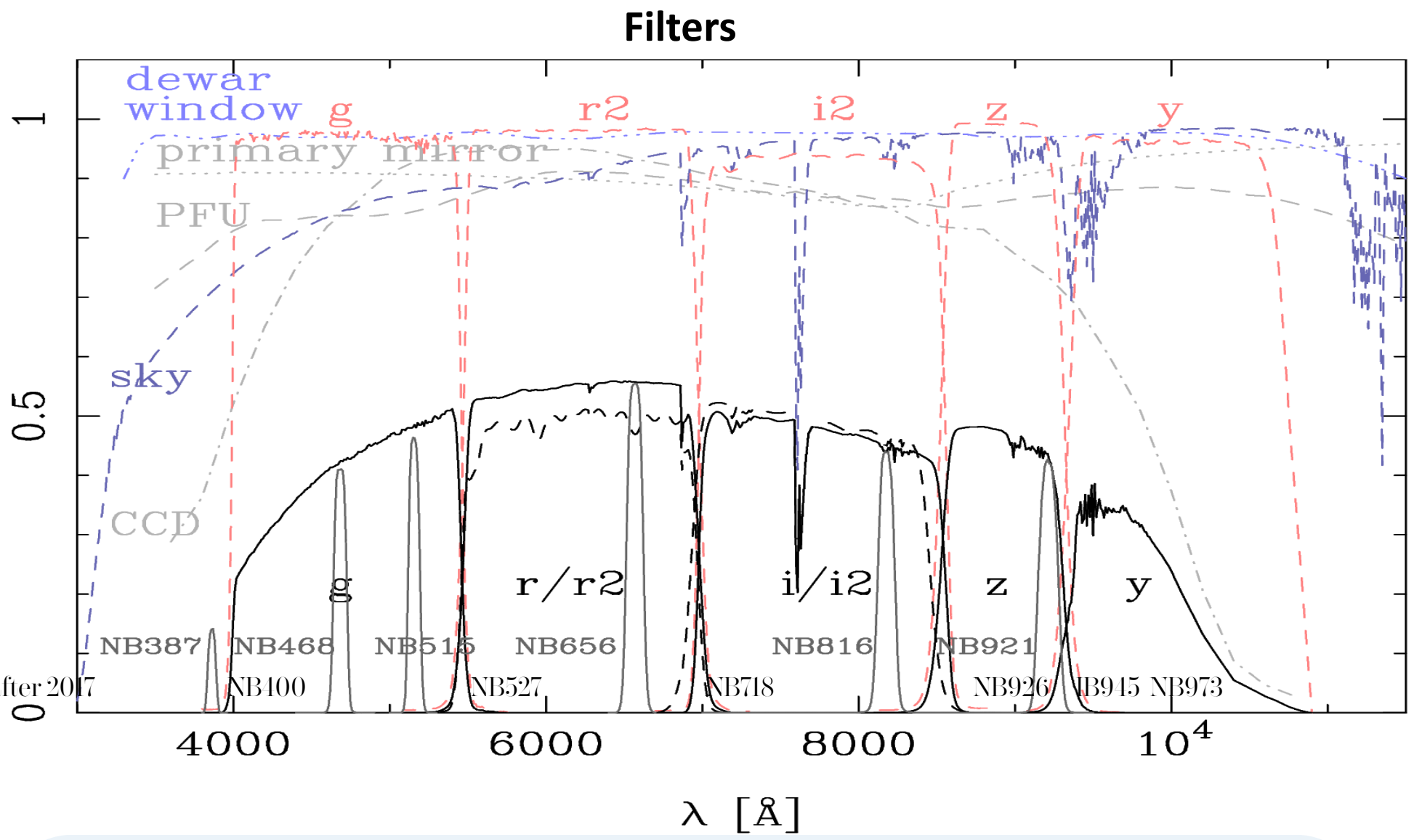
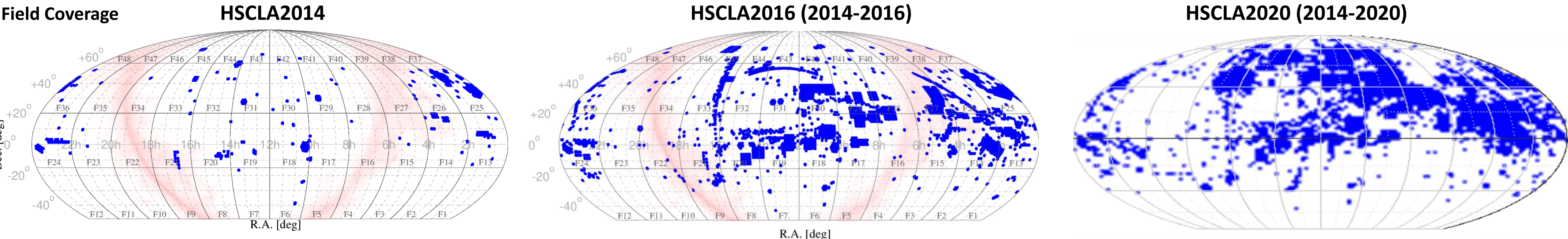


Hyper Suprime-Cam Legacy Archive Status Report

Sumiko Harasawa, Hisanori Furusawa, Michitaro Koike, Sogo Mineo, Takahiro Morishima, Kazumi Murata, Yuki Okura, Satoshi Takita, Masayuki Tanaka

The Hyper Suprime-Cam Legacy Archive (HSCLA) is a public data archive of processed, science-ready data from HSC PI-based programs. The latest release from HSCLA was made in June 2022 based on the data taken during 2014-2016 from PI observations. The release includes about 20,000 exposures in total, amounting to 800 hours of observation executed under good conditions. It covers approximately 3400 square degrees (approximately 8 % of the sky) and as many as 770 million objects are detected and measured. The total data volume, including intermediate data products, is about 450 terabytes. We are preparing to add data taken during 2017-2020 to this release. The next release will have about 40,000 exposures with a total of 1600 hours of observations. The covered area is expected to be more than 5000 square degrees. from PI observations. The website is <https://hscla.mtk.nao.ac.jp>



Comparison				
The Number of	HSCLA 2014	current HSCLA 2014-2016	2017-2020 observation	working now! Next HSCLA
visits	3065	18769	21558	40327
tracts	772	3879	4316	6323
area (deg^2)	580	3400	4000	5000
hours	149hrs.	789hrs.	877hrs.	1666hrs.
pipeline	v7	v8.4	v8.4	v8.4

There are several tools to access HSCLA data.

HOME

AVAILABLE DATA

DATA ACCESS

ACKNOWLEDGEMENT

Data Access Tools

Tips: Only a small fraction of the area is available in more than 2 filters. In order to view the two-filter area in color in the HSC Map, use 'SIMPLE_COLOR_MATRIX' in the color mixer diagram and then choose the two filters you want to use from the Preset menu, e.g., g-i.

Registration

Database Search

Schema Brwower

HSC Map

Image Cutout

File search

PSF retriever

Figure 2: Sculptor Dwarf Galaxy. It is a satellite galaxy of the Milky Way Galaxy. Its apparent. Figure 1: NGC4244, an edge-on galaxy at about 4Mpc (13 million light years away). Individual stars are resolved as shown in the blow-up. (Image credit: NAOJ)

Data Quality
We have performed some quality assurance tests. we checked seeing, depth (5sigma for point sources), astrometric offsets against Gaia both in R.A., and Dec. directions, internal photometric consistency by comparing PSF-Kron and PSF-CModel magnitudes for point sources, external photometric comparison against PS1, and the PSF size residual between the observed and model PSF sizes. These tests are performed for each field separately. The figures below show some quality assurance results on Field F24. The complete information is on <https://hscla.mtk.nao.ac.jp/doc/available-data-2016/#DataQuality>

Seeing

astrometric

external photometric comparison against PS1

HSCMAP (<https://hscla.mtk.nao.ac.jp/hsclMap/>) is a very user-friendly tool to access data. You could access the data through HSCMAP. There are 10 movies to explain how to get HSCLA data from HSCMAP;