INAF GENIUS Team

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WP 330 VO infrastructure

Development of VO Dance

Addition of TAP procedures to VO Dance

Testing on Gaia size datasets

WP-240: Seamless data retrieval acrossss archives and wavelengths

Studies suggested

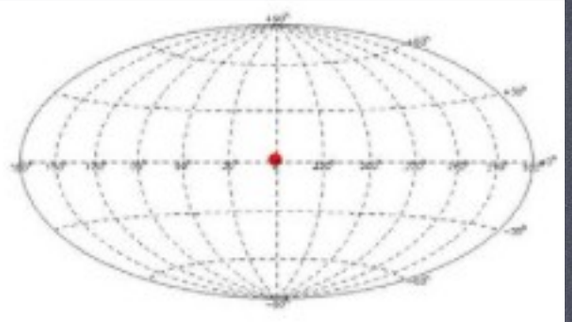
1) Dense field examination

2) Multiwavelength cross matching

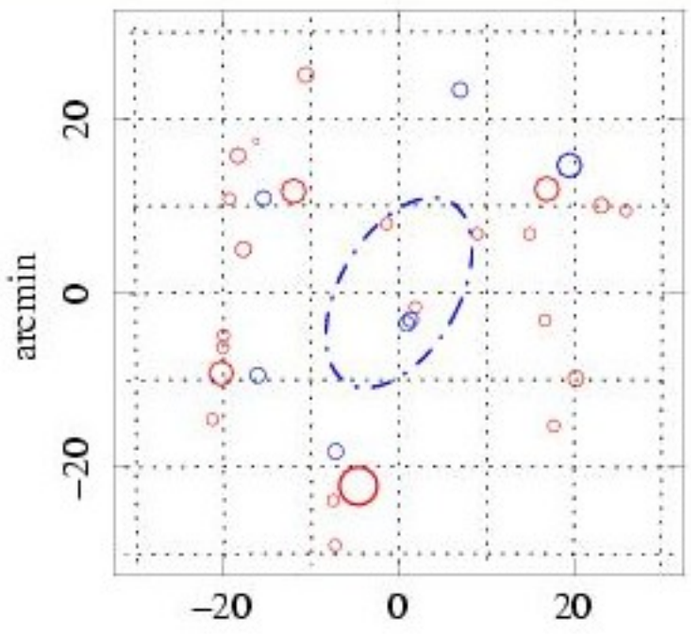
Gaia multi-wavelength cross match

asdc
ASI Science Data Center
Version 2.0

Entry 2FGL J1739.6-2726
R.A.(J2000) = 17 39 39.7 (264.9154 deg) l=0.58
Dec (J2000) = -27 26 03.8 (-27.4344 deg) b=1.90
Galactic nH = 5.12E+21 (cm^-2)
Source Names



Fermi-LAT Incremental Light Curves | Fermi-LAT Data Products | Error circle *EXPLORER* | Source Details



show sources list
download image in ps format

TUTORIAL HELP

Default catalogs
(always selected)

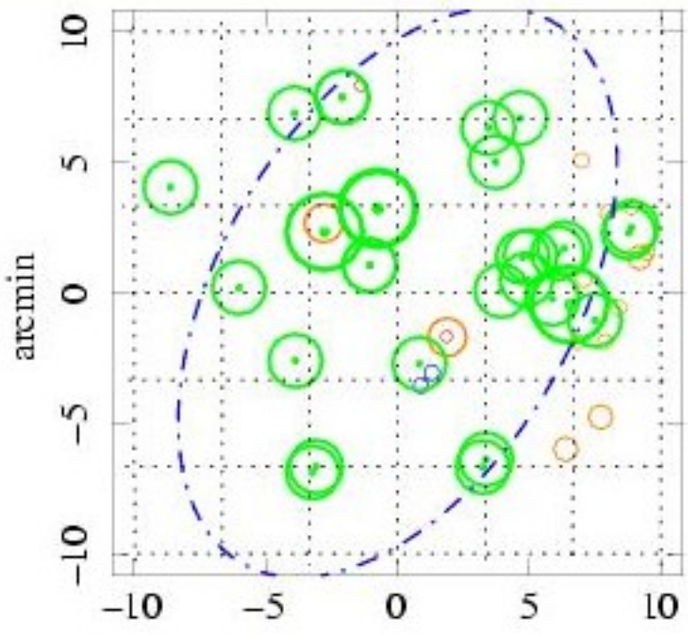
Selectable catalogs:

Default selection [i] ☐
Radio [select] ☑
Infrared [select] ☑
Optical [select] ☑
X-Ray [select] ☑
Gamma [select] ☐
Source Catalogs [select] ☐

[Selected catalog List >>]

size (arcmin) 10

Create new image



show sources list
download image in ps format

Position selected for the analysis:
R.A.=17 39 39.7 (264.9154 deg) l=0.58
Dec=-27 26 03.8 (-27.4344 deg) b=1.90
SED Builder | Source Names

Reset Position
Galactic nH= 5.12E+21 (cm^-2)

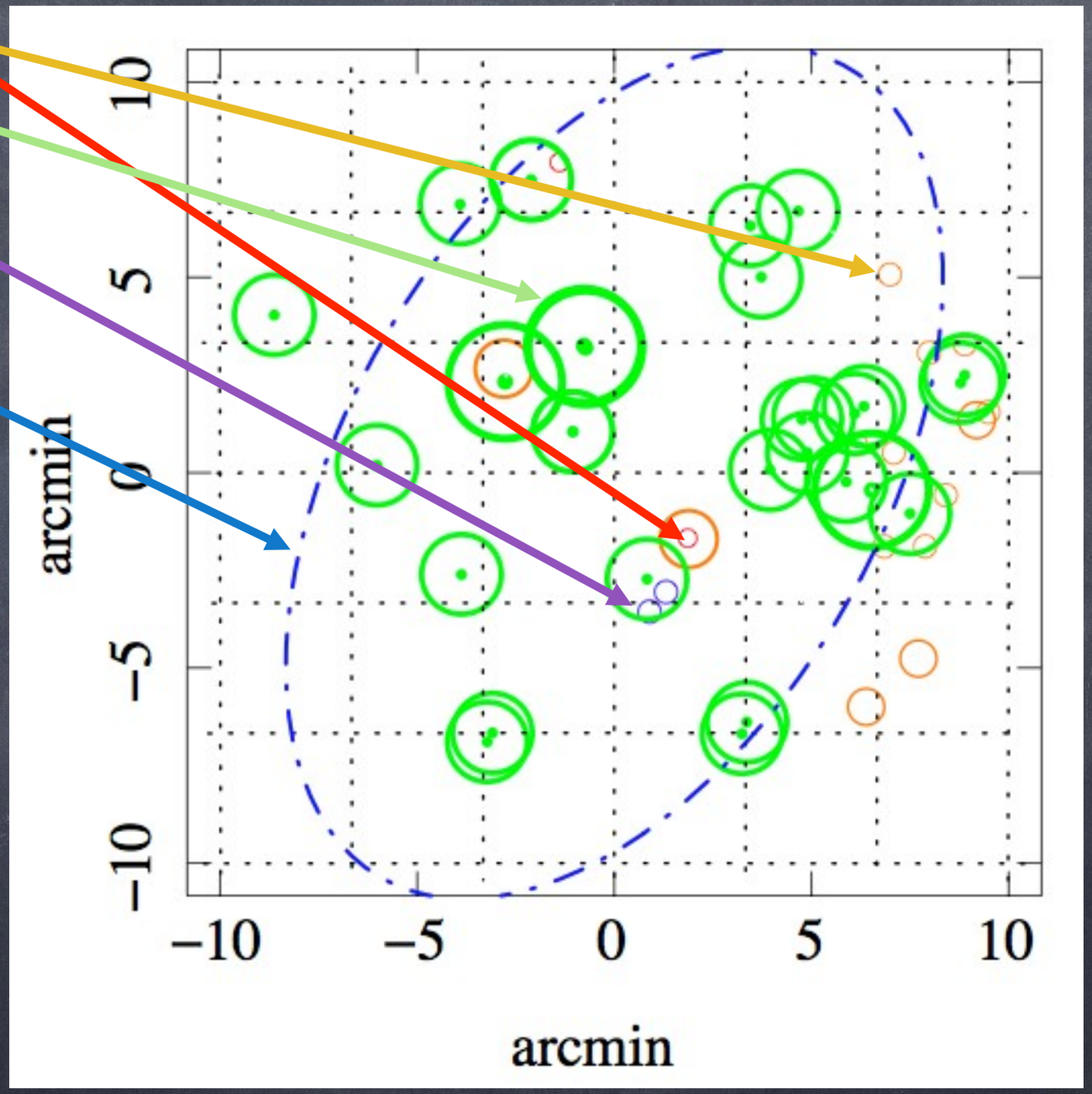
Radio [select] ☑

Infrared [select] ☑

Optical [select] ☑

X-Ray [select] ☑

Fermi



MW cross-match is an hard job

- Different astrometric accuracy
- Different flux sensitivity (very faint optical could be the brightest X-ray source)

What we want to do

- Explore different cross match strategies and algorithms
- Evaluate different figure of merit selecting the best choice for each catalog

Our goal

- Give to users a big multi wavelength catalog starting from Gaia
- Give to users tools for MW cross match

VO Resources @IA2

Plain listing of VO service changes since last year

- + 1 WINGS SIA service
  - + WIde field Nearby Galaxy clusters Survey (INAF-OAPd)
- + 4 WINGS SCS services
- + 2(+1) TAP services
  - Laurino/D'Abrusco
  - SDSS derived galaxies & quasars candidates with redshifts
  - Euro-PlaNet
  - INAF-IAPS collaboration
  - Planetary Science catalogue, RDB refactor
    - NASA dust particle catalogues vol.15 & 18
    - (+1) Asiago Astronomical Observatory technical data
  - For internal AAO use
    - First step in using TAP or TAP-like services for non-explicit scientific purposes

27 (+1) services running...more to come

WINGS oncoming full catalogue services

VO-Dance & IA2TAP powered

IA2 VO publishing capabilities

VO-Dance

S*AP publisher application

IA2 TAP web application

Evolved to host multiple resources in parallel

Ready to deploy TAP services

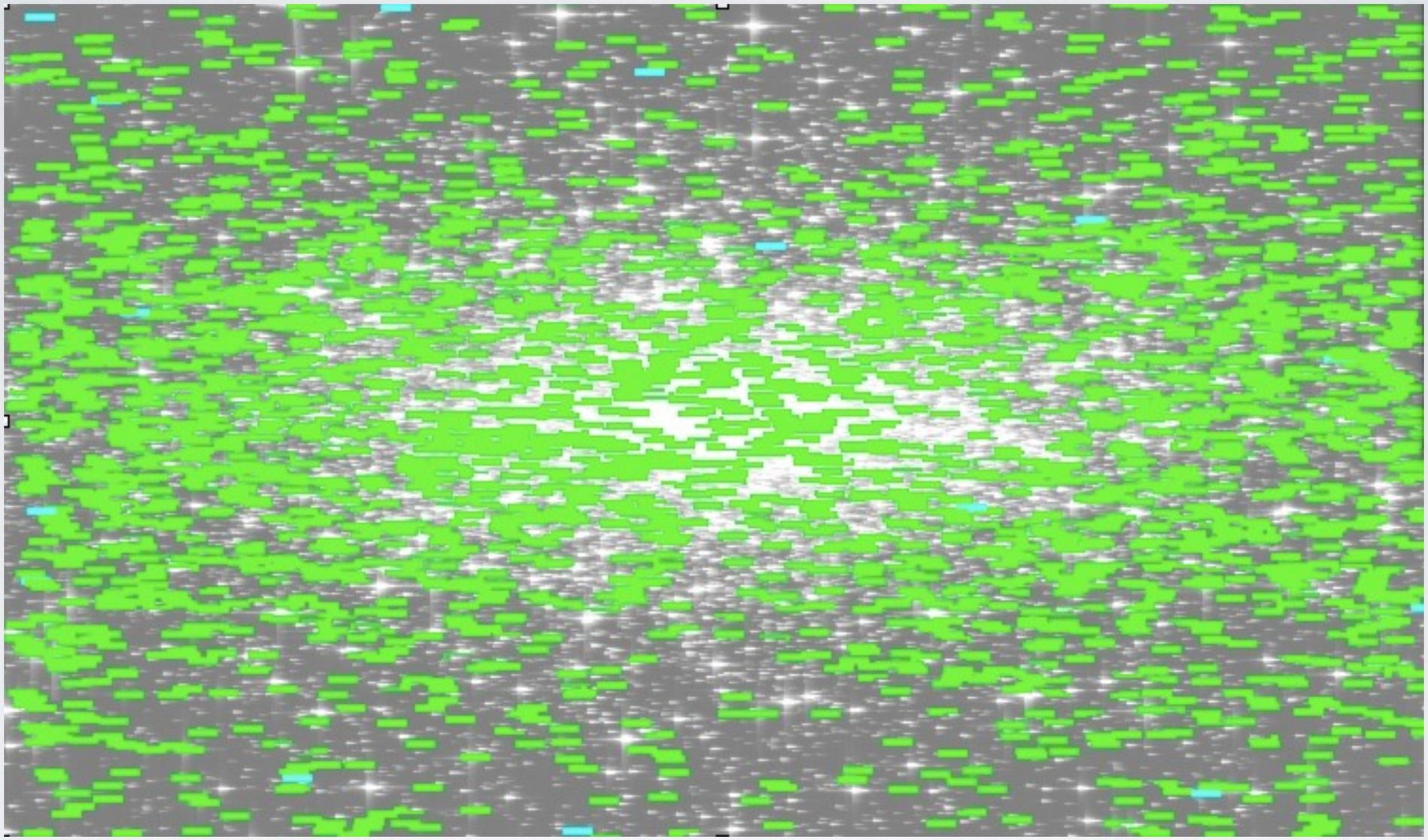
Baseline for collaborations

- EPN-TAP example

Project Name	Project Type	Data Type	Data Amount Archive	Data Amount DB	UI	VO	1yr User Access UI	1yr User Access VO
LBT ✓✓✓✓	Telescope	image / spectra	**10 TB**	**320 MB**	✓	SIA	**2.5k**	**47k**
TNG ✓✓✓✓	Telescope	image / spectra	**3 TB**	**1.2 GB**	✓	SIA	**12k**	**55k**
GAPS	Survey (TNG)	image / spectra	**850 MB**		✓(TNG), TWiki, Yabi			
Asiago ✓✓✓ **< 1yr**	Telescopes	image / spectra	**400 GB**	**290 MB**	✓	(TAP)	**700**	**(70)**
PESSTO	Survey (NTT)	image / spectra	**7 GB**	**1 MB**	✓			
hosted services								
WGE SDSS redshifts	data mining	catalogue		**8 GB**		SCS / TAP		**11k / 170**
Planck	early release	catalogue		**8 MB**		SCS		**49k**
TIRGO	IR camera	image	**(Arcetri)**	**100 MB**		SIA		**13k**
WINGS **< 1yr**	Survey	image / catalogue	**26GB**	**700 MB**		SIA / SCS		**11k / 10k**
INAF-IAPS EPN **< 1yr**	dust particles (NASA)	catalogue		**2 MB**		TAP		**1k**
ITVO	Theoretical Simulation	mixed	**1 TB**	**1 MB**	✓		**70**	

GAIA COMPLETENESS LIMIT

Max ?? for square degree



How many missing stars in high-density fields ?
Clusters, Bulge…

VISTA Variables in the Via Lactea Survey - Data Release 1

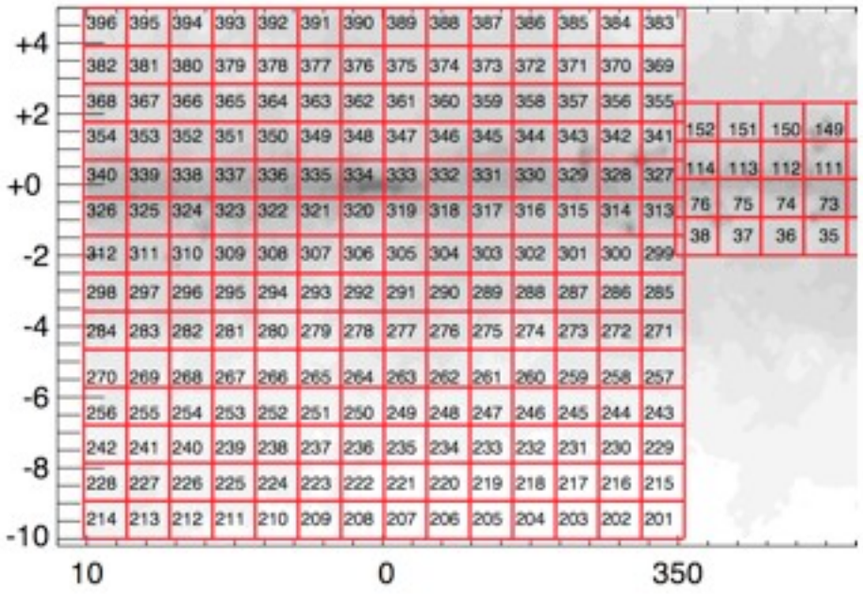
Provided by: D. Minniti, P. Lucas, and the VVV team

Release Date: 25.07.2011

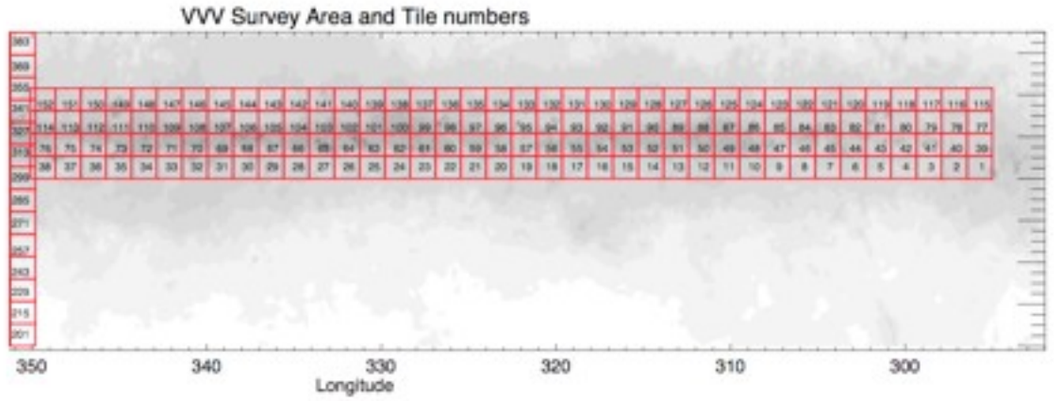
Summary

The VVV Survey data delivered in this ESO Data Release 1 (DR1) includes the VISTA paw-print and tile images that were acquired until September 30, 2010, and processed by the Cambridge Astronomical Survey Unit (CASU). These CASU v1.1 data files were successfully submitted to the ESO Archive through the Phase 3 system before April 30, 2011.

The Phase 3 release contains observations up to 30 September 2010 with all the approved data from CASU v1.1 pipeline reduction, including images and merged source catalogs. The list for this first Phase 3 DR1 has ~2800 tile images. If we count these plus associated confidence maps and catalogues they are approximately 1.6TB of data.



(a)



(b)

Figure 1. Maps showing the VVV tile numbers for: (a) bulge; and (b) disk.

Tools related to VizieR

- *new* **Photometry viewer** : Plot photometry (sed) including all VizieR
- **TAP VizieR** : query VizieR using ADQL (a SQL extension dedicated for astronomy)
- **CDS cross-match service** : fast cross-identification between any 2 tables, including VizieR catalogues, SIMBAD

→ Thanks for acknowledging the VizieR Service

searching for galaxy clusters, and looking for high redshift quasars. The KIDS project fills an important niche in lensing surveys between smaller, slightly deeper surveys, such as the CFHT Legacy Survey, and larger, shallower surveys like the SDSS. **Homepage:** http://kids.strw.leidenuniv.nl/

Probably we already have the answer!