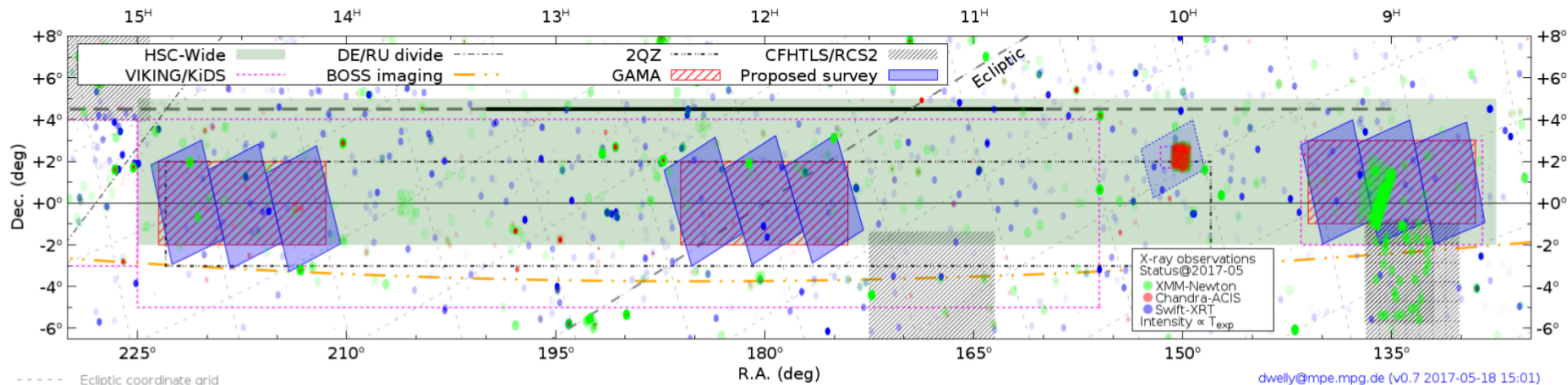


eROSITA/HSC collaboration

<http://hscerosita.pbworks.com>

Mara Salvato
Johan Comparat
Oct. 22nd@Ringberg
(MPE/MPG)



dwelly@mpe.mpg.de (v0.7 2017-05-18 15:01)



HSC strategy & timeline

- Grizy + NB imaging
 - Wide: 1400deg², $i \sim 26$
 - Deep: 28deg², $i \sim 27$
 - Ultradeep: 3.5 deg², $i \sim 28$
- ~ 700 deg² in common
- Contains 99% of AGNs $z < 6$
- Should complete end 2019
- Final data release in 2021

MOU eRosita-HSC

- HSC=Japan+Taiwan+Princeton(US)
- Working groups:
 - AGN: T. Nagao, M. Strauss
 - Weak lensing: M. Takada, T. Hamana, R. Mandelbaum
 - Cluster: T. Lin, M. Tanaka
 - PhotoZ: M. Tanaka
- Duration 5 years
- Intellectual property is owned by its creators. No transfer.
- Collaboration board 2x3 members oversee **all** activities
- No automatic access to data, If access to data granted => abide to HSC collaboration rules
- Joint analyses of individual projects

MOU eRosita-HSC, joint analysis

- Joint analysis.
 - A liaison member in each collaboration
 - Clear goal and expected results (papers, products...) from start.
 - Publications announced to the relevant WG for approval
 - If started during proprietary period, must finish under MOU
 - ‘Builder’ status in HSC, not in eRosita
- Projects
 - Regular updates to the relevant email list
 - Teleconferences
 - Updates on the wiki
- Funding, proposal
 - Are subject to review from the MOU board

HSC-eRosita wiki page

Please subscribe here

<http://hscerosita.pbworks.com>

Mailing lists

Please subscribe here:

<https://lists.mpe.mpg.de/cgi-bin/mailman/listinfo/erosita-hsc-agn>

<https://lists.mpe.mpg.de/cgi-bin/mailman/listinfo/erosita-hsc-clusters>

Complementary public data sets

Photometry: DECaLS, VST-KIDs, VIKING,
unWISE

Narrow-band photometry: J-PLUS, J-PAS

Spectroscopy: GAMA, SDSS, 2QZ

VISTA KIDS, VIKING

- VST KIDS survey will cover 1500 deg^2 in u,g,r,i divided in two stripes (NGP, centred on equator ; SGP, centred on Dec = -30).
- VISTA Kilo-degree Infrared Galaxy survey (VIKING) is the VISTA counterpart to the VST KIDS survey.
- Z,Y,J,H, Ks with $\sim 400\text{s}$ exposures per band.
- VIKING DR2 690 deg^2 in Northern Galactic Equatorial Strip that covers the GAMA09/12/14 regions,
- 10 sigma Vega median magnitude limits Z=21.4, Y=20.6, J=20.1, H=19.0, K=18.6

UnWISE NEO4, DECam-LS

<http://legacysurvey.org>

Wise: 0.5 mag deeper than the official.
DECam-LS, $g=24.0$, $r=23.4$, $z=22.5$ (5 sigma)

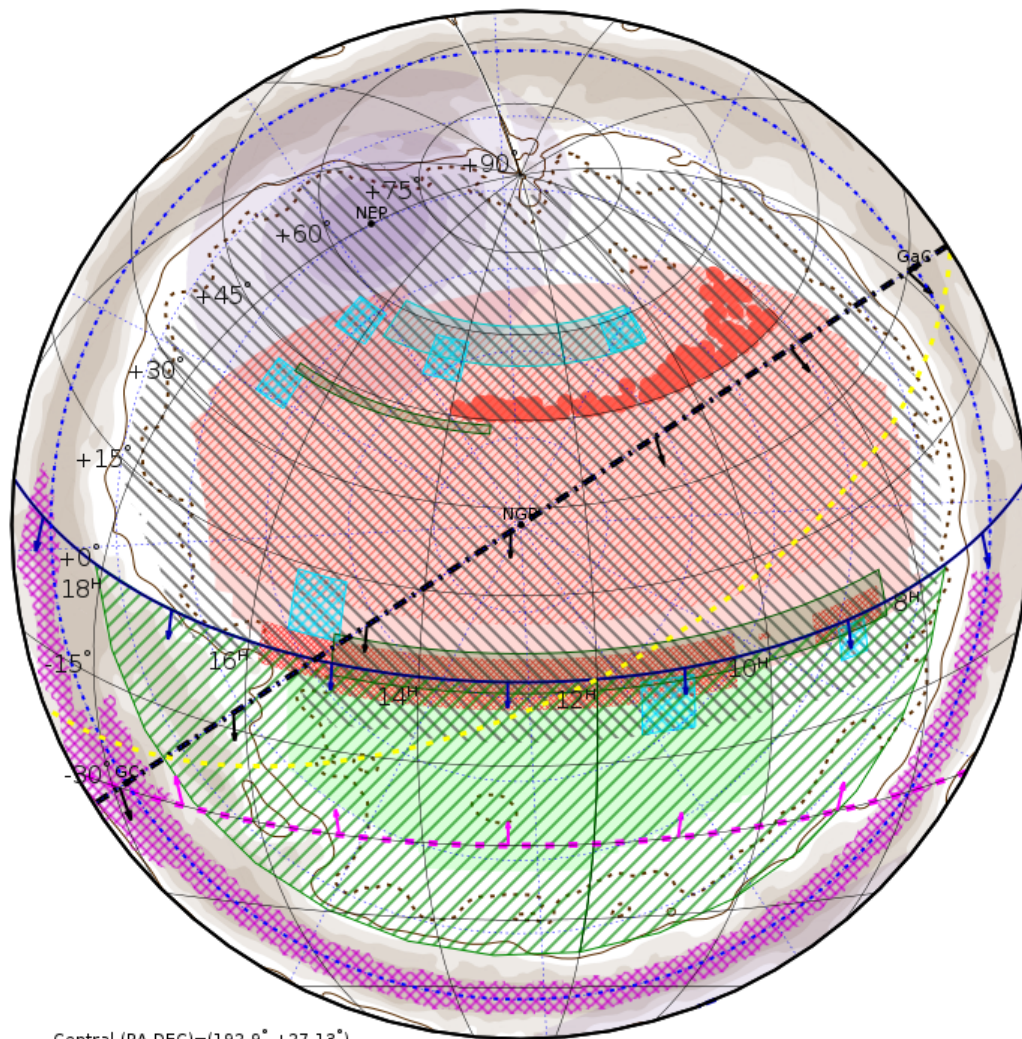
<https://arxiv.org/abs/1804.08657>

<https://arxiv.org/abs/1705.06746>

Sky coverage of selected wide area surveys - OPT bands

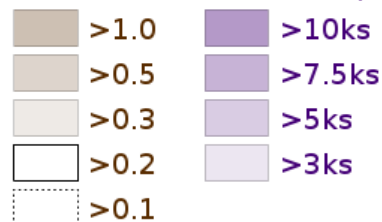
North Galactic Hemisphere

South Galactic Hemisphere

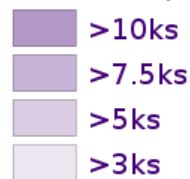


Central (RA,DEC)=(192.9°, +27.13°)

Dust E(B-V)



eRASS Texp



VST-ATLAS

VST-KIDS

BOSS

eBOSS

SEQUELS

DESI Imaging

CFHTLS/RCS-2

HETDEX

Subaru-HSC

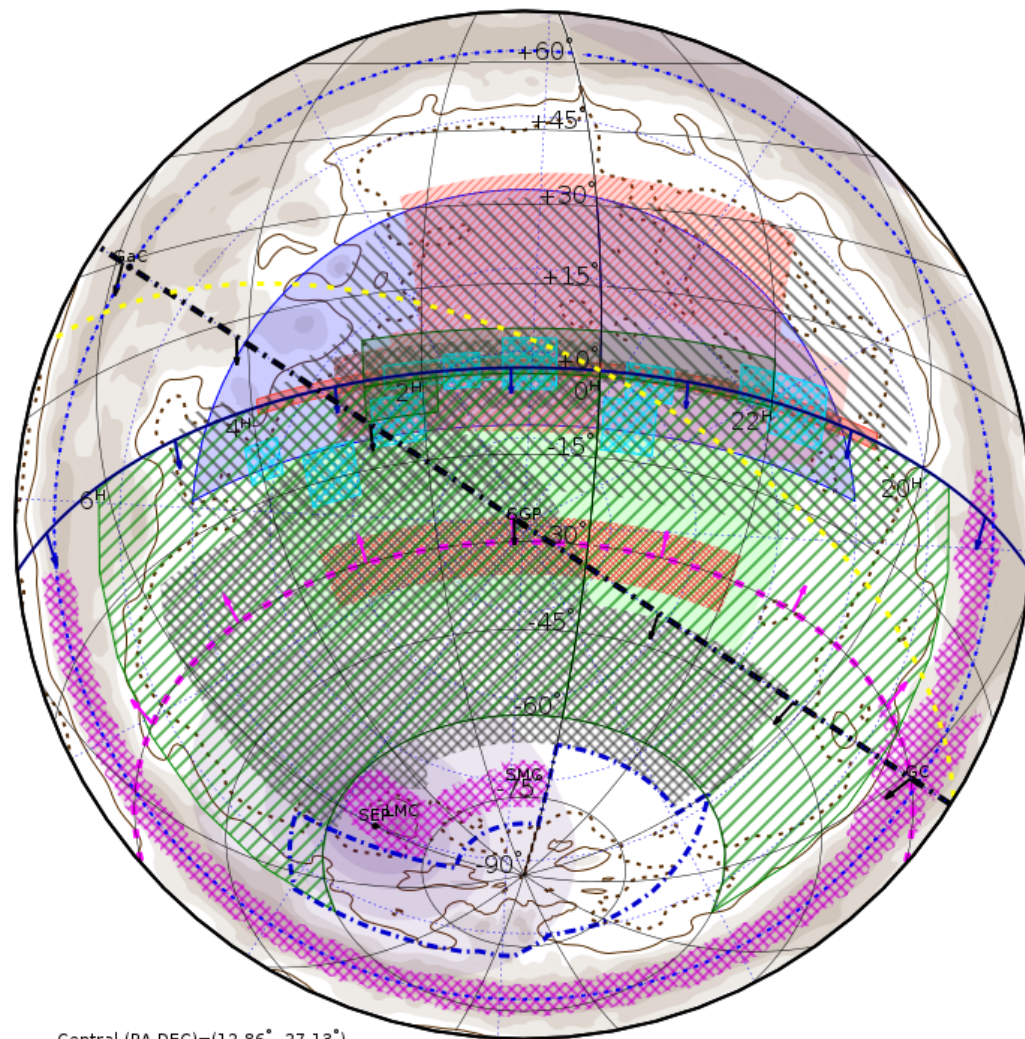
OGLE-IV

LSST-Main

PanSTARRS

MagLiteS-goal

SkyMapper



Central (RA,DEC)=(12.86°, -27.13°)

eRosita-DE

J2000 grid

Galactic grid

Ecliptic plane

dwelly@mpe.mpg.de

Credit: T. Dwelly @eRosita

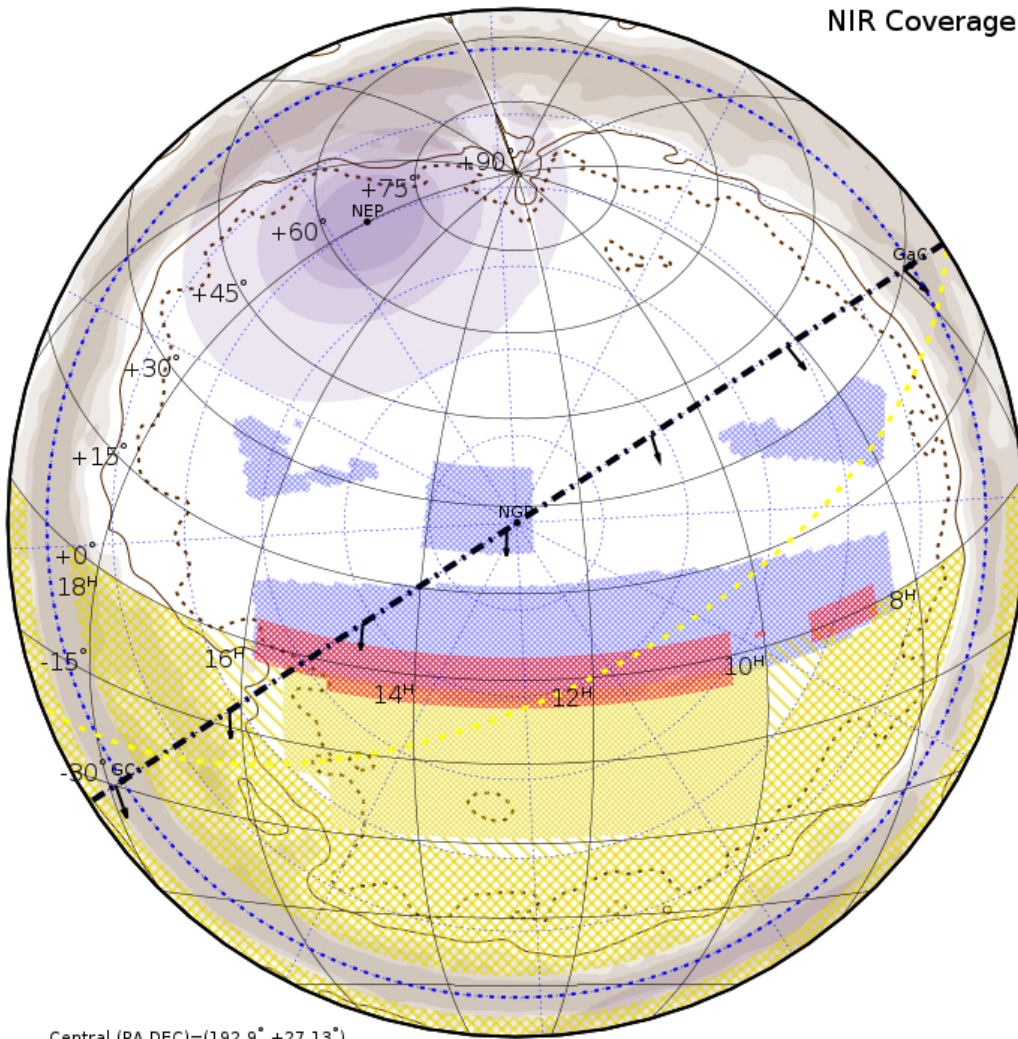
Sky coverage of selected wide area surveys - NIR bands

North Galactic Hemisphere

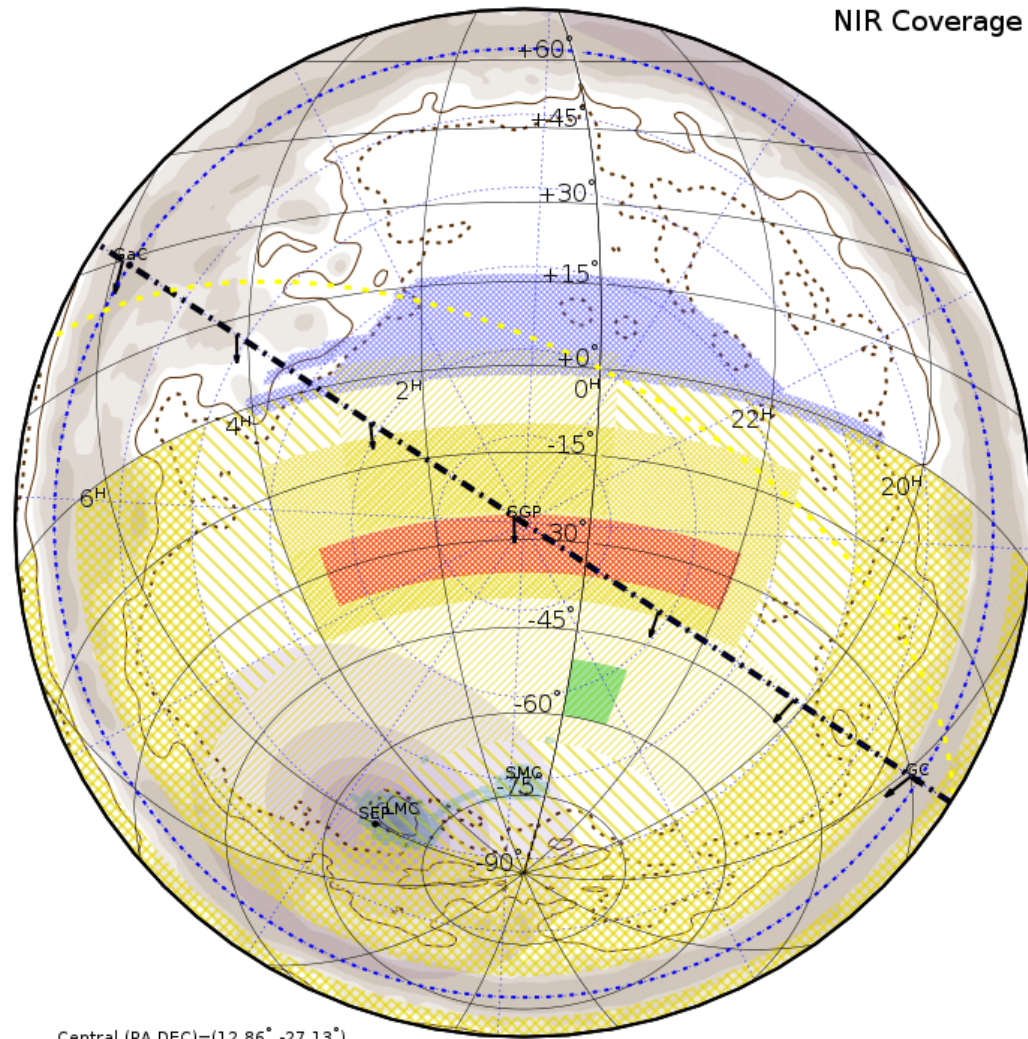
South Galactic Hemisphere

NIR Coverage

NIR Coverage



Central (RA,DEC)=(192.9°, +27.13°)

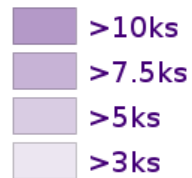


Central (RA,DEC)=(12.86°, -27.13°)

Dust E(B-V)



eRASS Texp



UKIDSS-LAS

VHS-ATLAS

VHS-GPS

VHS-rest

VIKING

eRosita-DE

J2000 grid

Galactic grid

Ecliptic plane

J2000 Coords, Zenithal Equal Area Projection (radius=100°)

dwelly@mpe.mpg.de

Credit: T. Dwelly @eRosita

Summary

- HSC imaging is key for eRosita early phase
 - eFEDs analysis
 - Pipeline validation
- Please
 - Join mailing lists and wikipages
 - propose joint projects