Current Status of SMOKA

@Subaru Users Meeting
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What is SMOKA?

SMOKA (Subaru-Mitaka-Okayama-Kiso-Archive)
is science archive system providing public data

- 8.2m Subaru Telescope (Hawaii)
- 188 cm telescope (OAO)
- 105 cm Schmidt telescope (Kiso Obs.)
- 50 cm telescopes (Akeno Obs. & OAO)

- Observed data after proprietary period become open.
- SMOKA provides several ways of data search.
- Data request and downloading with FTP, DDS4 are available after registration.

Status

	Frames	(GB)	Occupation	
Subaru	1,420,000	15,450	18 months	1999 ～
Okayama	150,000	819	2 years	1991 ～
Kiso	130,000	1,073	1 year	1993 ～
MITSuME	1,090,000	2,152	1 year	2007 ～

2010 January

SMOKA Science Archive

日本語

SMOKA ver 3.2

ver 3.2 : The server operating SMOKA is replaced. Replacement has mostly been completed though there still remains imperfect parts. (Jun.17, 2008)

SMOKA provides public science data obtained at Subaru Telescope, 188cm telescope at Okayama Astrophysical Observatory, and 105cm Schmidt telescope at Kiso Observatory (University of Tokyo). It is intended mainly for astronomical researchers.

SMOKA has been developed and maintained by Astronomical Data Archives Center (ADAC), Astronomy Data Center (ADC), National Astronomical Observatory of Japan (NAOJ).

Resources

SMOKA Web Index

SMOKA Overview and How To Search and Request Data

Online Help
How to use SMOKA for a detail, and descriptions of reduction method.

User Registration
You need to register if you wish to retrive FITS data.

Data Search
Simple Search : search data from a list of object names.
Advanced Search : search data from various search constraints.
SUP Search : search Suprime-Cam (SUP) Data (raw data, astrometric calibrated data and reduced data)

Remarks

2008/06/02
We found total SUP 299 frames being unexpectedly replaced. Of which, 162 frames are changed in data padding; note however that original data paddings did not follow the FITS convention. For the rest of 137 frames, values of data in 1 or 2 pixels are changed. For both cases, FITS header is kept unchanged. Now we have alraedy fixed them. We recommend that you should retrieve data if
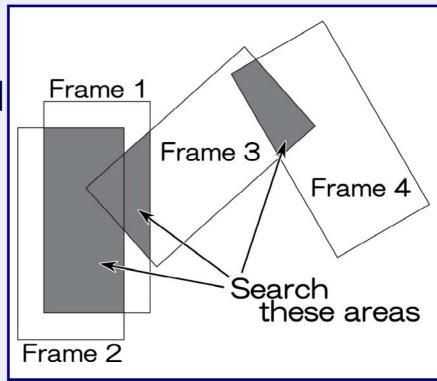
SMOKA Top Page
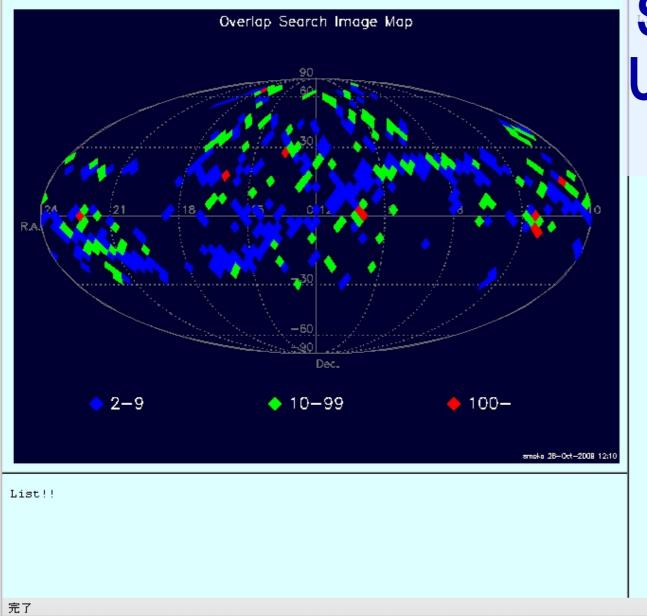**http://smoka.nao.ac.jp/**

Development Status of SMOKA

Current version is 3.2

- Replacement of Computers
    - Processing capacity considerably improved
- Data Request System via e-mail (DRM)
    - Since Sep.29, 2008
- Data release of new instrument
    - ISLE & KOOLS (Okayama Astrophysical Observatory)
- **Development of new search modes**
    - Overlapped area search
    - Solar system small body search

coming soon ...

- Providing Data of New Instrument
    - HOWPol (KANATA telescope, Higashi-Hiroshima)
- Replacement of data transfer system

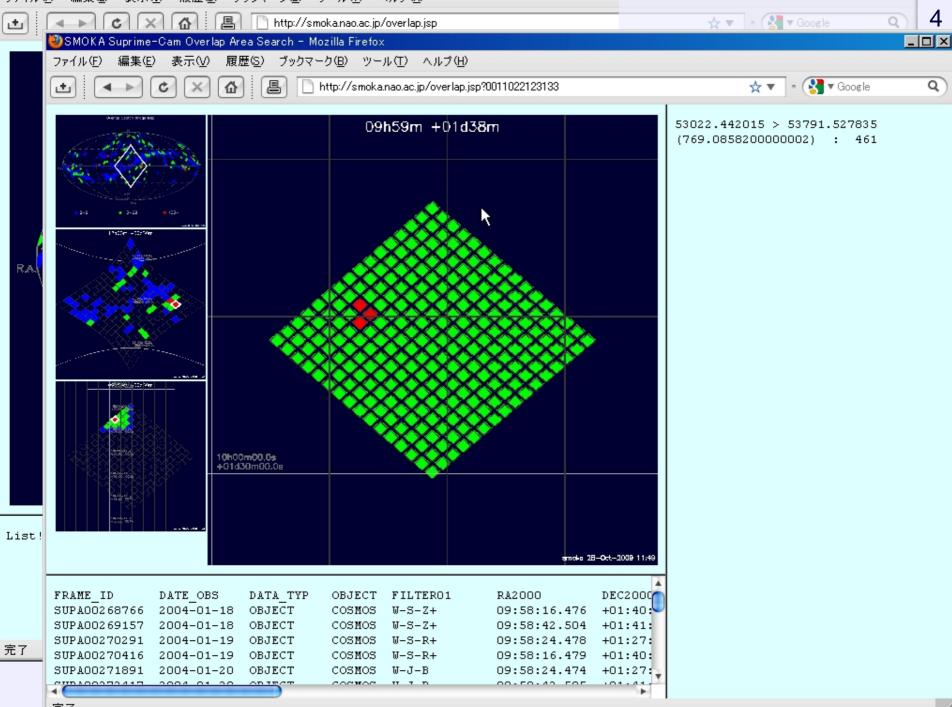# Overlapped area search
(coming soon)

- **Searching multiple observed area**
  - Solar system bodies survey
  - Variable objects search (SNes, variable stars, etc.)
  - Query for deep observed region
- Indexing area (1-arcmin at smallest) over the sky by using HEALPix* method
  *) http://healpix.jpl.nasa.gov/

➜ Search the area of which indices in the frames are the same.

Frame 1
Frame 3
Frame 4
Frame 2
Search these areas

Snap-shot of User Interface
（example）

Overlap Search Image Map

R.A.

Dec.

◆ 2-9   ◆ 10-99   ◆ 100-

smoka 26-Oct-2008 12:10

List!!

完了

http://smoka.nao.ac.jp/overlap.jsp

ファイル(E)　編集(E)　表示(V)　履歴(S)　ブックマーク(B)　ツール(T)　ヘルプ(H)

http://smoka.nao.ac.jp/overlap.jsp

Google

SMOKA Suprime-Cam Overlap Area Search - Mozilla Firefox

ファイル(F)　編集(E)　表示(V)　履歴(S)　ブックマーク(B)　ツール(T)　ヘルプ(H)

http://smoka.nao.ac.jp/overlap.jsp?0011022123133

Google

09h59m +01d38m

53022.442015 > 53791.527835
(769.0858200000002)　:　461

10h00m00.0s
+01d30m00.0s

smoka 28-Oct-2009 11:49

R.A.

List!

完了

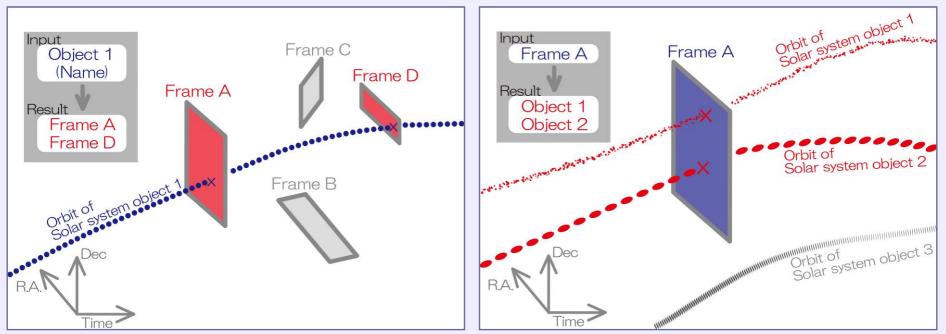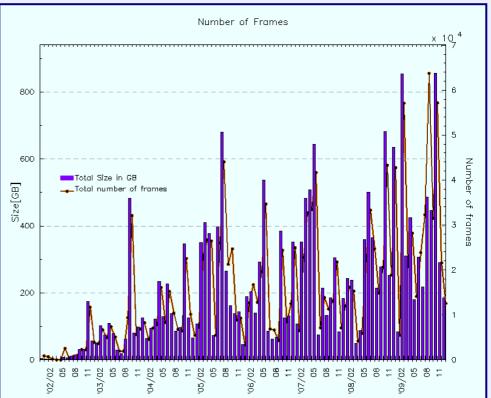| FRAME_ID	DATE_OBS	DATA_TYP	OBJECT	FILTER01	RA2000	DEC2000
SUPA00268766	2004-01-18	OBJECT	COSMOS	W-S-Z+	09:58:16.476	+01:40:
SUPA00269157	2004-01-18	OBJECT	COSMOS	W-S-Z+	09:58:42.504	+01:41:
SUPA00270291	2004-01-19	OBJECT	COSMOS	W-S-R+	09:58:24.478	+01:27:
SUPA00270416	2004-01-19	OBJECT	COSMOS	W-S-R+	09:58:16.479	+01:40:
SUPA00271891	2004-01-20	OBJECT	COSMOS	W-J-B	09:58:24.474	+01:27:
SUPA00272417	2004-01-20	OBJECT	COSMOS	W-J-B	09:58:42.505	+01:41:

完了

Solar System Small body Search
（under development）

- **Searching** (discovered) **Solar System small bodies from archived frames.** Two modes for search:
  - Search frames in which the object was observed （left figure）,
  - Search object names which were observed in archived frames （right figure）.
- By using HEALPix indices （for 1-arcsec）

Usage of SMOKA (Users & Data Request)

`http://smoka.nao.ac.jp/about/drstat.jsp`

- ## Number of Users
  - ### 229 (2009/04/01 – 2010/01/08)

- ## Data Request per Month
  - ### 5000〜40000 frames
  - ### 100〜600 GB

- ## Subaru/Suprime-Cam Data is most requested

Products of SMOKA

http://smoka.nao.ac.jp/about/publish.jsp

- **Papers using SMOKA**
  - 2003–2010 : **57** papers
    （A&A, ApJ, AJ, PASJ, MNRAS, PASP, ICARUS, etc.）