



PADC

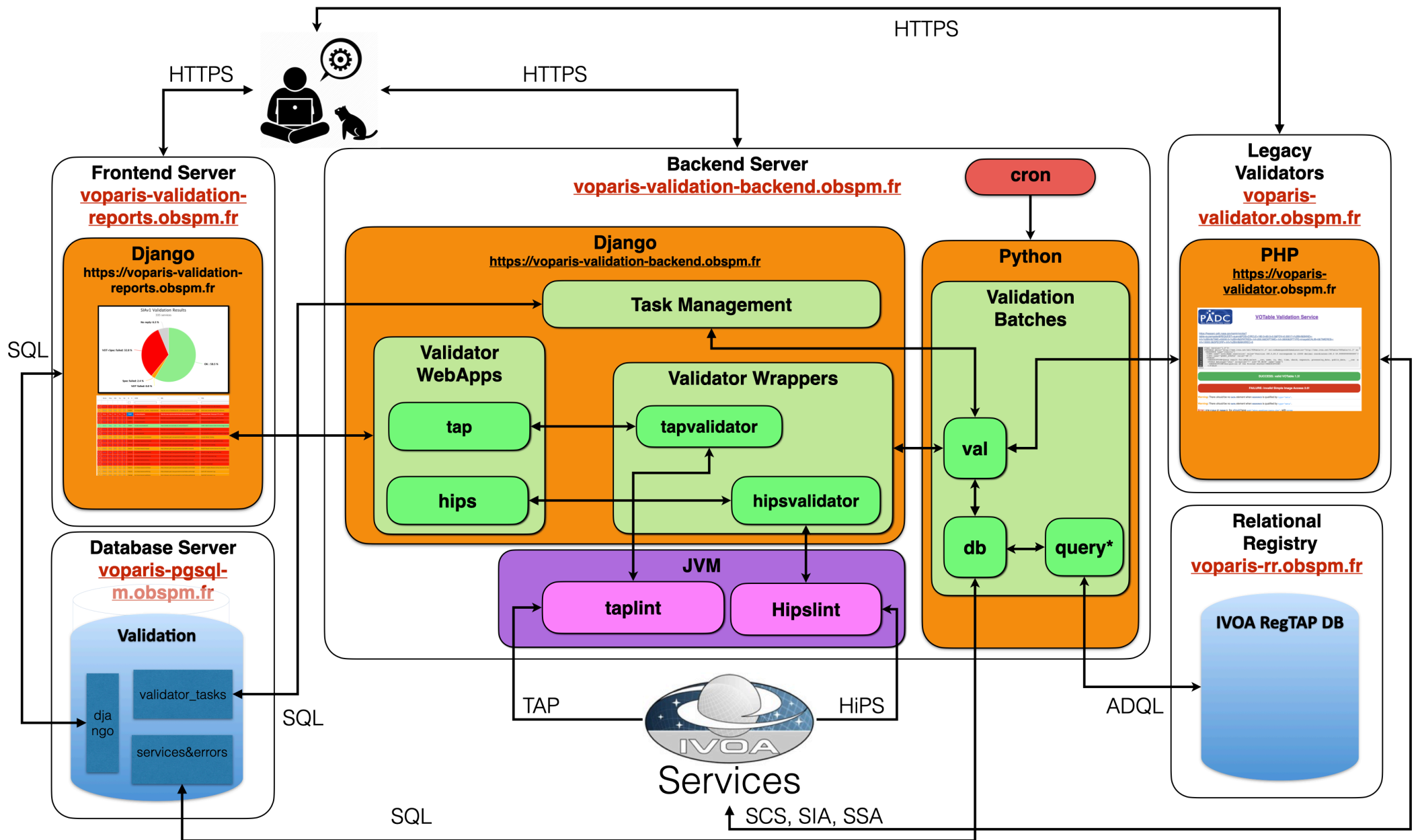
Weather Report

Renaud Savalle, Pierre Le Sidaner

PADC, Observatoire de Paris, France

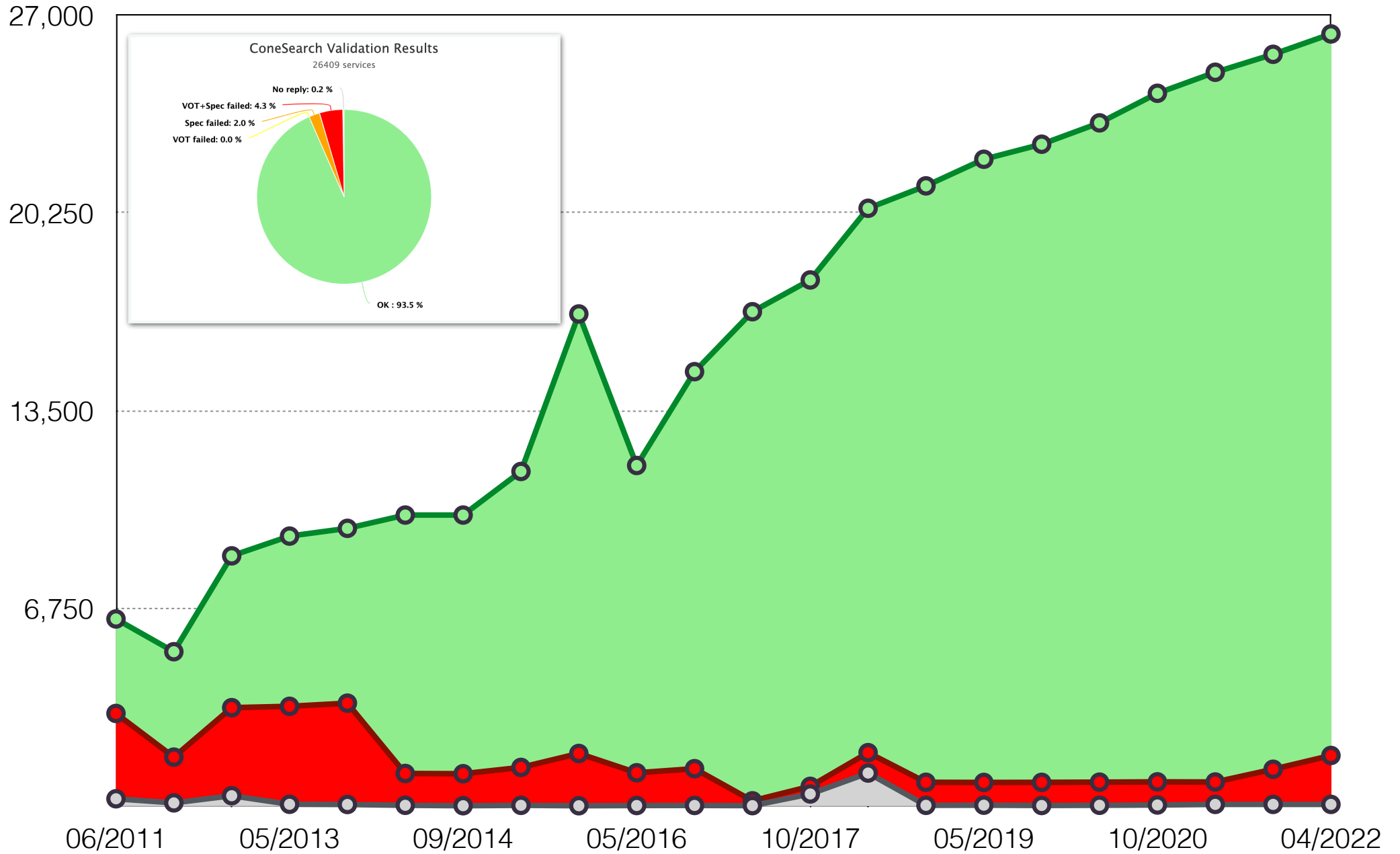
IVOA Interop Meeting - VIRTUAL - 2022-04-29 - Operations IG

PADC Validation Architecture (2022)

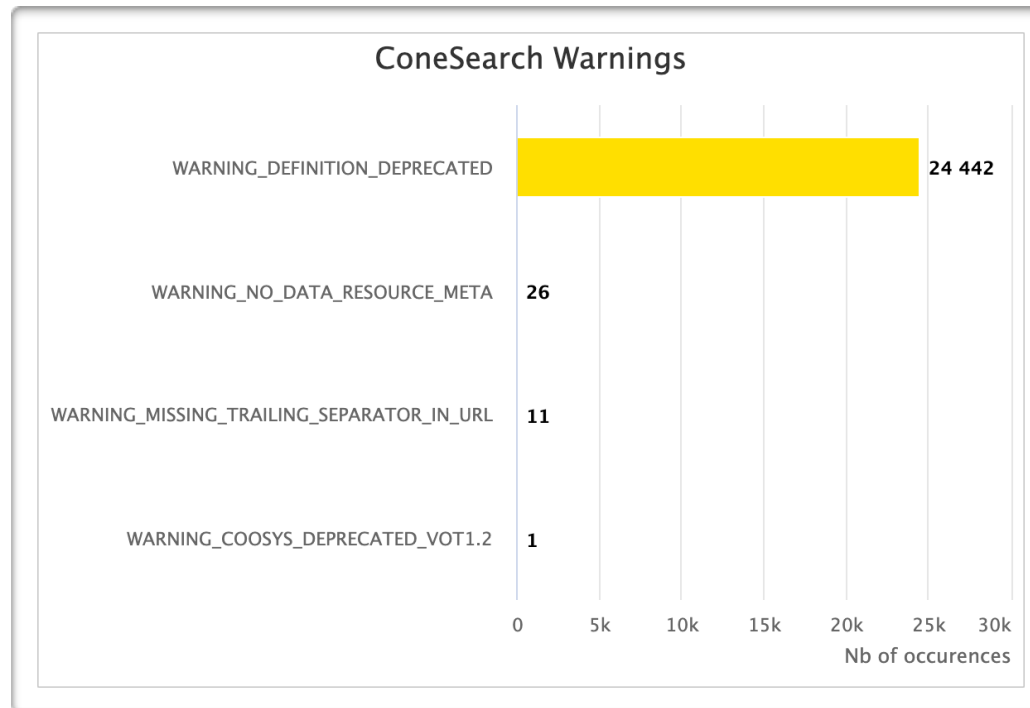
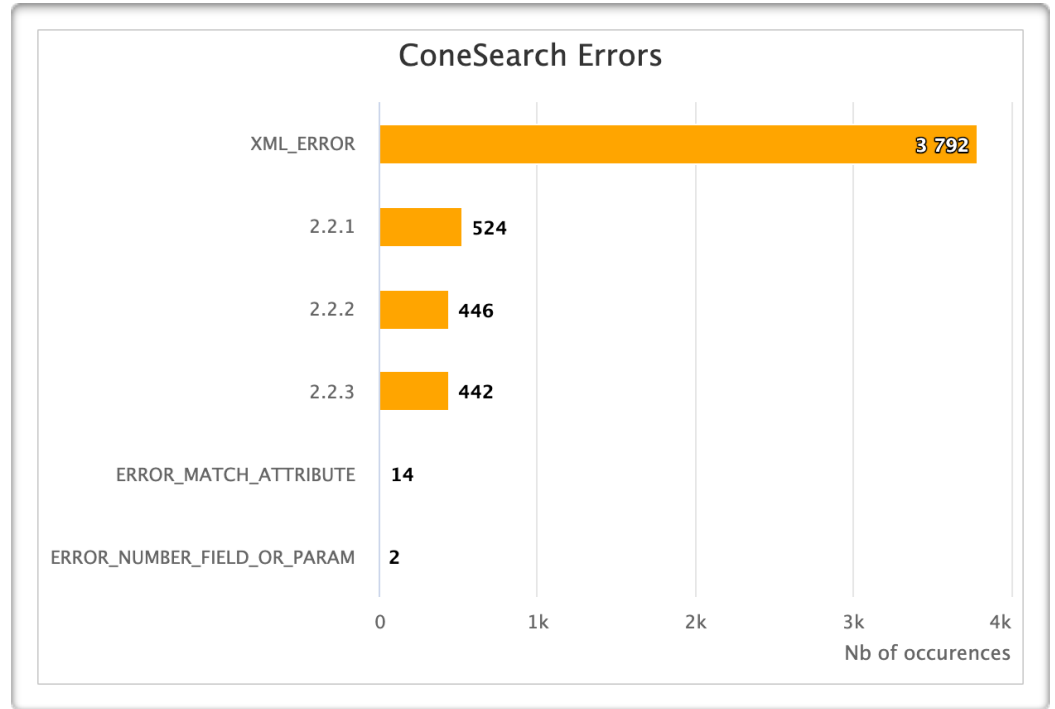
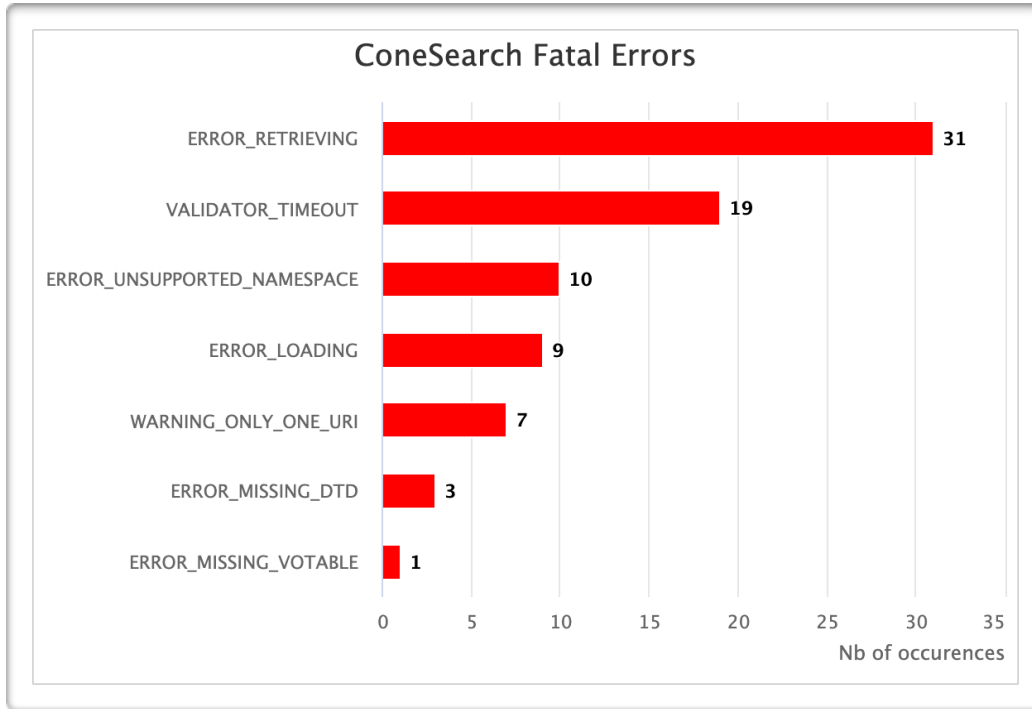


ConeSearch History

○ Not Responding ● Error ● Valid



2022-04 SCS Error Frequencies



TOP SCS Providers

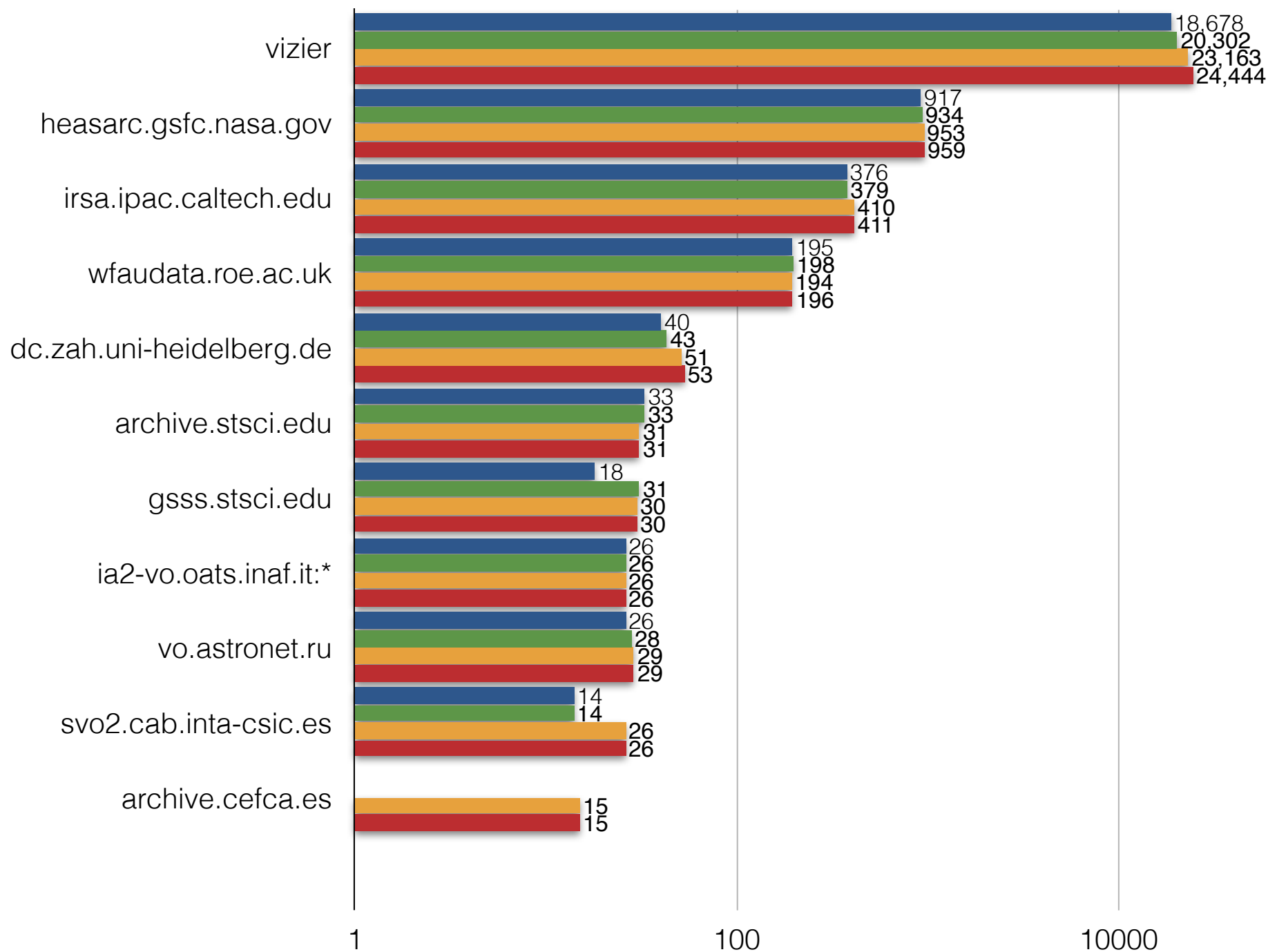
(N > 10 services)

2018-05

2019-05

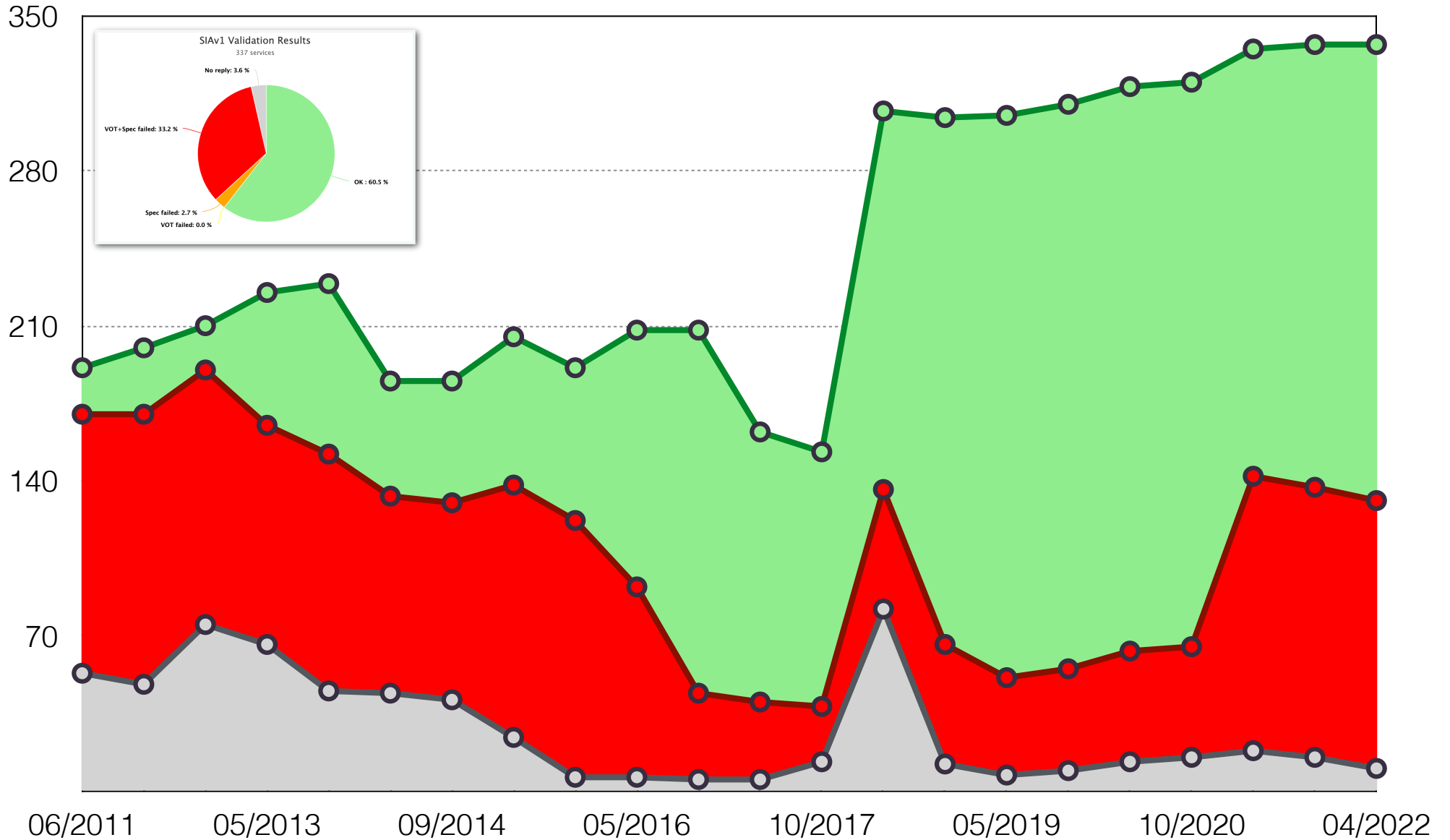
2021-05

2022-04

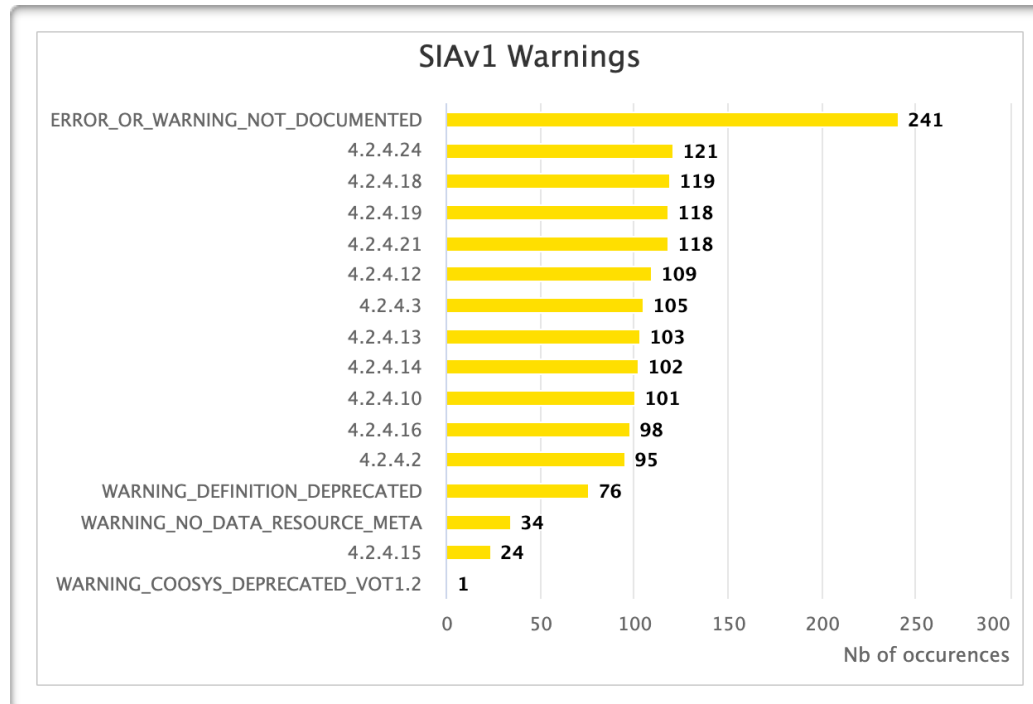
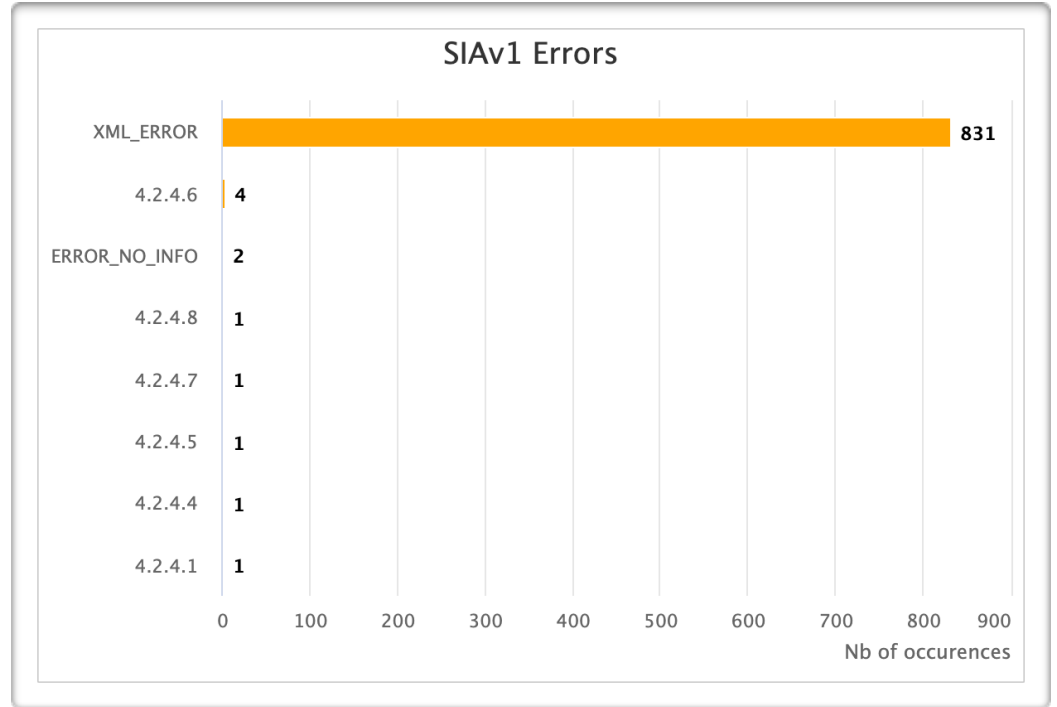
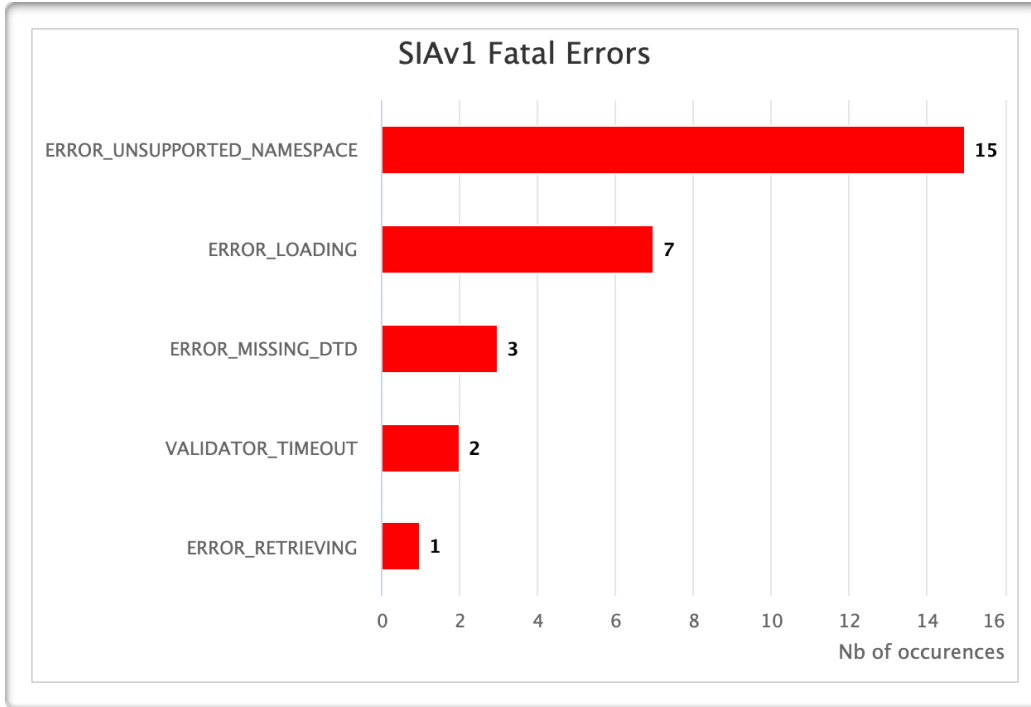


SIAv1 History

○ Not Responding ● Error ● Valid



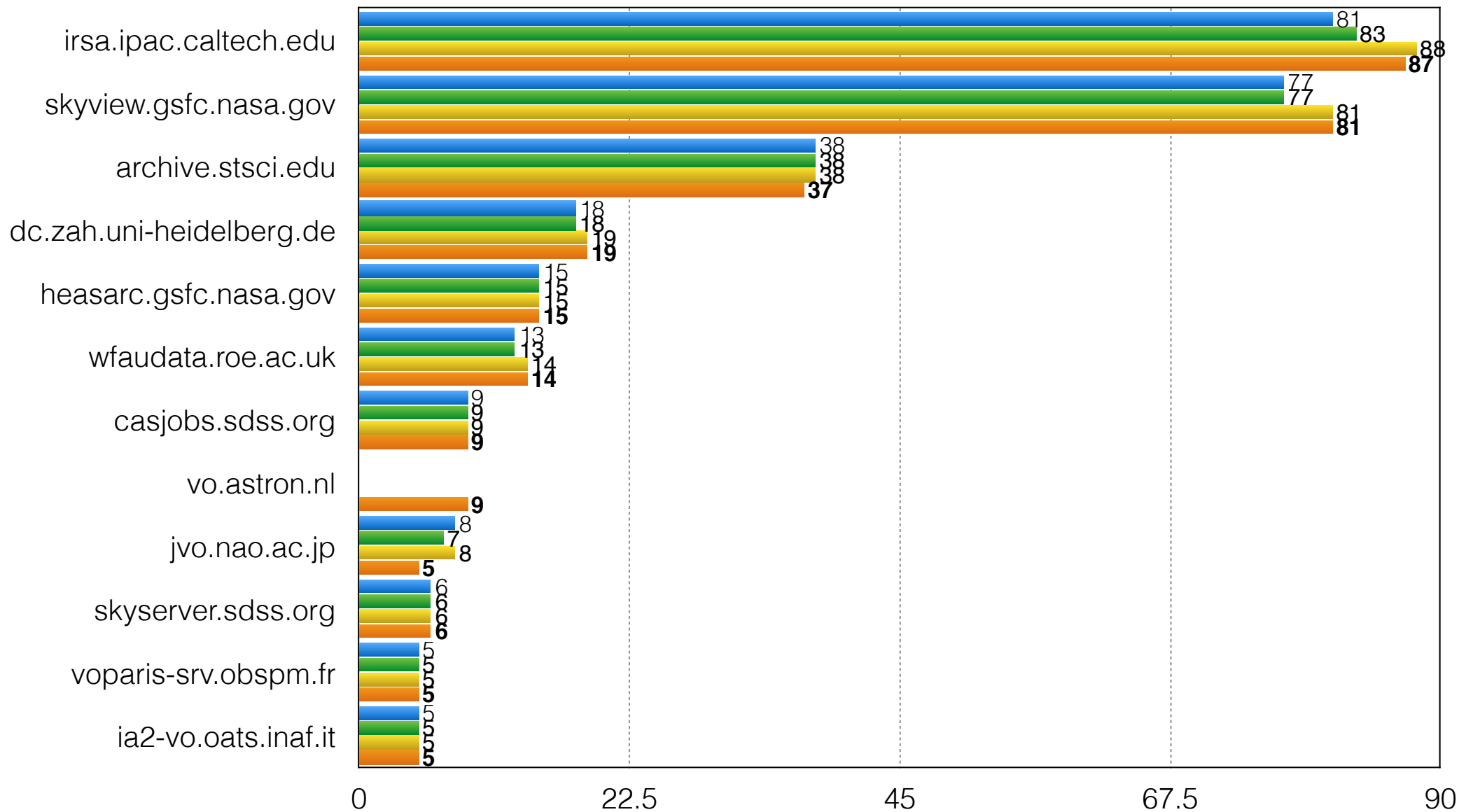
2022-04 SIAv1 Error Frequencies



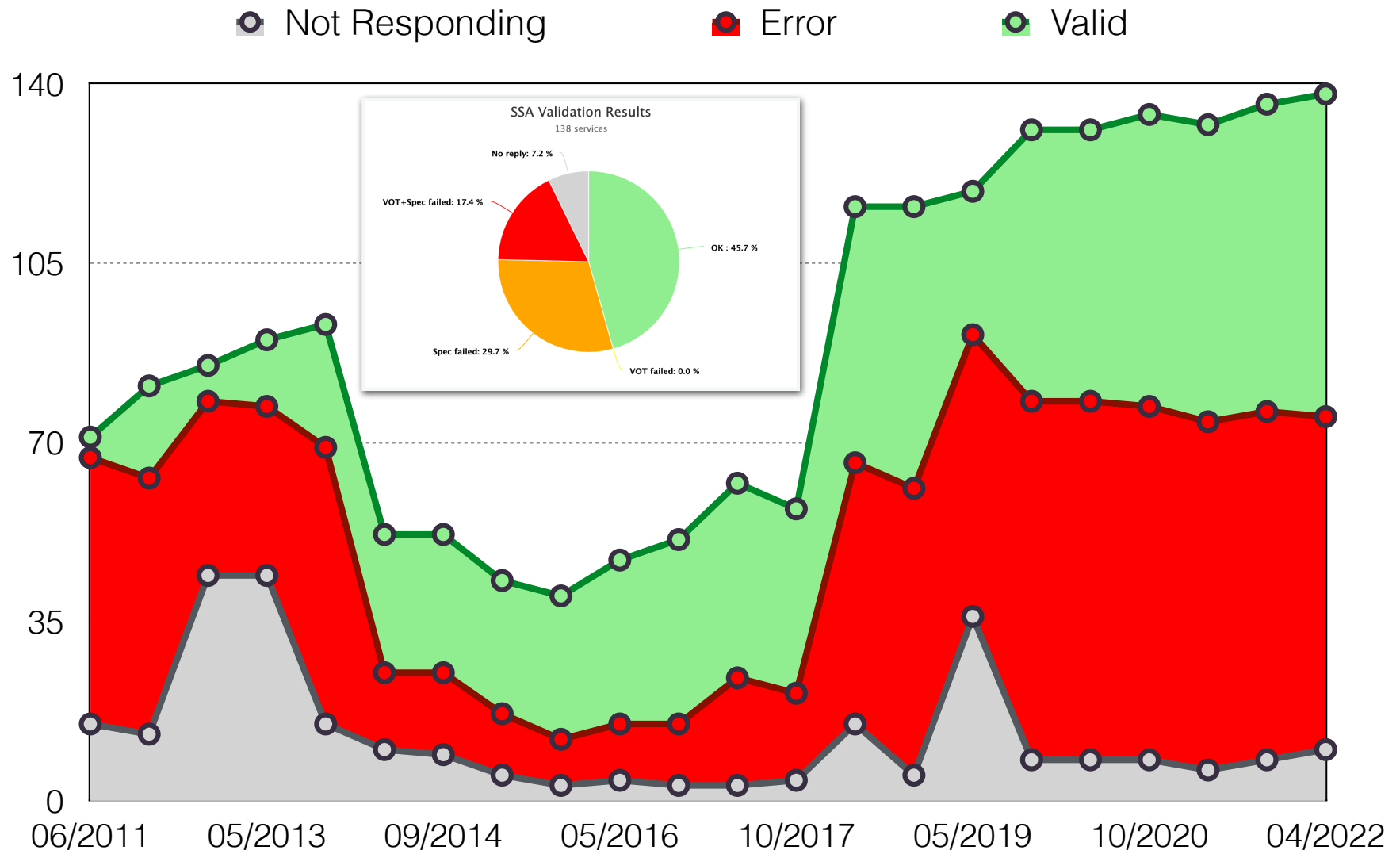
TOP SIAv1 Providers

(N>4 services)

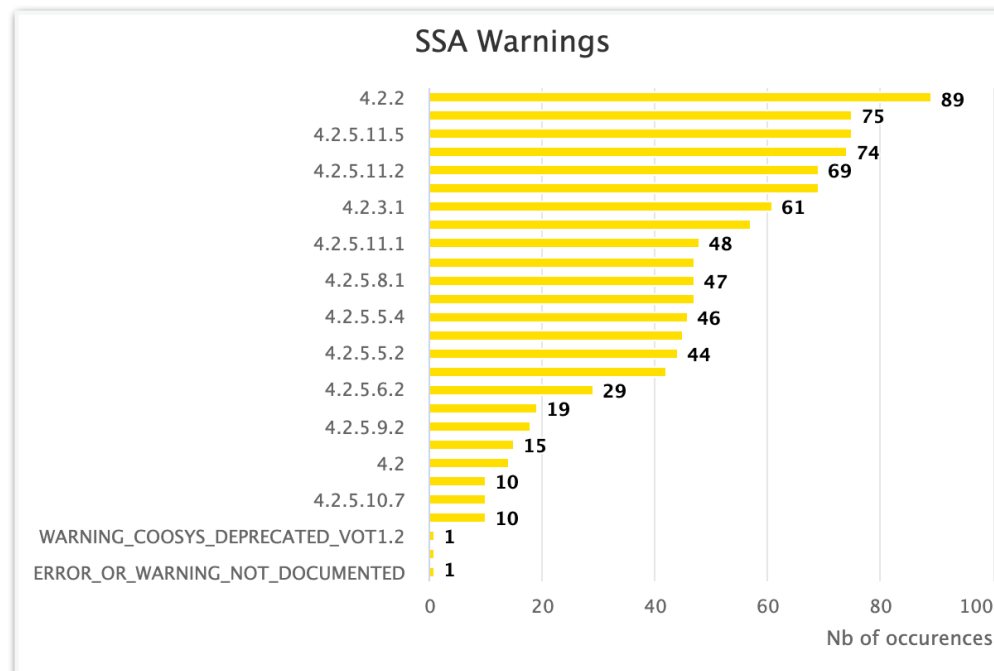
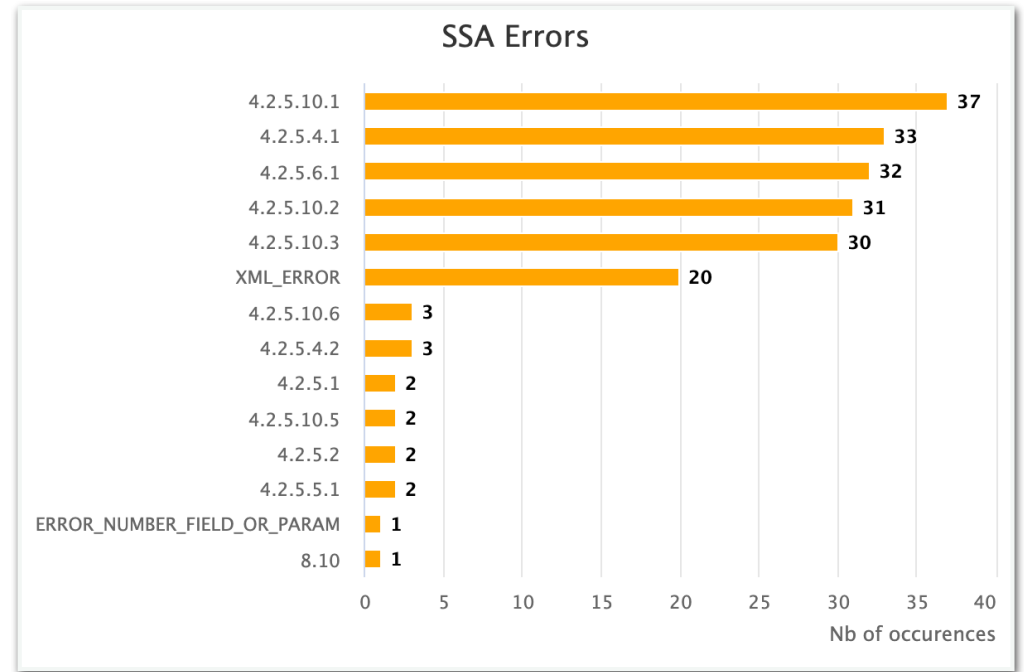
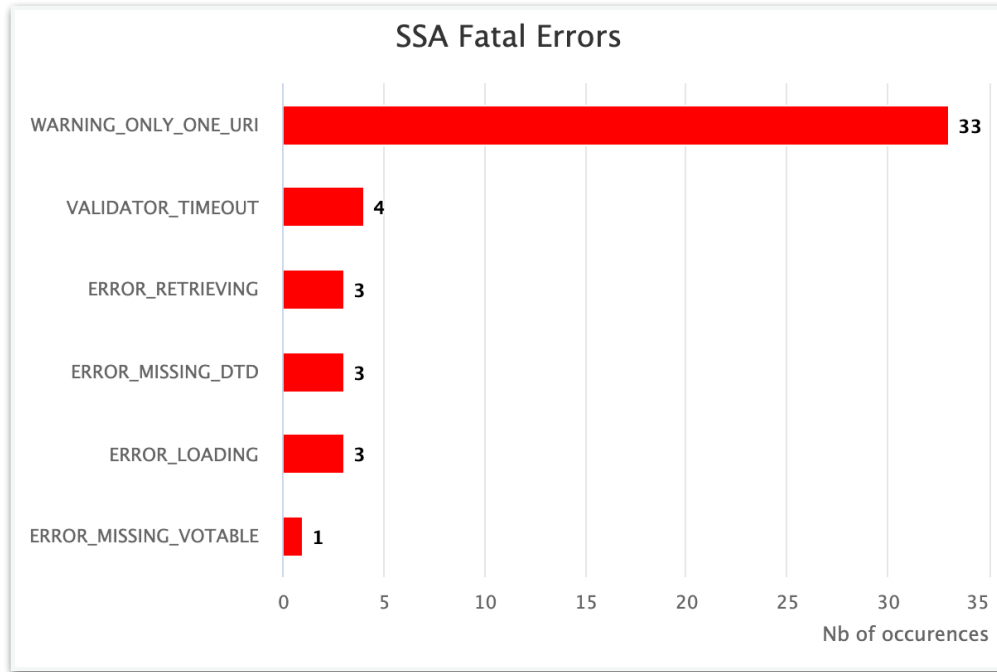
2018-05 2019-05 2021-05 2022-04



SSA History



2022-04 SSA Error Frequencies



TOP SSA Providers

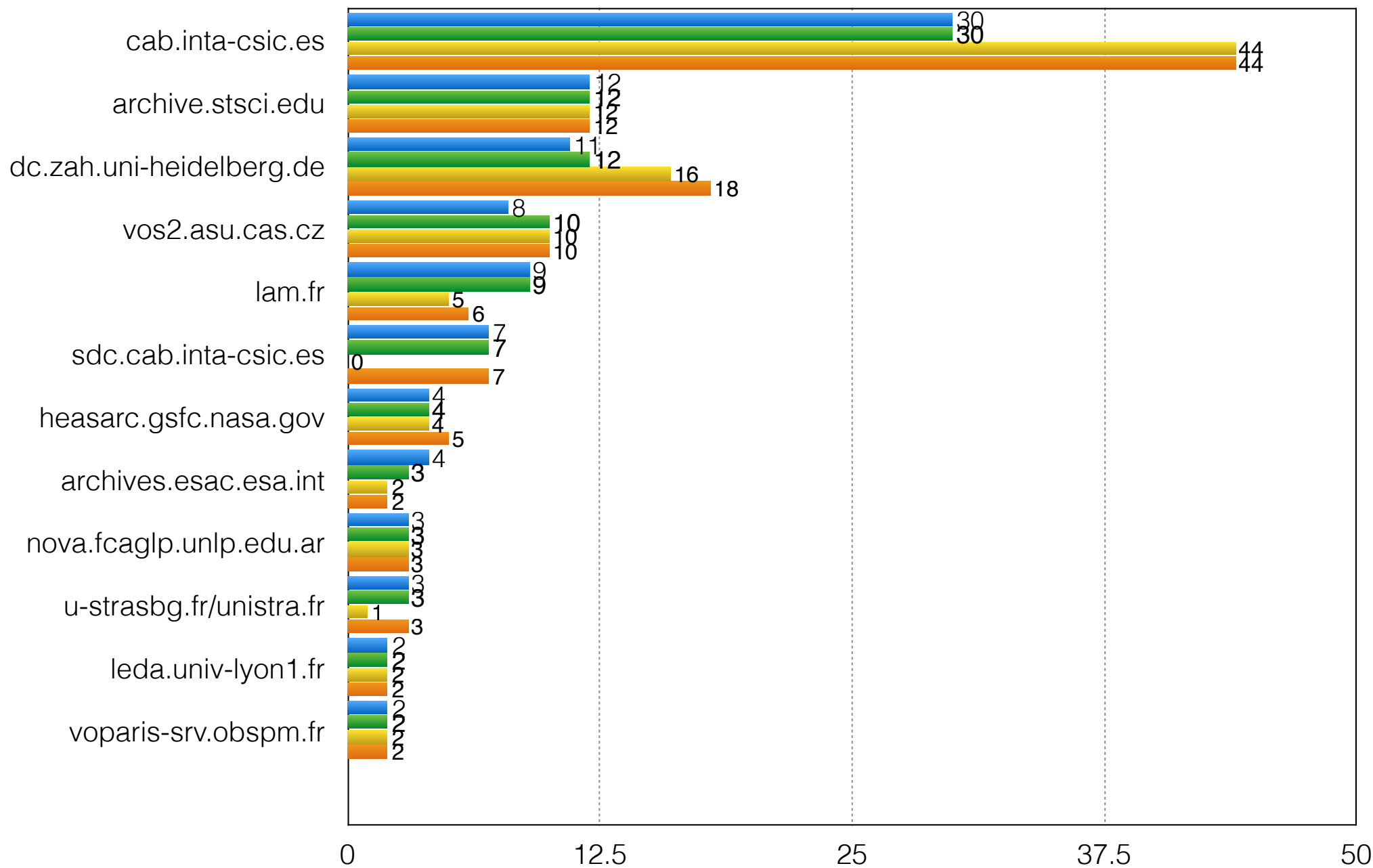
(N>1 service)

2018-05

2019-05

2021-05

2022-04





SIAv2 Validation

- SIAv2 monitoring started in 2022 using PADDC validator

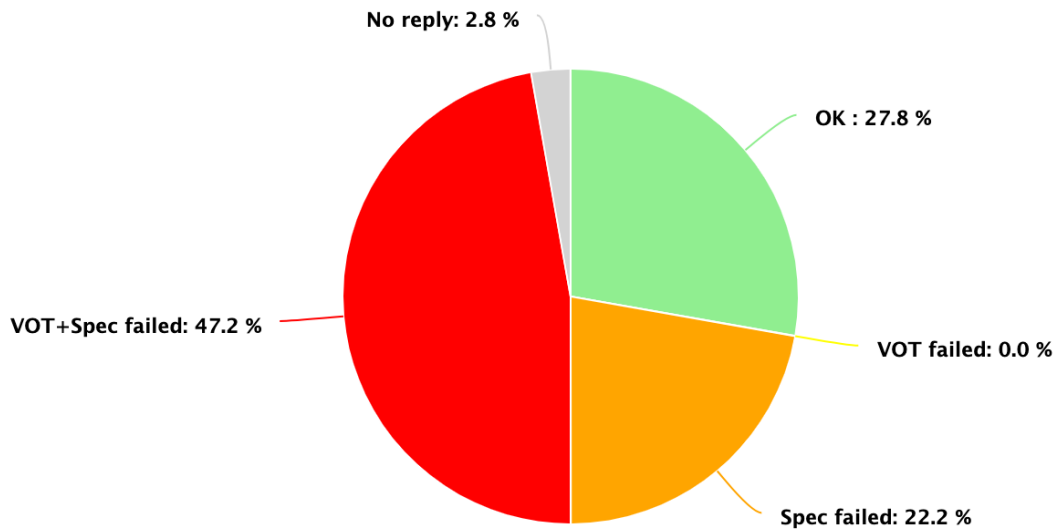
- **36 services on 14 servers**

SIAv2 Servers

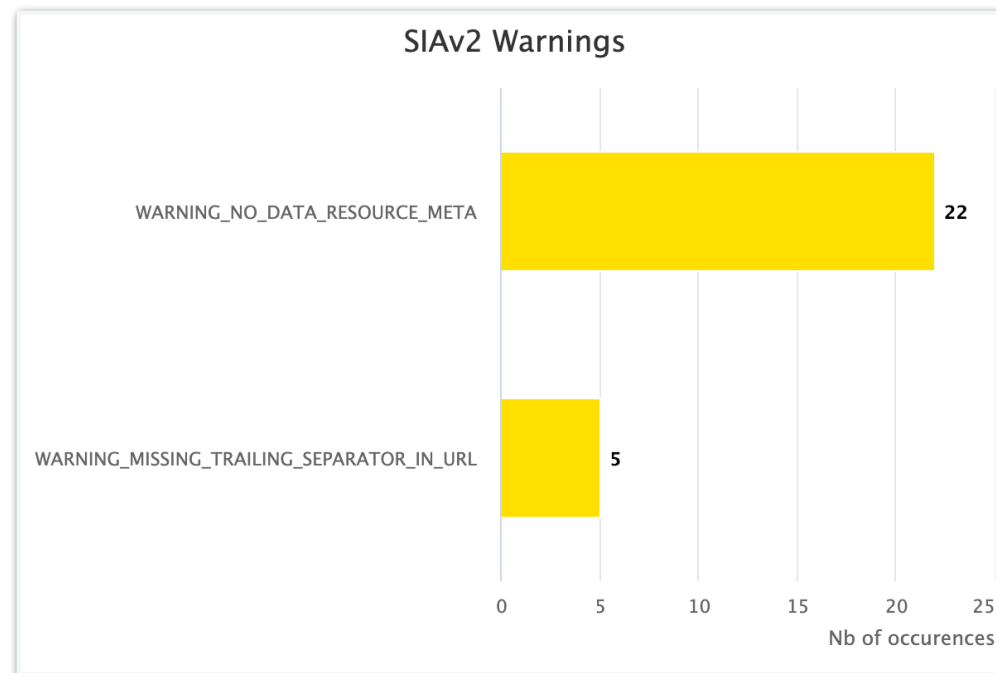
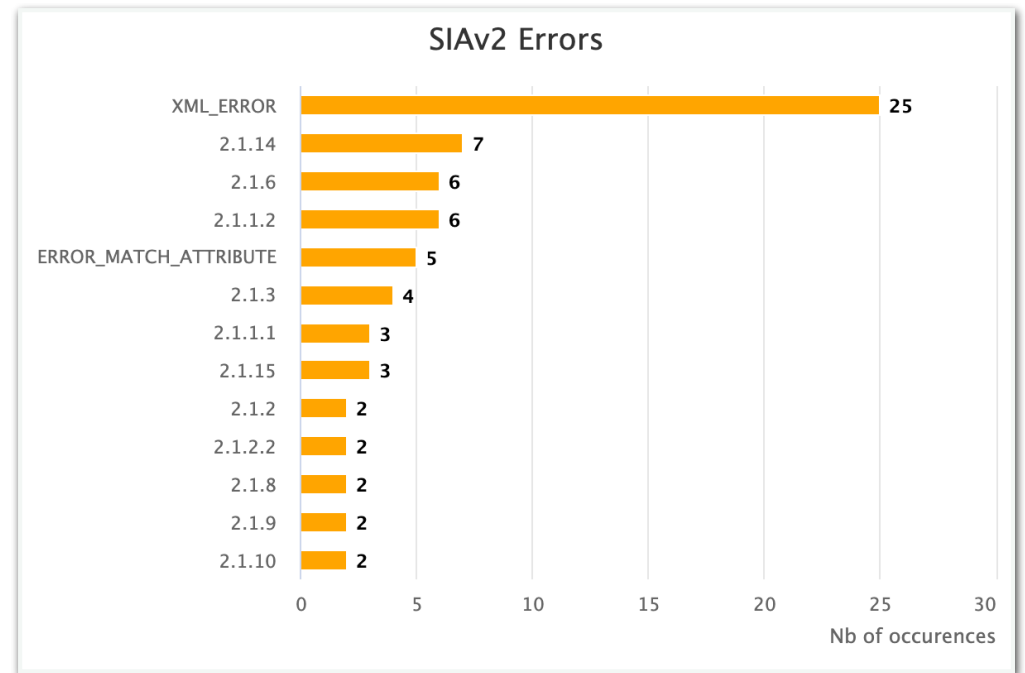
Server Name	Services	Warnings	Errors	Fatal Errors
heasarc.gsfc.nasa.gov	15	20	37	0
jvo.nao.ac.jp	7	1	6	0
archive.cefca.es	3	0	0	0
casda.csiro.au	1	0	0	0
dachs.eu.ngrok.io	1	0	0	1
datacentral.org.au	1	2	7	0
dc.zah.uni-heidelberg.de	1	0	10	0
irsa.ipac.caltech.edu	1	0	0	0
vo.astron.nl	1	0	9	0
vo.ned.ipac.caltech.edu	1	0	0	1
almascience.eso.org	1	1	0	0
ws.cadc-ccda.hia-ihp.nrc-cnrc.gc.ca	1	1	0	0
almascience.nao.ac.jp	1	1	0	0
almascience.nrao.edu	1	1	0	0

SIAv2 Validation Results

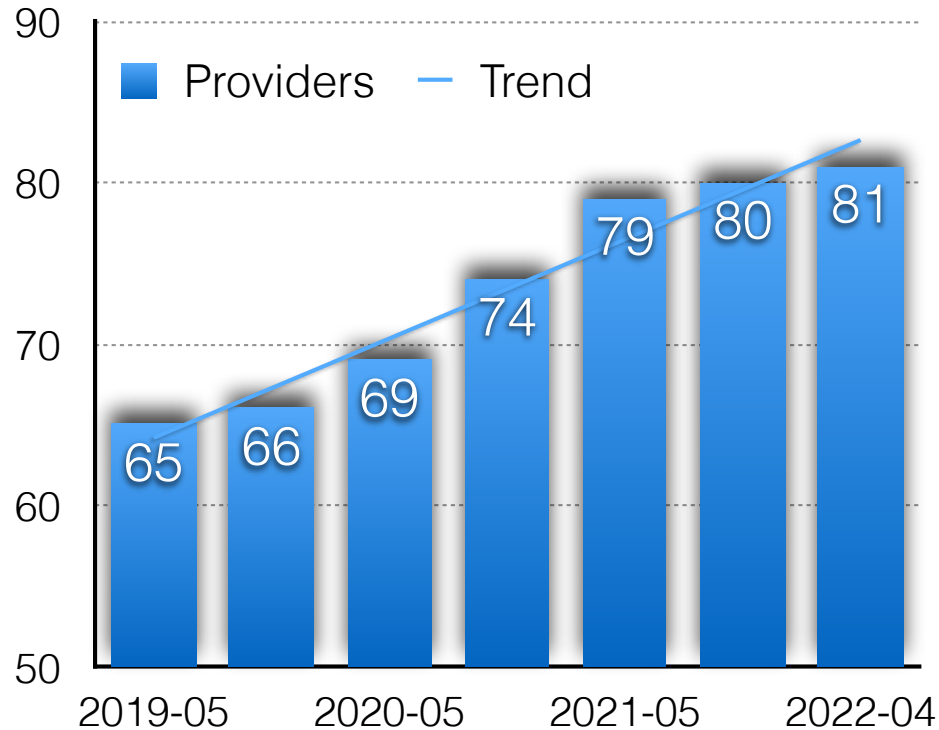
36 services



2022-04 SIAv2 Error Frequencies



TAP Validation



- TAP Monitoring started in 2018, using Mark Taylor's STILT **taplint** program for validation
- Uptake: +25% in 3 years
- **23903 services** (tables)
 - *in* **130 collections**
 - *on* **81 servers**

Unreachable TAP Collections

IVOID	URL	Name	Message	Section
ivo://vo-plasma.oeaw.ac.at/tap	http://epn-tap.oeaw.ac.at/tap	TAP0	TAP service not present	PRE
ivo://wfau.roe.ac.uk/osa-tap	http://tap.roe.ac.uk/osa	TAP0	TAP service not present	PRE
ivo://ia2.inaf.it/iaps/tap	http://vo-node1.iaps.inaf.it/tap	TAP0	TAP service not present	PRE
ivo://wfau.roe.ac.uk/vsa-tap	http://tap.roe.ac.uk/vsa	TAP0	TAP service not present	PRE
ivo://jacobsuni/tap	https://dachs.eu.ngrok.io/tap	TAP0	TAP service not present	PRE
ivo://wfau.roe.ac.uk/wsa-tap	http://tap.roe.ac.uk/wsa	TAP0	TAP service not present	PRE
ivo://byu.arvo/tap	http://arvo-registry.sci.am/tap	TAP0	TAP service not present	PRE
ivo://chivo/tap	https://vo.chivo.cl/tap	TAP0	TAP service not present	PRE

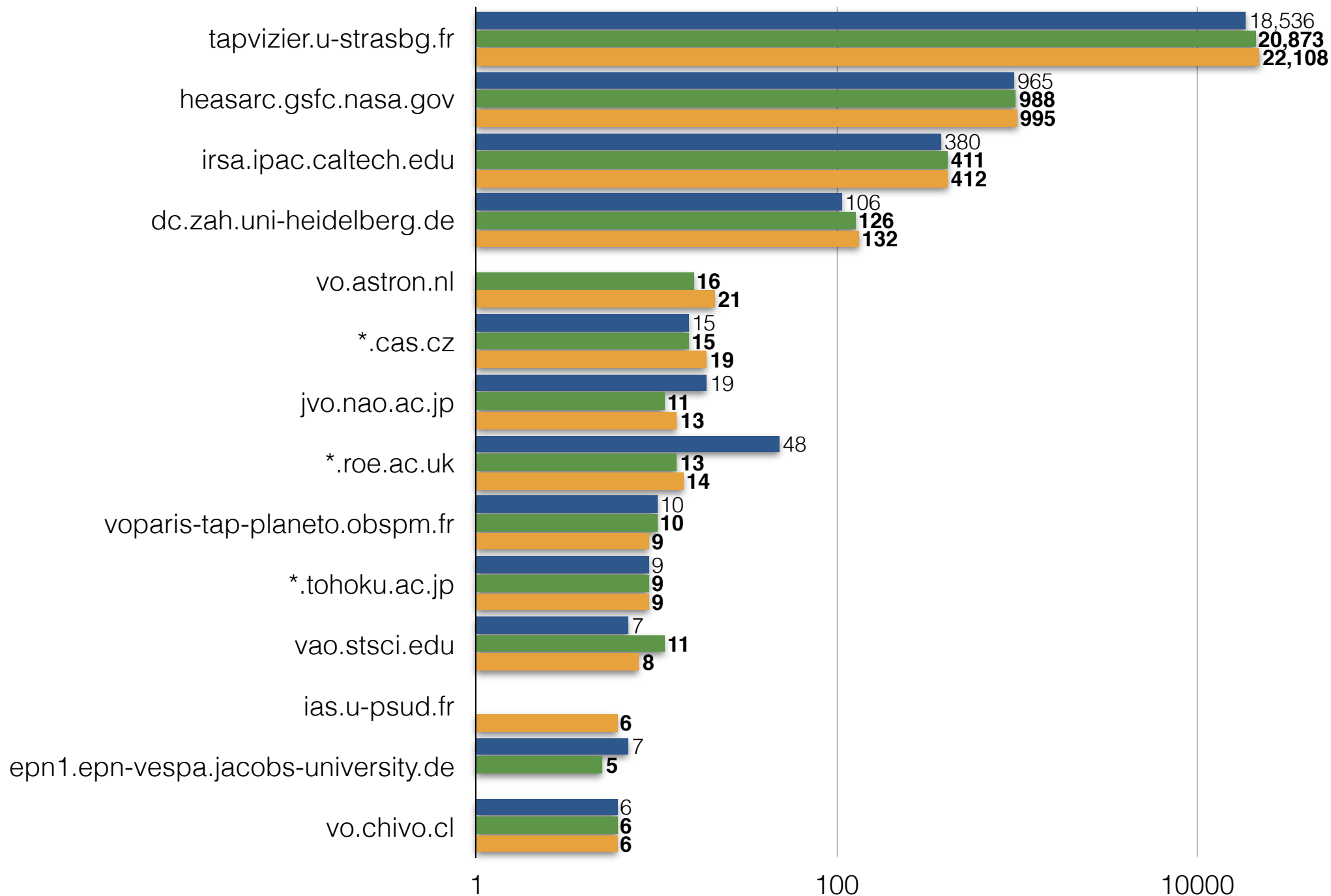
TOP TAP Providers

(> 5 services)

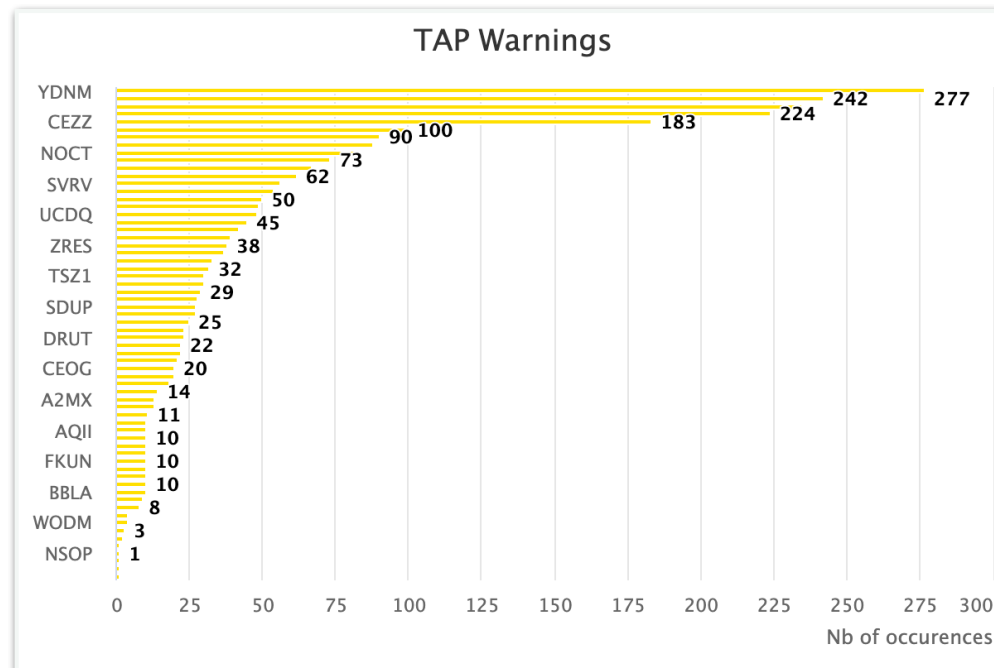
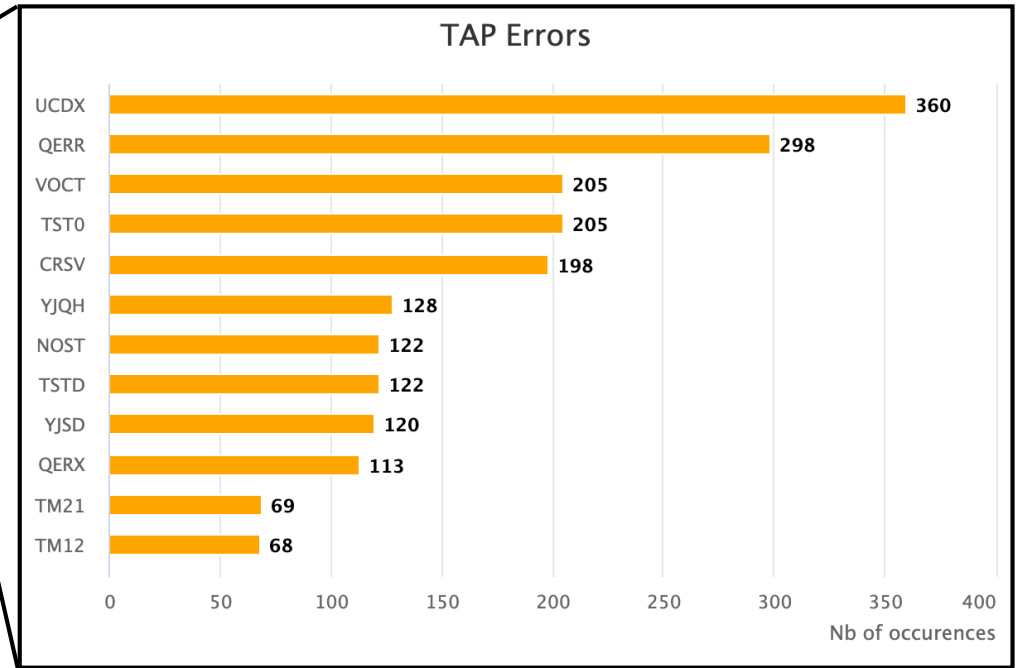
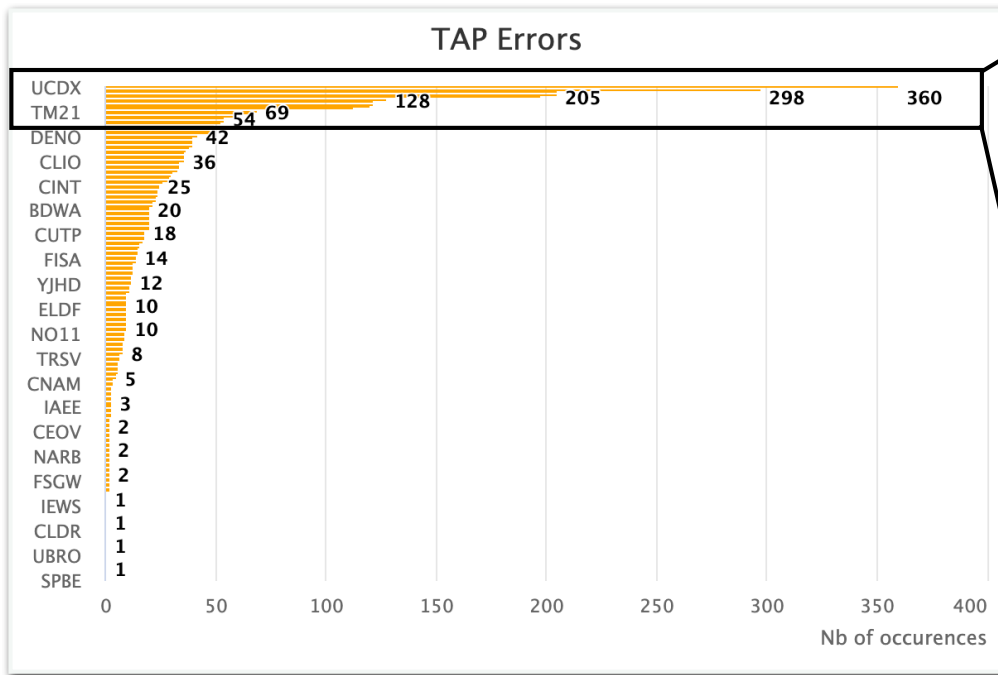
2019-05

2021-05

2022-04



2022-04 TAP Error Frequencies





HiPS Validation

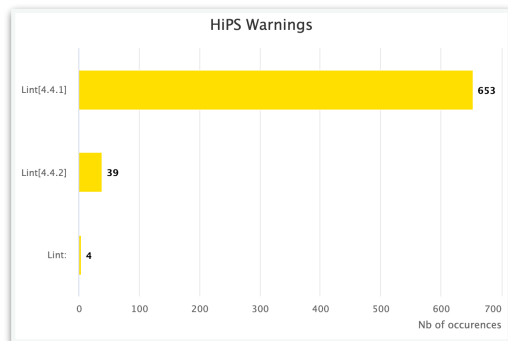
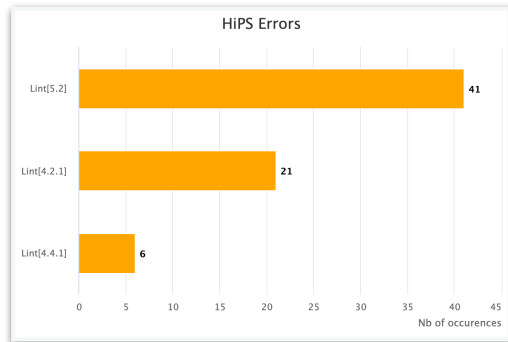
- Monitoring started in 2022, using the JSON output of our wrapper for Pierre Fernique's **Hipslint** program
- **11 registered services** (collections of image/cube/catalog surveys) on **10 servers**:

Registered HiPS Services

IVOID	URL	Title	Val Result	Nb Warnings	Nb Errors	Nb Fatal	Nb Failures
ivo://au.csiro/hips/server	https://casda.csiro.au/hips/hipslist	CSIRO HiPS Mirror Service	OK	0	2	0	0
ivo://cadc.nrc.ca/hips	https://hips.canfar.net/hipslist.txt	CADC image/cube HiPS service (Collection 1)	java exception	0	0	0	2
ivo://cds.aladin/hips/master	http://alasky.cds.unistra.fr/hipslist	CDS image/cube HiPS service (master server)	java exception	112	8	0	2
ivo://cds.aladin/hips/slave	http://alaskybis.cds.unistra.fr/hipslist	CDS image/cube HiPS service (slave server)	OK	0	2	0	0
ivo://cds.aladin/hips/slave	https://alaskybis.cds.unistra.fr/hipslist	CDS image/cube HiPS service (slave server)	OK	2	2	0	0
ivo://cds.vizier/hips/server	http://axel.cds.unistra.fr/HiPSCatService/hipslist	CDS catalog HiPS Service	OK	832	2	0	0
ivo://cxc.harvard.edu/hips	https://cdfaftp.cfa.harvard.edu/hipslist	Chandra HiPS Service	OK	6	0	0	0
ivo://esavo/esasky/hips	http://skies.esac.esa.int/hipslist	ESASky HiPS Service	OK	384	36	0	0
ivo://irsa.ipac/hips	https://irsa.ipac.caltech.edu/data/hips/list	IRSA Hierarchical Progressive Survey (HiPS) Node	OK	0	0	0	0
ivo://jvo/hips	http://jvo.nao.ac.jp/HiPS/hipslist.txt	JVO HiPS service	OK	56	84	0	0
ivo://nasa.heasarc/hips/server	https://skyview.gsfc.nasa.gov/hips/skyview.hips	SkyView HiPS Server	OK	0	0	0	1

- Many more (24+) HiPS nodes exist ! Providers: please **register** them...

HiPS Validation: Most common Errors & Warnings



1. Incoherencies: the hipslist (index) and the properties file don't match

- `hips_status` (ex: unclonable in the hipslist, but clonable in the properties file)
- `hips_service_url` => URL modification not reported in the Hipslist
- `hips_release_date` => Hips release date not correctly reported in the Hipslist

2. Some recommended keyword missing:

- `t_min`, `t_max` => epoch unknown
- `em_min`, `em_max` => energy band unknown
- `hips_initial_ra` (`de`, `fov`) => initial position unknown
- `prov_progenitor` => origin of the data unknown
- `obs_description` => verbose description unknown

3. Syntax errors:

- numeric value required ex `hips_initial_fov`
- unreferenced `obs_regime` not in ("Radio" | "Millimeter" | "Infrared" | "Optical" | "UV" | "EUV" | "X-ray" | "Gamma-ray")
- unreferenced `dataproduct` (only: image, catalog or cube)
- unreferenced `hips_frame`: ex: "Galactic" => galactic

4. Some HiPS use obsolete elements since REC 1.0

- "Moc.fits" coordinate system error, ICRS expected, found [G] => Not allowed for celestial MOC
- gzipped files: ex: `allsky.fits.gz` => deprecated

Thanks to Pierre Fernique, CDS for his help on this analysis

Summary

- PADCC daily crawls the Registry and validate all its SCS, SIA, SSA, TAP, HiPS services. SIAv2 validation now operational (36 services)
- Service Providers: please be proactive and check compliance:
 - **Reporting Web App** - browse your results
<https://voparis-validation-reports.obspm.fr/>
 - **API** - get your results in JSON format
<https://voparis-validation-reports.obspm.fr/api/>
- Improving the validators generally improves the statistics
→ Comments and feedback always welcome !