

# Current Status of SMOKA



SMOKA Staff Members



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# 1. About SMOKA <sup>1/2</sup>

**SMOKA** (**S**ubaru-**M**itaka-**O**kayama-**K**iso **A**rchive system)

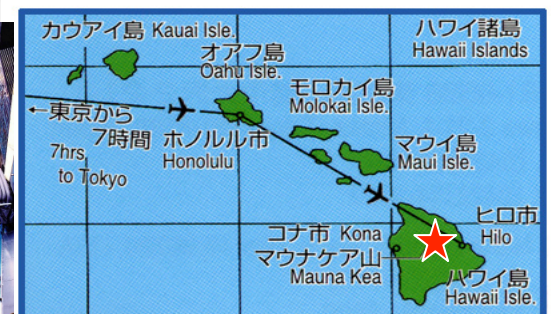
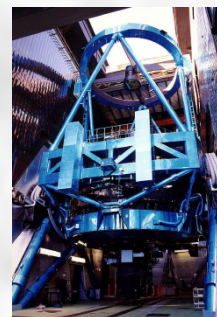
provides public data observed with the Subaru telescope and several optical and infrared telescopes operated by Japan.



## Providing archives

- 8.2m Subaru Telescope (Hawaii)
- 188cm Telescope (Okayama)
- 105cm Schmidt Telescope (Kiso)
- MITSuME Telescope (Akeno, Okayama)
- 150cm Katana Telescope (Higashi-Hiroshima)

## Subaru



# 1. About SMOKA <sup>2/2</sup>

Current version : 3.7

## Observational Instruments

- Subaru : Suprime-Cam, FOCAS, HDS, OHS/CISCO, IRCS, CIAO, COMICS, CAC, MIRTOS, MOIRCS, Kyoto-3DII, HiCIAO, FMOS, Hyper Suprime-Cam(HSC)
- Okayama : ISLE, KOOLS, HIDES, OASIS, SNG
- Kiso : 1kCCD, 2kCCD, KWFC
- MITSuME : MTA, MTO
- Higashi-Hiroshima : HOWPol, HONIR

	Frames	(TB)	Occupation	Since
Subaru	4,257,912	61.5	18 months	1999~
Okayama	545,497	5.2	2 years	1991~
Kiso	1,016,192	7.3	1 year	1993~
MITSuME	8,608,312	17.7	1 year	2007~
Higashi-Hiroshima	425,379	3.5	18 months	2010~
Total	14,853,292	95.2		

2017 Jan. 01



## 2. Products of SMOKA

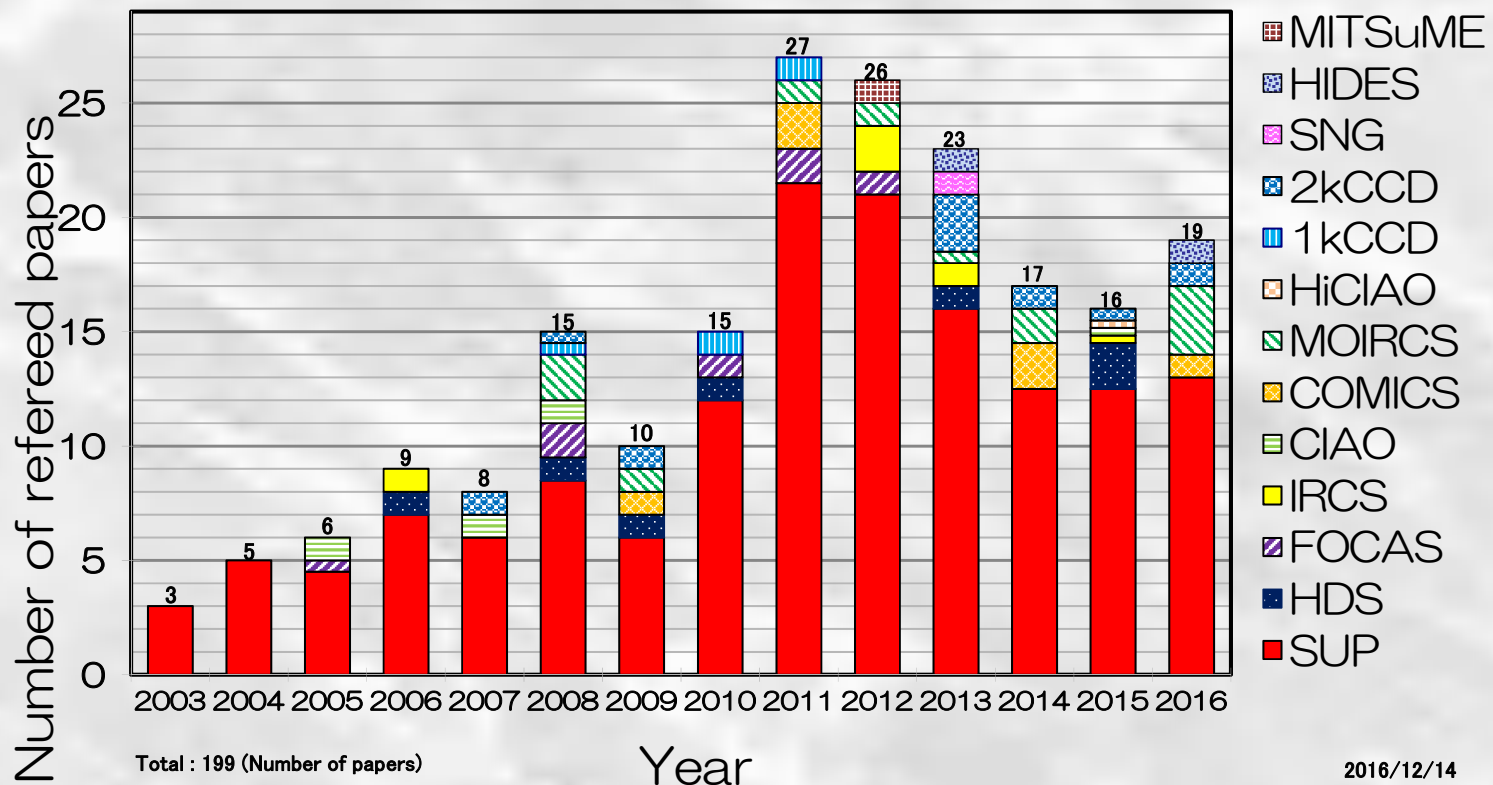
<http://smoka.nao.ac.jp/about/publish.jsp>

- **220 Users** (2016.04.01 – 2017.01.04: renew every fiscal year)

### Number of refereed papers using SMOKA

- 2003-2016 : **199 papers** (A&A, ApJ, AJ, PASJ, MNRAS, PASP, ICARUS, etc.)

#### Papers in Main Journals



# 3. Development Status

## In the past year:

- (2016 Jan. 08) MITSuME data include our astrometric calibration
- (2016 Feb 19) **SHOT mode of the output format for Hyper Suprime-Cam (HSC) is supported**
- (2016 Apr. 04) MITSuME pin-point Search is available
- (2016 Jun. 14) Minor Bodies Search is available (MITSuME/Akeno)
- (2016 Jul. 11) **All Keywords Search is available (Kiso/KWFC)**
- (2016 Jul. 27) Minor Bodies Search is available (MITSuME/Okayama)
- (2016 Nov. 26) Requested Data Cleanup Service is available

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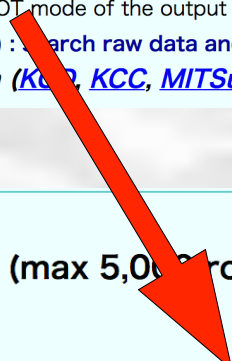
### Hyper Suprime-Cam CCD Layout



# 3-1. SHOT mode for HSC data 2/4

You can select “**SHOT mode**” for Hyper Suprime-Cam (HSC) data in “**Advanced Search**” of SMOKA

Resources	Remarks
<a href="#">SMOKA Web Index</a>	<b>2015/12/25</b> Some duplicate frames in SMOKA were found. We have not opened the frames in order to avoid trouble. Click <a href="#">here</a> for details.
<a href="#">SMOKA Overview</a> and <a href="#">How To Search and Request Data</a>	<b>2014/12/25</b> There was duplication of the header keywords in data requested from Apr.2013 to Dec. 2014 due to the HeaderReplacer defect. It has been restored now.
<a href="#">Online Help</a> How to use SMOKA for a detail, and descriptions of reduction method.	<b>2009/07/28</b> The DIMM (Differential Image Motion Monitor) system at Subaru Telescope has been broken. We have no seeing image of DIMM after Dec. 02, 2007.
<a href="#">User Registration</a> You need to register if you wish to retrieve FITS data.	<b>2007/04/25</b> Newer data of MITSuME/Akeno
<b>Data Search</b> Abbreviations for search available data of telescope or observatory are as follows: <a href="#">Subaru</a> (Subaru), <a href="#">OAO</a> (Okayama), <a href="#">Kiso</a> (Kiso), <a href="#">MITSuME</a> (MITSuME), and <a href="#">HHO</a> (Higashi-Hiroshima). <a href="#">Simple Search</a> ( <a href="#">Subaru</a> , <a href="#">OAO</a> , <a href="#">Kiso</a> , <a href="#">MITSuME</a> , <a href="#">HHO</a> ) : search data from a list of object names <a href="#">Advanced Search</a> ( <a href="#">Subaru</a> , <a href="#">OAO</a> , <a href="#">Kiso</a> , <a href="#">MITSuME</a> , <a href="#">HHO</a> ) : search data from various search constraints (add SHOT mode of the output format for SUP and KWF) <a href="#">SUP Search</a> (SUP) : search raw data and astrometric calibrated data <a href="#">Pin-point Search</a> ( <a href="#">KCC</a> , <a href="#">KCC</a> , <a href="#">MITSuME</a> ) : search frames whose fields contain the search	



**Output Format**  
☒ TABLE (max 5,000 rows, HTML)    ☐ ASCII (max 20,000 rows, text)

**Frame or Shot mode**  
☐ FRAME    ☒ SHOT (SUP, HSC, and KWF ONLY)

[Search](#)

[Reset to defaults](#)

[Help...](#)

# 3-1. SHOT mode for HSC data 3/4

The results of “SHOT mode” provides you a group of the multiple frames which had been observed by a same exposure.

## Results

[Click here to know how to look search results.](#)

10094 shots were found. However, over 5000 shots are ignored.

The results are summarized below:

Instrument	Number of shots
HSC	10094

Shot images. [VIEW](#) [available for Suprime-Cam (SUP), Hyper Suprime-Cam(HSC), and KWFC only]

To retrieve data, mark checkboxes at the "Raw Data" column of rows which correspond to the frames which you'd like to retrieve.

Then push "Datarequest" button located before/after the table.

If you want to retrieve astrometric calibrated data, and/or flat fielded data of Suprime-Cam (SUP) data,

please use [SUP Search](#).

A link of "No." column will lead you to the detailed information of corresponding frame.

You can see the quicklook image, the header information, and the ASCII table extension, if exist.

To view other page of the query results, select the range of numbers from the list box located at the bottom of the table,

then push "Go" button next to it.

[Mark all](#) [Unmark all](#) [Datarequest \(for 1-100\)](#)

No.	Doubt	Raw Data	FRAMEID	DATE_OBS	FITS_SIZE	OBS_MODE	DATA_TYPE	OBJECT	FILTER	WVLEN	DISPERSER
<a href="#">1</a>		<input type="checkbox"/>	<a href="#">HSCA00051[0.1]XX</a>	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0	
<a href="#">2</a>		<input type="checkbox"/>	<a href="#">HSCA00051[2.3]XX</a>	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0	
<a href="#">3</a>		<input type="checkbox"/>	<a href="#">HSCA00052[8.9]XX</a>	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0	



# 3-1. SHOT mode for HSC data 4/4

Therefore, you can easily search all frames which observed by a same exposure.

## Results

[Click here](#) to know how to look search results.

10094 shots were found. However, over 5000 shots are ignored.

The results are summarized below:

Instrument	Number of shots
HSC	10094

Shot images. [VIEW](#) [\[available for Suprime-Cam \(SUP\), Hyper Suprime-Cam\(HSC\), and KVI\]](#)

To retrieve data, mark checkboxes at the "Raw Data" column of rows which. Then push "Datarequest" button located before/after the table.

If you want to retrieve astrometric calibrated data, and/or flat fielded data of please use [SUP Search](#).

A link of "No." column will lead you to the detailed information of correspond. You can see the quicklook image, the header information, and the ASCII table.

To view other page of the query results, select the range of numbers from the then push "Go" button next to it.

[Mark all](#) [Unmark all](#) [Datarequest \(for 1-100\)](#)

No.	Doubt	Raw Data	FRAMEID	DATE_OBS	FITS_SIZE	OBS_MODE
<a href="#">1</a>		<input type="checkbox"/>	<a href="#">HSCA00051[0.1]XX</a>	2014-03-26 <a href="#">weather</a>	17	IMAG
<a href="#">2</a>		<input type="checkbox"/>	<a href="#">HSCA00051[2.3]XX</a>	2014-03-26 <a href="#">weather</a>	17	IMAG
<a href="#">3</a>		<input type="checkbox"/>	<a href="#">HSCA00052[8.9]XX</a>	2014-03-26 <a href="#">weather</a>	17	IMAG

No.	Doubt	Raw Data	FRAMEID	DATE_OBS	FITS_SIZE	OBS_MODE	DATA_TYPE	OBJECT	FILTER	WVLEN
<a href="#">1</a>		<input type="checkbox"/>	HSCA00051000	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">2</a>		<input type="checkbox"/>	HSCA00051001	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">3</a>		<input type="checkbox"/>	HSCA00051002	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">4</a>		<input type="checkbox"/>	HSCA00051003	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">5</a>		<input type="checkbox"/>	HSCA00051004	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">6</a>		<input type="checkbox"/>	HSCA00051005	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">7</a>		<input type="checkbox"/>	HSCA00051006	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">8</a>		<input type="checkbox"/>	HSCA00051007	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">9</a>		<input type="checkbox"/>	HSCA00051008	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">10</a>		<input type="checkbox"/>	HSCA00051009	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">11</a>		<input type="checkbox"/>	HSCA00051010	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">12</a>		<input type="checkbox"/>	HSCA00051011	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">13</a>		<input type="checkbox"/>	HSCA00051012	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0
<a href="#">14</a>		<input type="checkbox"/>	HSCA00051013	2014-03-26 <a href="#">weather</a>	17	IMAG	OBJECT	TEST	HSC-Y	933.0--1020.0

## 4. Future Works

- Shortly (a half to one year)
  - Provide data applied astrometric calibration:  
Subaru/Suprime-Cam, Kiso/KWFC...
  - Provide images applied astrometric calibration:  
SkyMonitor Imaging Data Service System  
(Okayama, Akeno, Higashi-Hiroshima)
  - Provide known Supernova Search System
- Future works
  - Provide data of the new observational instruments:  
Kiso/Tomo-e Gozen
  - Query using indices of quality assessment

Dear researchers,  
Please use SMOKA for your studies!!

Our poster : P02

SMOKA page  
**<http://smoka.nao.ac.jp/>**