

Current Status of SMOKA



SMOKA Core Members



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1. About SMOKA ^{1/2}

URL: <http://smoka.nao.ac.jp/> (Ver. 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	6,876,572	106.0	18 months	1999~
Okayama	569,481	5.4	2 years	1991~
Kiso	1,250,292	8.3	1 year	1993~
MITSuME	9,705,957	20.0	1 year	2007~
Higashi-Hiroshima	524,576	4.4	18 months	2010~
Total	18,926,878	144.1		

2018 Jan. 12

1. About SMOKA ^{2/2}

SMOKA has the **Header Replacer** for
correcting FITS headers

- One of the important operations is the **Header Replacer**.
- The header in downloaded FITS file includes the original card, which commented out, and the modified one.

Modified frames and FITS header keywords of Subaru instruments

	Modified Frames (/Total)	Modified Keywords (frames)
HSC	61,220 (/4,208,222; 1.45%)	T_PURPOS (33,444), DATA-TYP (27,216) , T_PROG (1,680), ...
IRCS	11,034 (/396,009; 2.79%)	DATE-OBS (11,004) , FILTER02 (26) , I_MCW2NM (26), ...
COMICS	2,237 (/84,748; 2.64%)	DATE-OBS (2,157) , MJD (2,157), RA2000 (108), ...
FOCAS	480 (/154,441; 0.31%)	FILTER01 (282) , CUNIT2 (122), CTYPE2 (122), ...
...		

2. Products of SMOKA

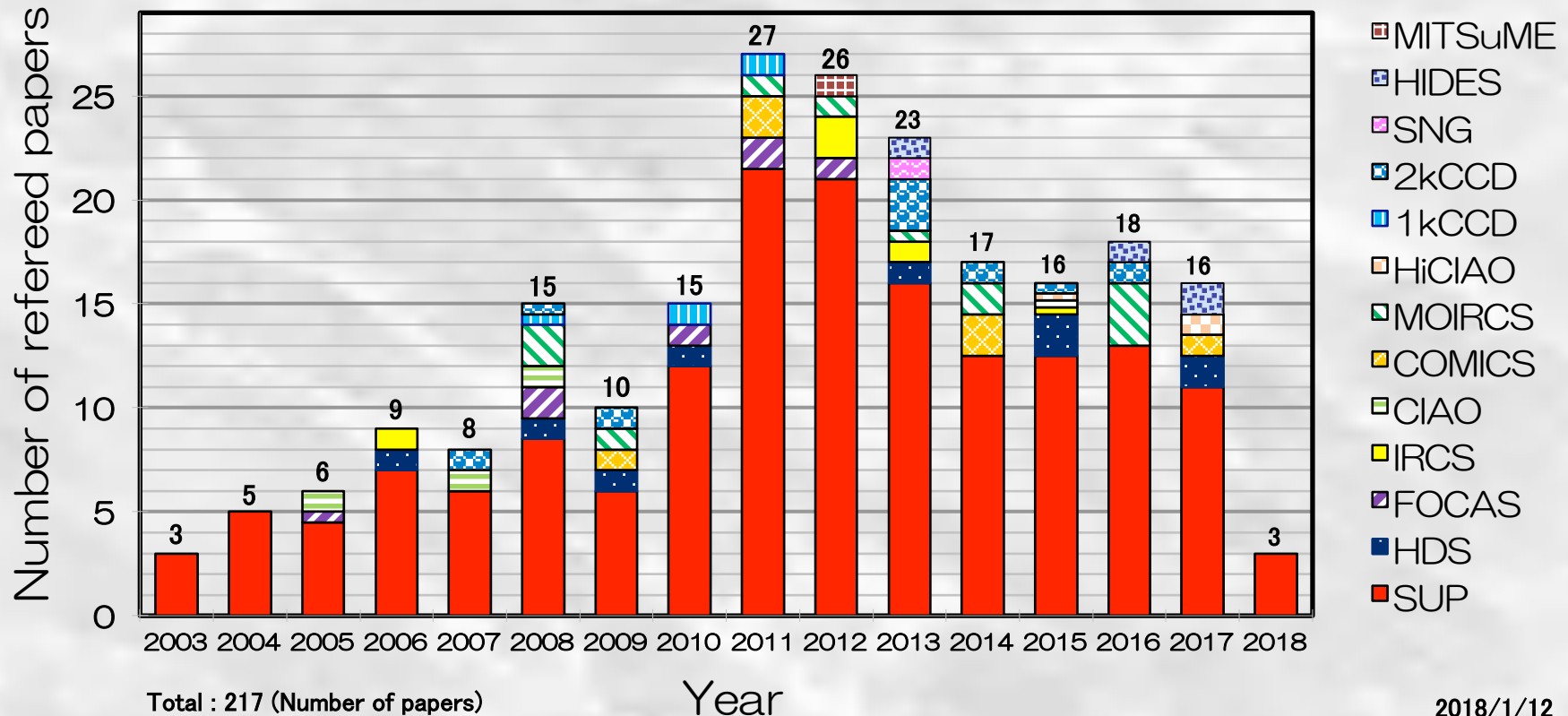
<http://smoka.nao.ac.jp/about/publish.jsp>

- **236 Users** (2017.04.01 – 2018.01.12: renew every fiscal year)

Number of refereed papers using SMOKA data

- 2003-2018 : **217 papers** (A&A, ApJ, AJ, PASJ, MNRAS, PASP, ICARUS, etc.)

Papers in Main Journals



3. Development Status

In the past year:

(2017 Mar. 01)

- Subaru/HSC SSP frames are released.

(2017 May 18)

- “Supernova Search” is available.

(2017 Jul. 26)

- FITS file with WCS information can be requested in “SkyMonitor Imaging Data Service System” (Japanese Only).

(2017 Nov. 22)

- “Data Request” corresponding to MOIRCS Multiple Extensions FITS format(MEF) is available.

(2018 Jan. 09)

- “List of User Selected Keywords” is available.

3-1. Subaru/HSC SSP data

- HSC SSP **raw data** whose DATE-OBS (UT) are from '2014-03-25' to '2015-11-19' have been released.
- The frames of the later Data Releases of SSP will be also released in SMOKA.
- Note that only HSC **raw data** are available on SMOKA.
- The processed data can be retrieved from HSC Website regarding Public Release for SSP.
(<https://hsc-release.mtk.nao.ac.jp/doc/>)

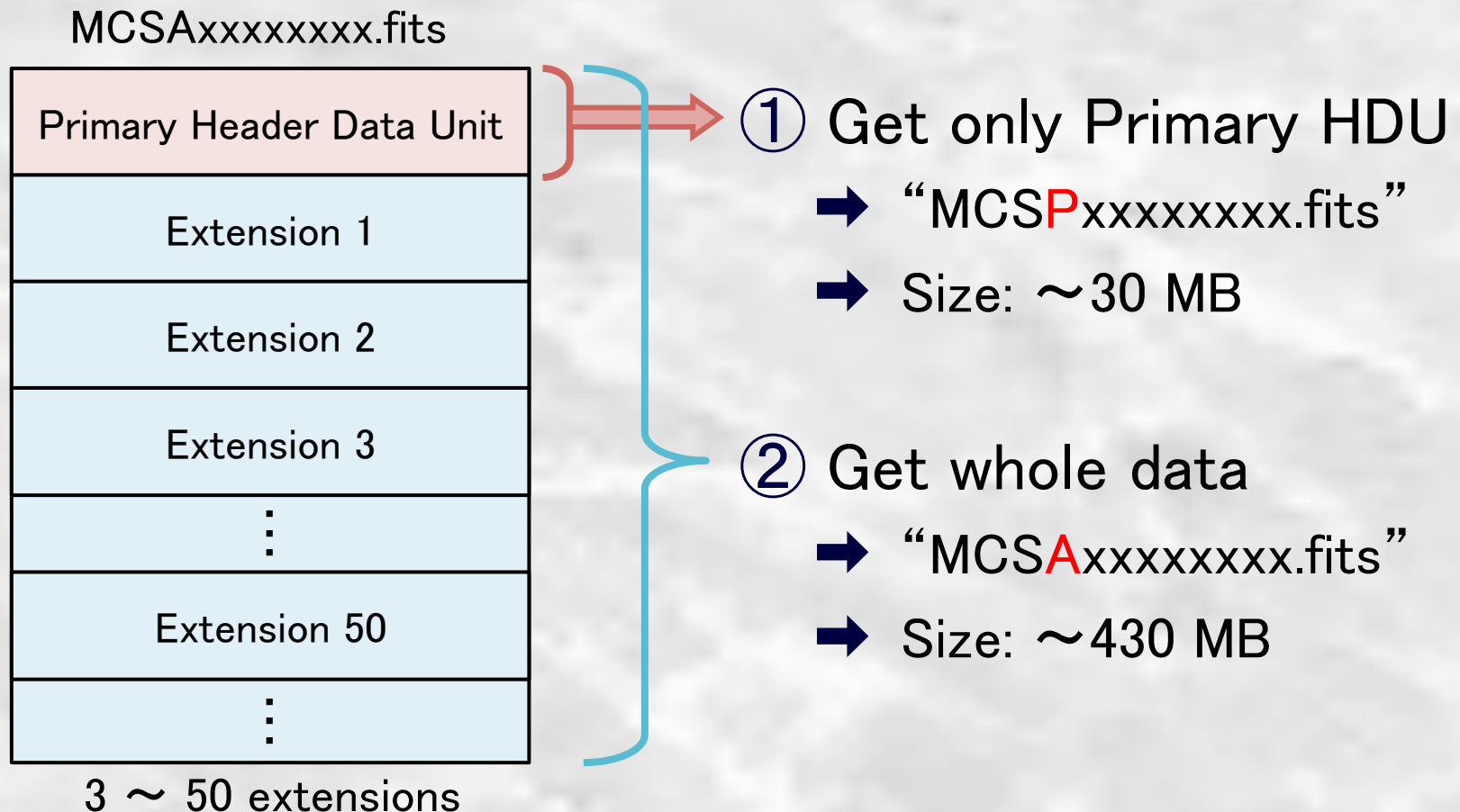
3-2. MOIRCS Multiple Extensions FITS format (MEF) 1/3

- MOIRCS Detector has been updated to the Hawaii2 RG from late 2015.
- The first public frame conforming to MOIRCS MEF format is `FRAME_ID='MCSA00224669'` (`DATE-OBS='2016-05-20'`).
- The size of a MEF format frame is large.
- We have developed the download option to select the frame with MEF format or only Primary Header Data Unit.

3-2. MOIRCS Multiple Extensions FITS format (MEF) 2/3

MOIRCS new format

Data Request Selection

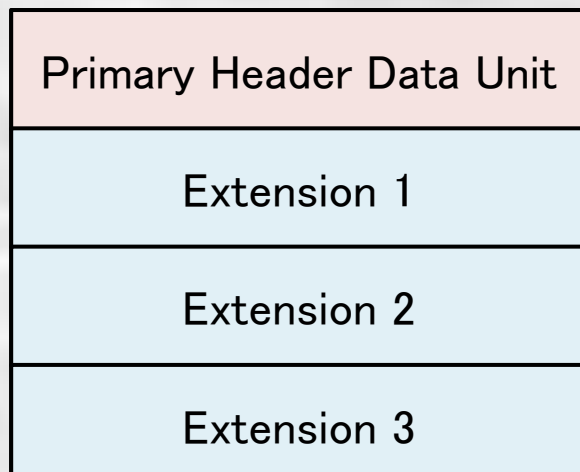


3-2. MOIRCS Multiple Extensions FITS format (MEF) 2/3

MOIRCS new format

Main Contents

MCSAxxxxxxx.fits



Main Data

(e.g., object image and scientific keywords)

Image Extension Data

(Image Extensions of reset and signal levels)

Users who need only Main data
can get only Primary HDU in SMOKA

4. Future Works

Replacing SMOKA computer system Now !!

More powerful new system starts in March !!

- Provide frames of the new observational instruments:

Subaru/CHARIS

Kiso/Tomo-e Gozen

Okayama/HIDES-F, MuSCAT

- Provide frames applied astrometric calibration:

Subaru/Suprime-Cam

Kiso/KWFC

Dear researchers,
Please use SMOKA for your studies!!

For details,
please see our poster : **P06**

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