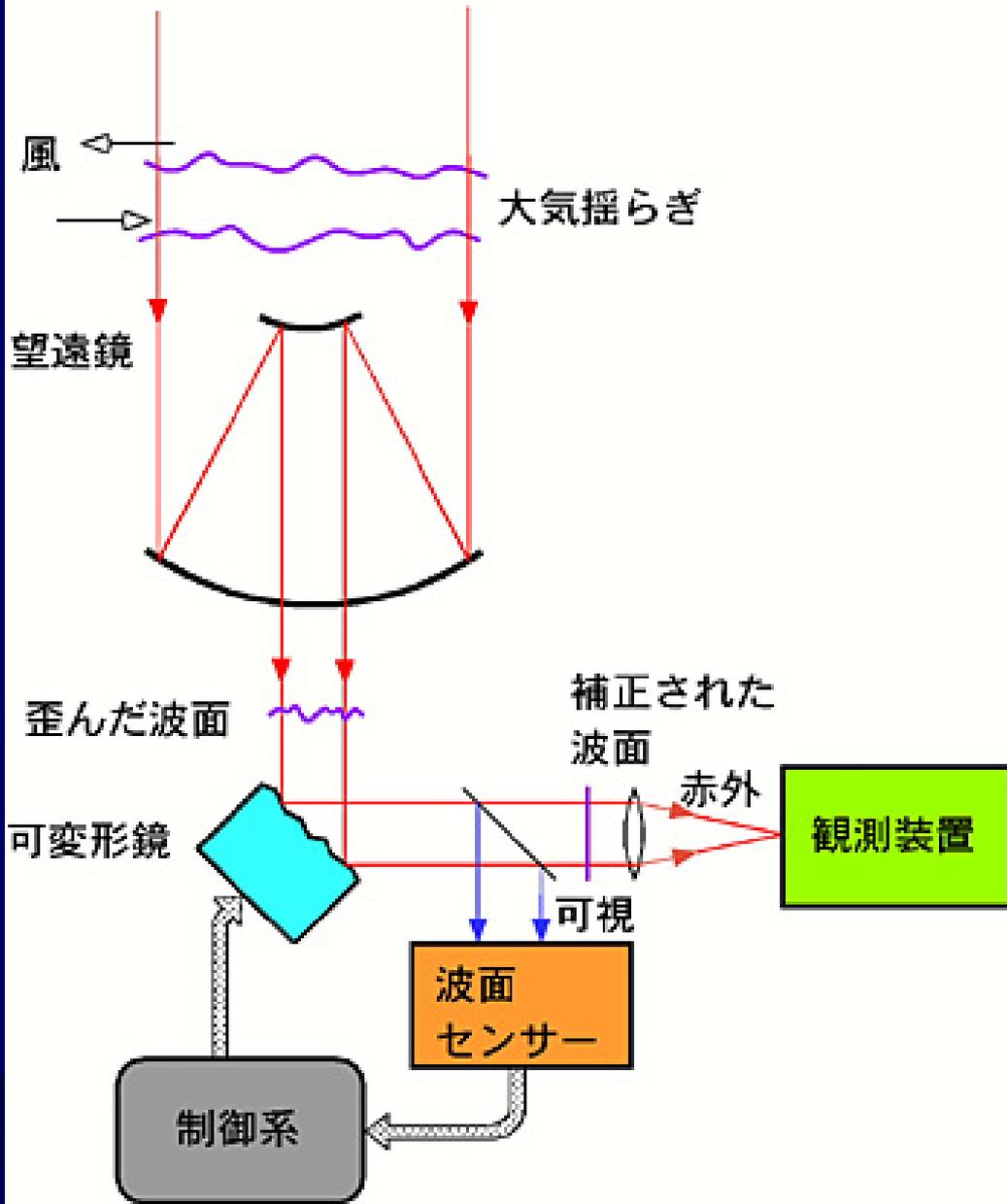
Subaru Telescope

- ◆ Japanese Common Use facilities
- ◆ Proposal competition (3-5times)
- ◆ 7 instruments for 3 foci
- ◆ Almighty telescope for responding most request by astronomers

波長分解能 ($\lambda / \Delta\lambda$)

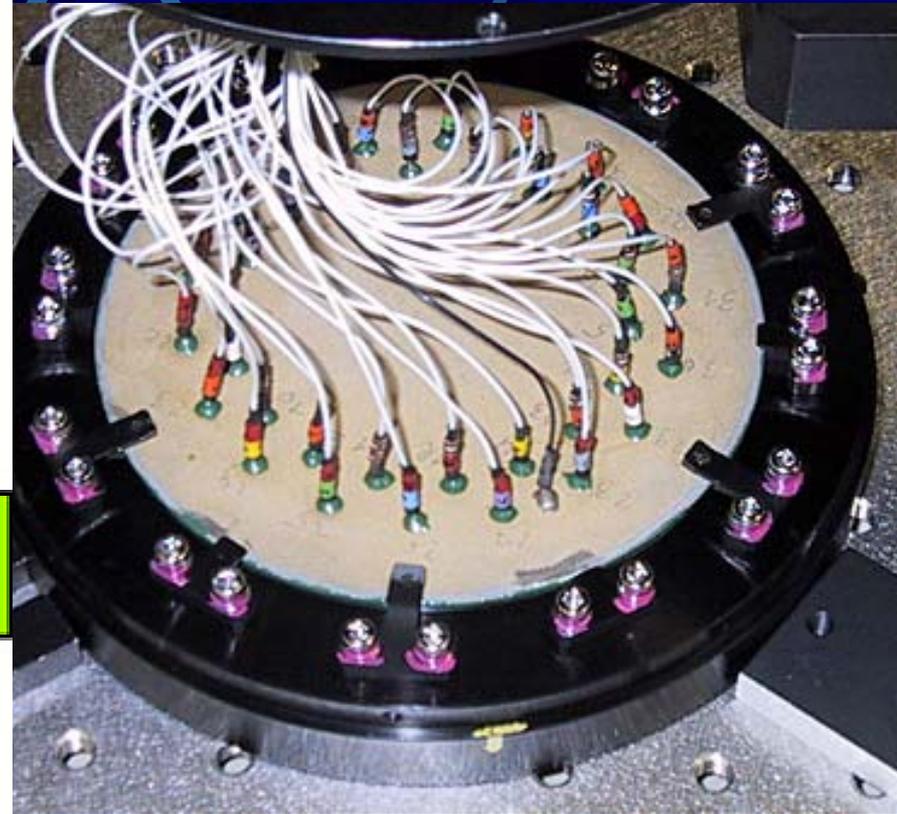


ガイド星
★
● 天体



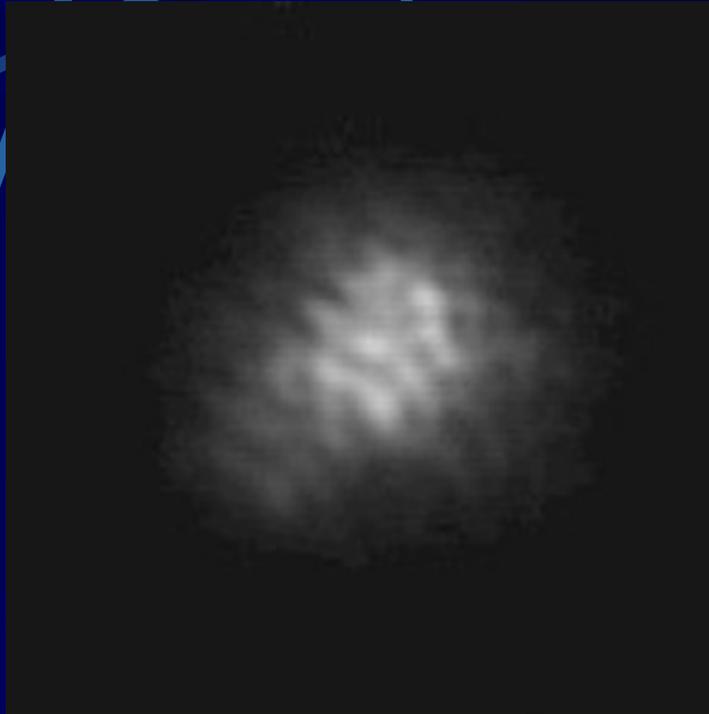
AO

波面補償光学装置

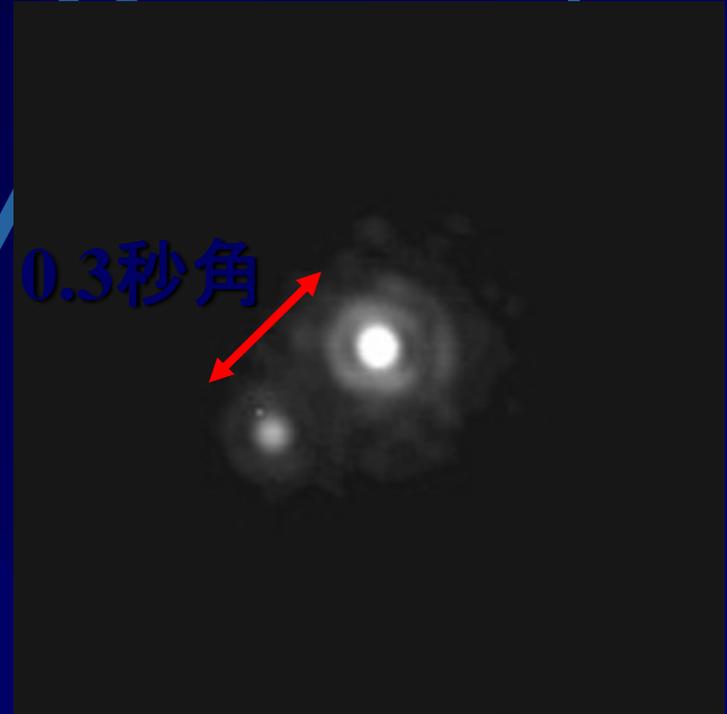


鏡の直径11cm

Exceeds Spatial resolution exceeds Hubble

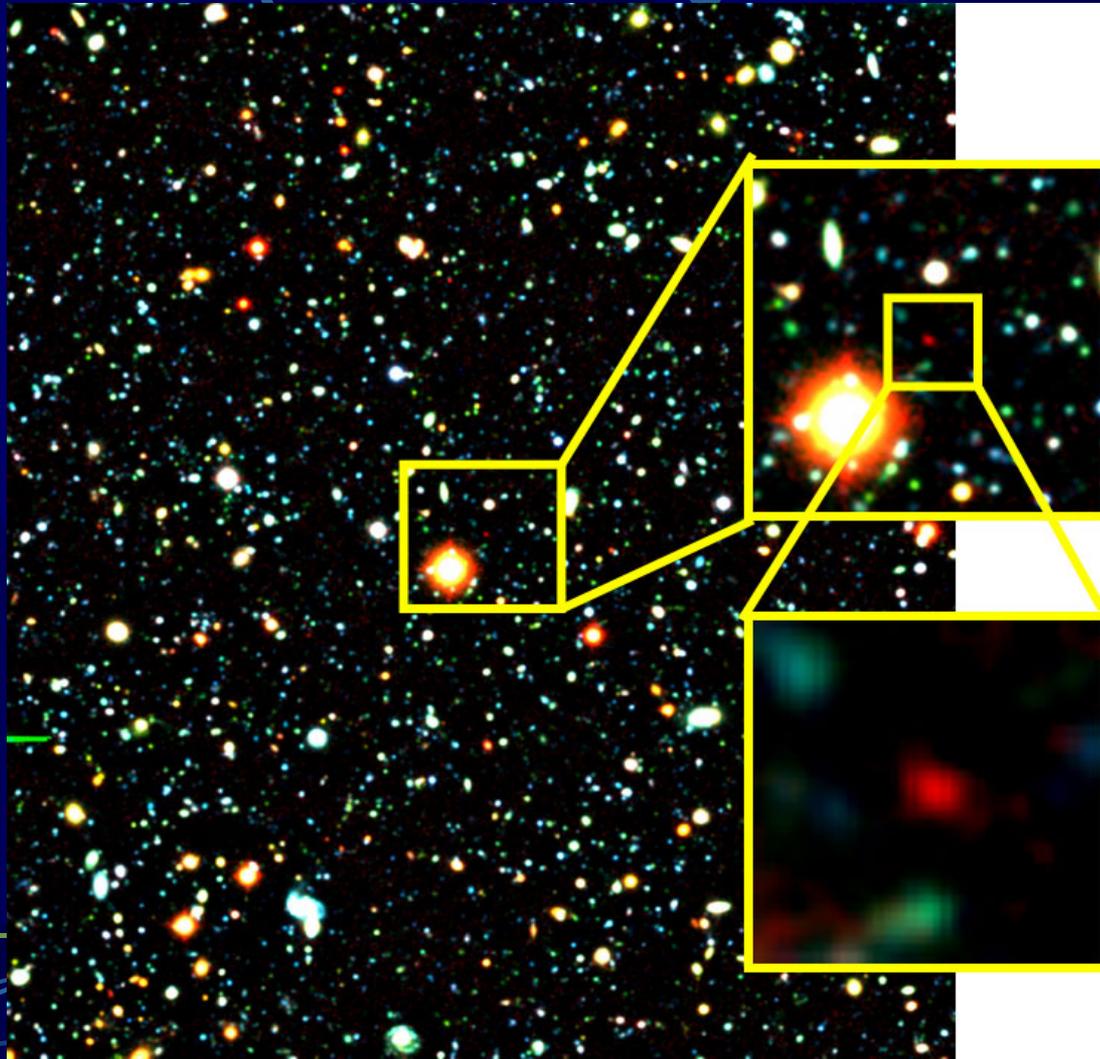


AOなし



AOあり

World record of most distant galaxy



List of distant objects

表 1: 最も遠い銀河ベストテン (2006 年 9 月 14 日)

順位	天体名	座標	赤方偏移	距離 #	論文	公表日
1	IOK-1	J132359.8+272456	6.964	128.826	家ほか	2006 年 9 月 14 日
2	SDF ID1004	J132522.3+273520	6.597	128.250	谷口ほか	2005 年 2 月 25 日
3	SDF ID1018	J132520.4+273459	6.596	128.248	柏川ほか	2006 年 4 月 5 日
4	SDF ID1030	J132357.1+272448	6.589	128.238	柏川ほか	2006 年 4 月 5 日
5	SDF ID1007	J132432.5+271647	6.580	128.222	谷口ほか	2005 年 2 月 25 日
6	SDF ID1008	J132518.8+273043	6.578	128.219	谷口ほか	2005 年 2 月 25 日
6	SDF ID1001	J132418.3+271455	6.578	128.219	小平ほか	2003 年 4 月 25 日
8*	HCM-6A	J023954.7-013332	6.560	128.189	Hu ほか	2002 年 4 月 1 日
9	SDF ID1059	J132432.9+273124	6.557	128.184	柏川ほか	2006 年 4 月 5 日
10	SDF ID1003	J132408.3+271543	6.554	128.178	谷口ほか	2005 年 2 月 25 日

距離は宇宙年齢を 136.6 億歳とするモデルによる値。単位は億光年

* この銀河のみケック望遠鏡で発見されたが、他はすべてすばる望遠鏡による発見。

How to submit proposal

- ★ <http://www.subarutelescope.org/Observing/index.html>
- ★ Deadline comes twice a year
- ★ Proposal A4-3-4pages Scientific Justification
A4 - 2pages limit (English)

Refereeing

- ★ 5 anonymous referees
- ★ Based on the referees' evaluation, the Time Allocation Committee is responsible for final assignment of time of common use.
- ★ **Observatory time (for staffs and maintenance)**
director's time, Univ. Hawaii time (15%)

Status of proposals(-03)

Semester		Proposals			Nights		
		Submitted	Accepted	Ratio	Requested	Awarded	Ratio
S00	2000/12 - 2001/03	114	26	23%	223	36	16%
S01A	2001/04 - 2001/08	105	27	26%	204	36	18%
S01B	2001/10 - 2002/03	160	29	18%	337	47	14%
S02A	2002/04 - 2002/09	186	37	20%	410	69	17%
S02B	2002/10 - 2003/03	193	38	20%	448	74	17%
S03A	2003/04 - 2003/10	195	40	20%	440	76	17%

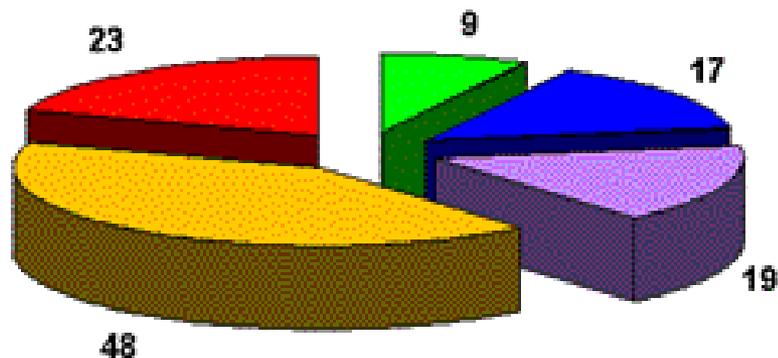
In the case of 2000

3. Scientific Category

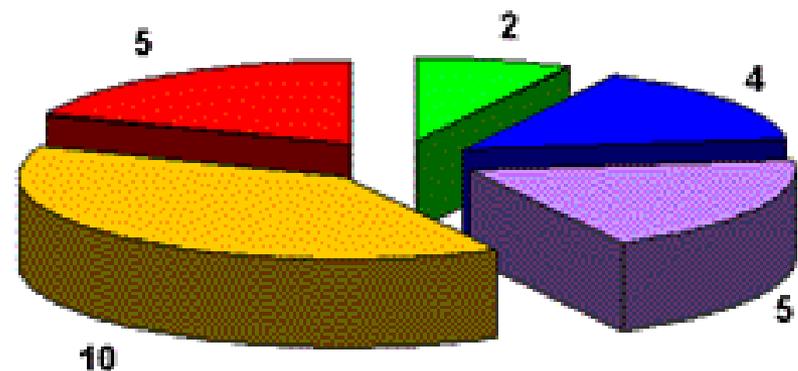
- | | | | |
|--|--|--|---|
| <input checked="" type="checkbox"/> Solar System | <input type="checkbox"/> Normal Stars | <input type="checkbox"/> Extrasolar Planets | <input type="checkbox"/> Star and Planet Formation |
| <input type="checkbox"/> Compact Objects and SNe | <input type="checkbox"/> Milky Way | <input type="checkbox"/> Local Group | <input type="checkbox"/> ISM |
| <input type="checkbox"/> Nearby Galaxies | <input type="checkbox"/> Starburst Galaxies | <input type="checkbox"/> AGN and QSO Activity | <input type="checkbox"/> QSO Absorption Lines and IGM |
| <input type="checkbox"/> Clusters of Galaxies | <input type="checkbox"/> Gravitational Lenses | <input type="checkbox"/> High- <i>z</i> Galaxies | <input type="checkbox"/> Deep Surveys |
| <input type="checkbox"/> Large-Scale Structure | <input type="checkbox"/> Cosmological Parameters | <input type="checkbox"/> Miscellaneous | |

- ■ 太陽系
 - ■ 星と銀河系
 - ■ 星形成と星間物質
 - ■ 系外銀河と活動銀河核
 - ■ 大規模構造形成と宇宙論
- 観測が認められたプロポーザルの数

プロポーザルの数



観測が認められたプロポーザルの数



Schedule of August 2009

Schedule for August 2009

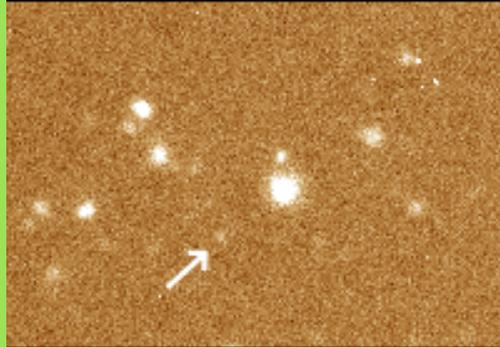
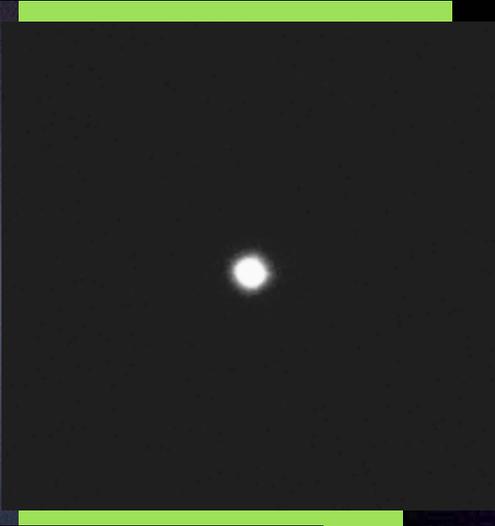
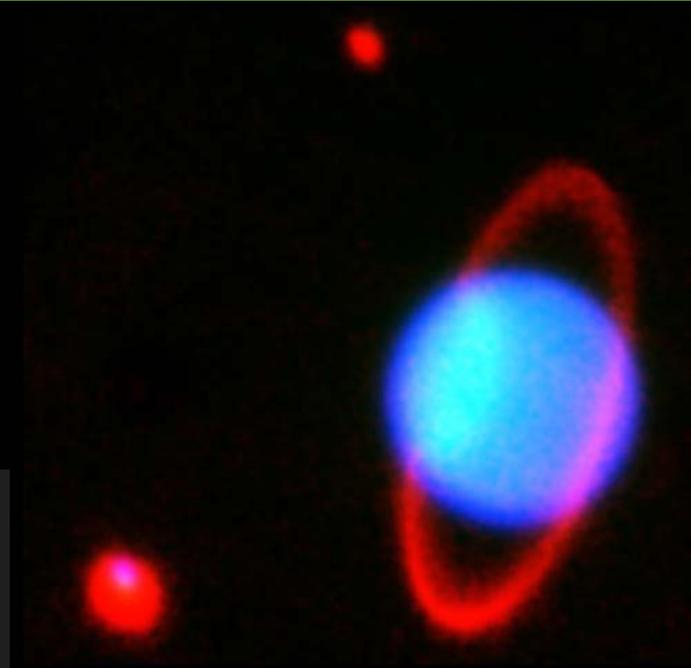
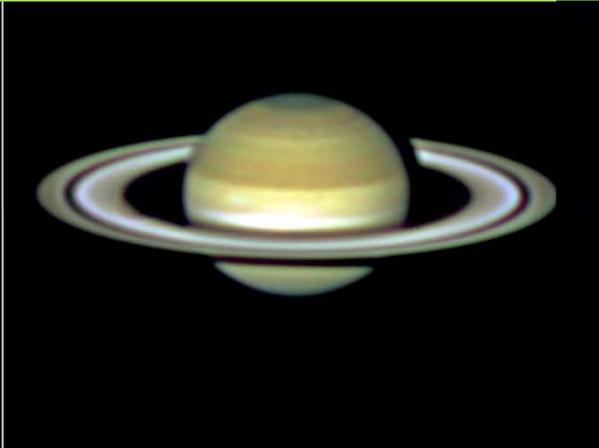
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						Aug 01
						S09B-106 Sakon COMICS
Aug 02	Aug 03	Aug 04	Aug 05 ○	Aug 06	Aug 07	Aug 08
S09B-058 Otsubo COMICS	Eng HiCLAO+AO188			S09B-086 Takeda HDS	S09B-065 Bakos HDS	
Aug 09	Aug 10	Aug 11	Aug 12 ●	Aug 13	Aug 14	Aug 15
S09B-065 Bakos HDS	S09B-024 Lee HDS	TBD	S09B-016 Janison IRCS+AO188			S09B-018 Currie IRCS+AO188
Aug 16	Aug 17	Aug 18	Aug 19	Aug 20 ●	Aug 21	Aug 22
TBD	TBD S09B-045 Maeda FOCAS	S09B-051 Kawabata FOCAS	S09B-093 Usuda FOCAS	Service S-Cam	TBD Service S-Cam	S09B-068 Grossi S-Cam
Aug 23	Aug 24	Aug 25	Aug 26	Aug 27 ●	Aug 28	Aug 29
UH-08B Tonry S-Cam	S09B-127 Nakagawa IRCS+AO188		TBD	S09B-127 Nakagawa IRCS+AO188	TBD	Service COMICS
Aug 30	Aug 31					
S09B-115 Takigawa COMICS	S09B-025 Tsujimoto IRCS					

Way to Subaru

Assignment of telescope time will be proportional to the number of submitted proposals.



More proposals in the solar system science!



Targets

- **Actual observing program will start some time between September 1 and October 1 because of the telescope downtime scheduled in this summer (July through August or September; cf. Table 1 below)**

The semester S10B

- **Actual observing program will start some time between September 1 and October 1 because of the telescope downtime scheduled in this summer (July through August or September; for re-coating of the primary mirror)**
- **Refurbishment of Top-Unit Exchanger (TUE) is planned at an early time of 2011 (maybe around 2011 February).**
- **From Mid-October through January 2011**

The semester S10B

- **Deadline**
- **March 12, 2010 12:00 (Noon) in Japan Standard Time for Normal/Intensive Programs**
- **April 9, 2010 12:00 (Noon) in Japan Standard Time for Service Programs**

Comet 103P/Hartley2

- 103P/Hartley 2 is a Jupiter-family comet.
 - Discovered in 1986 by Malcolm Hartley
 - Period is 6.4 years, next perihelion is **28 October 2010 at 1.059 AU**
 - Inclination is 13.6° , descending node is 27 October 2010
 - Peri.= 181.20282
 - Node =219.76018
 - E = 0.6951276
 - $q = 1.0586909$ ($a = 3.47257$)

Comet 103P/Hartley2

- CO2 abundant comet ?
 - ISO obs. (Colangeli et al. 1999)
 - HST obs.(Weaver et al. 1994)
- No silicate excess?
 - Fomenkova, et al.(1999)
- Crystalline silicate ?
- ISO obs. (Crovisier et al. 2000)

Meteor shower from Comet 103P/Hartley2

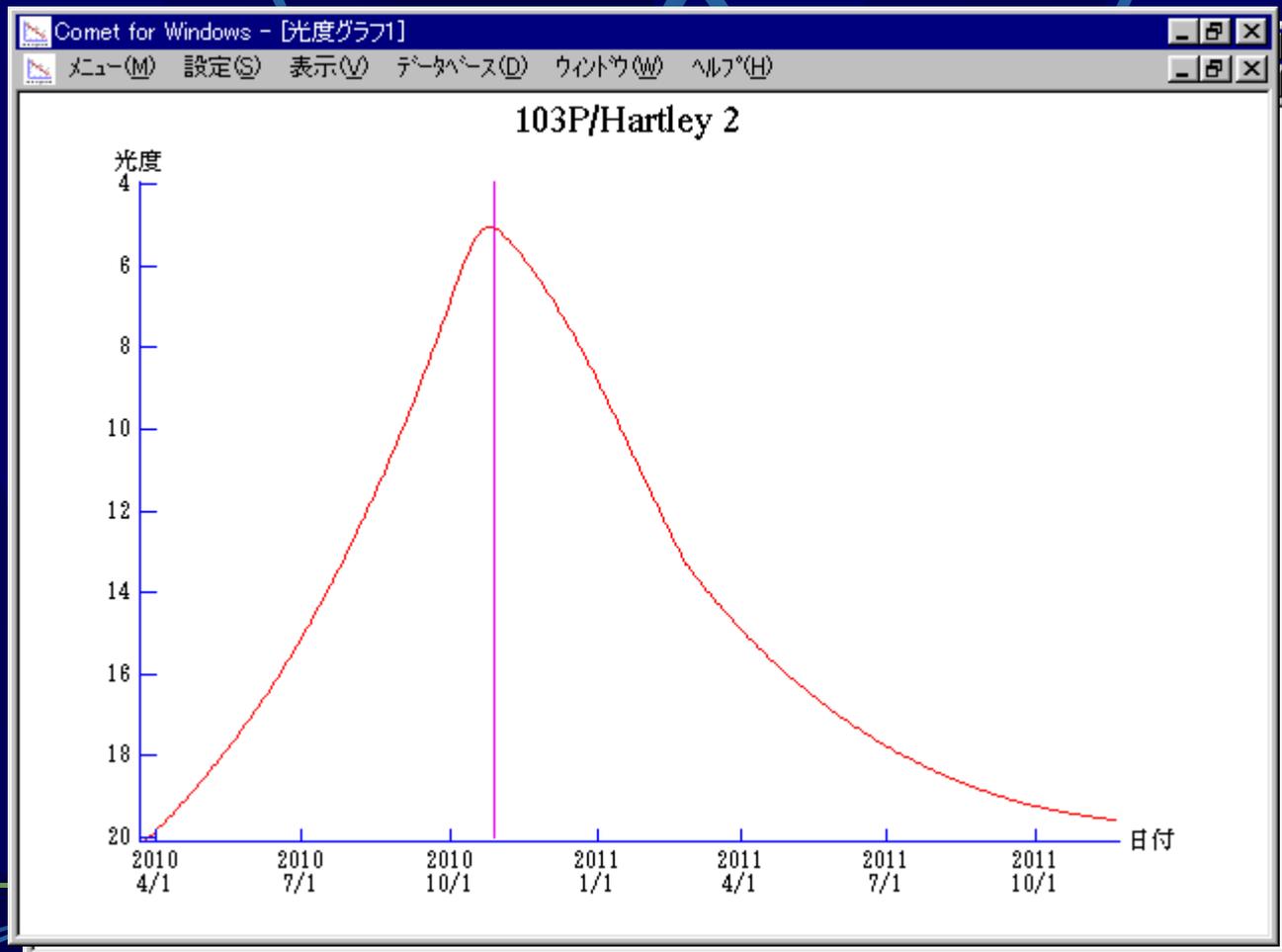
- Prediction of meteor shower associated with P/Hartley 2 (1991t).
 - By Ohtsuka, Tokyo Meteor Network Rep., No. 11, p. 65 – 67(1991)
 - The meteor activity associated with P/Hartley 2 (1991t) was expected on November 9.6 UT.
- The strong meteor display of November 5, 1991.
 - By Brown, Asher, D., Steel, D. ,WGN, Vol. 20, No. 1, p. 28 – 31(1992)

Meteor shower from Comet 103P/Hartley2

- Mr. Sekiguchi reported 12 meteors on Nov. 10-12, from R.P.(296,+13) ($d=4^\circ$ 、 $Wt=3$)
 - Slow and bright 2mag.($Lm=3.5$ 等)
 - However, it was not confirmed by other observers; Mr. Hasegawa, Mameda.
 - NMS Circular No. 594
- Actually strong display in 2062 ?

Targets

- Comet 103P/Hartley 2



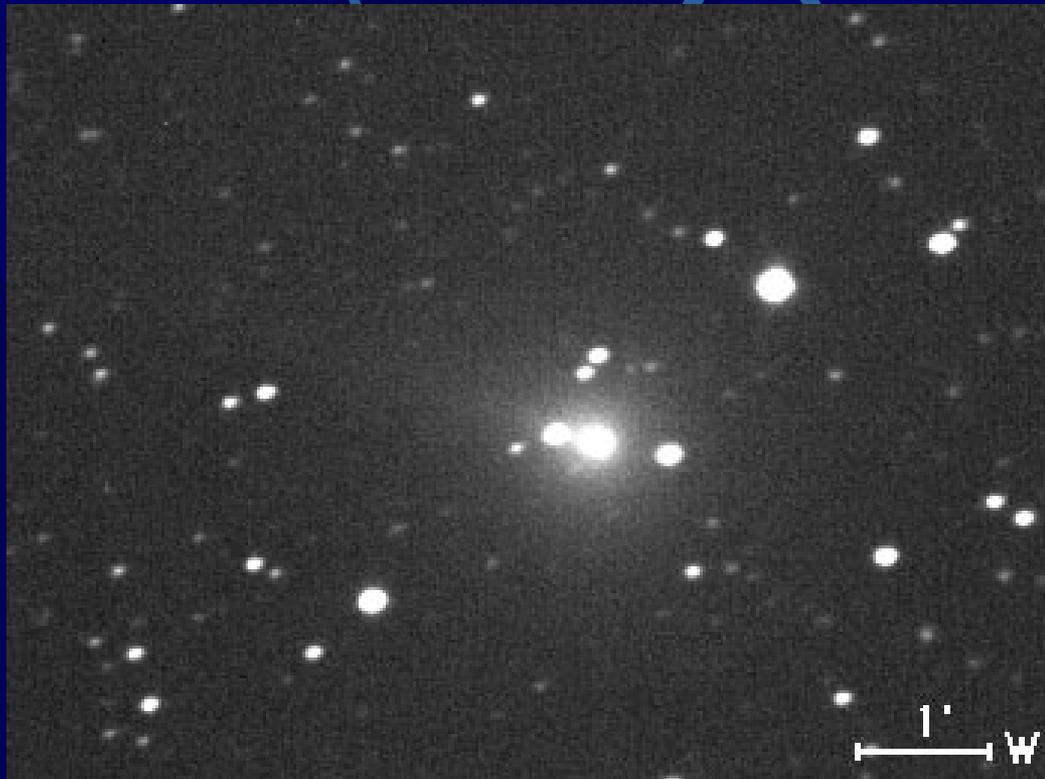
Targets

- Comet 103P/Hartley 2



Targets

- Comet 103P/Hartley 2



97 Nov 19.42 UT, 60cm F6 (Kuma Kogen Obs.)

DIXI mission target

- The DIXI (Deep Impact Extended Investigation) will observe comet 103P/Hartley instead of Comet Boethin.

