

Operations IG Status, Progress, Issues

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Operations IG
IVOA Interop
Online

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Outline

- Standards compliance and issues:
 - UCD
 - VOUnits
 - Sexagesimal markup
 - Cone Search
 - SSA
- Activities and Roadmap

UCDs Update

	owner	Total_Nov2021	Total_Oct2022	error_percent_Nov2021	error_percent_Oct2022
	cds.vizier	741645	810741	1.0	0.8
	wfau.roe.ac.uk	266987	266993	18.0	18.0
☺	nasa.heasarc	28812	29241	1.6	<u>0.0</u>
☺	org.gavo.dc	9112	9609	0.4	0.1
☺	www.plate-archive.org	3040	3688	2.1	1.9
☺	lam.cesam	2706	2838	0.3	<u>0.0</u>
☺	lam.cesam.aspic	2666	2702	0.2	<u>0.0</u>
	eso.org	2618	2618	1.2	1.2
☺	gaia.aip.de	2008	6410	10.9	8.2
☺	astron.nl	857	1064	3.7	3.2
☺	idoc	468	524	10.7	3.4
	vopdc.obspm	383	314	9.9	9.2
☺	uni-heidelberg.de	308	3081	6.8	1.0
☺	osug-vo.osug	281	324	9.3	3.7
☺	bira-iasb	277	231	8.3	<u>0.0</u>
☺	jacobsuni	274	588	8.0	0.7
☹	ar.nova	233	157	6.0	9.6
	musewide.aip.de	218	218	51.4	51.4
☺	purx	182	362	9.3	5.8
☺	geops.ipsl	166	166	7.2	<u>0.0</u>
☺	lmd.jussieu	124	232	3.2	<u>0.0</u>
☹	archive.stsci.edu	80	129	6.2	7.0
☺	latmos.ipsl	64	122	7.8	<u>0.0</u>
	ned.ipac	25	25	0.0	<u>0.0</u>
	km3net.org	6	6	0.0	<u>0.0</u>
	mssl.ucl.ac.uk	3	3	0.0	<u>0.0</u>

VOUnits Update

	owner	Total_Nov2021	Total_Oct2022	error_percent_Nov2021	error_percent_Oct2022
😊	cds.vizier	422286	447814	26.3	10.6
	wfau.roe.ac.uk	215386	216315	34.0	34.0
	nasa.heasarc	18927	19440	47.0	46.9
	org.gavo.dc	5587	5797	0.0	0.1
	archive.stsci.edu	3249	3273	83.9	83.6
😊	lam.cesam	2466	2550	6.0	0.0
😊	lam.cesam.aspic	2453	2453	6.1	0.0
	eso.org	1826	1826	12.5	12.5
😊	gaia.aip.de	1488	3414	99.5	29.1
😞	www.plate-archive.org	1158	1380	29.4	31.4
	voxastro.org	812	812	75.1	75.1
	astron.nl	575	850	0.0	0.0
	tohoku.univ.jp	480	480	0.0	0.0
	asu.cas.cz	373	373	8.6	8.6
	sao.ru	352	352	17.0	17.0
	ia2.inaf.it	326	326	7.4	7.4
	aip.gavo.org	279	279	45.5	45.5
	idoc	256	271	0.0	0.0
	src.pas	225	256	0.0	0.0
	vopdc.obspm	198	165	0.0	0.0
	bsdc.icranet.org	184	184	43.5	43.5
	chivo	170	170	0.0	0.0
😊	uni-heidelberg.de	167	1569	13.8	8.7
😊	ar.nova	127	87	27.6	5.7
😊	purx	116	169	3.4	2.4

Sexagesimal Metadata

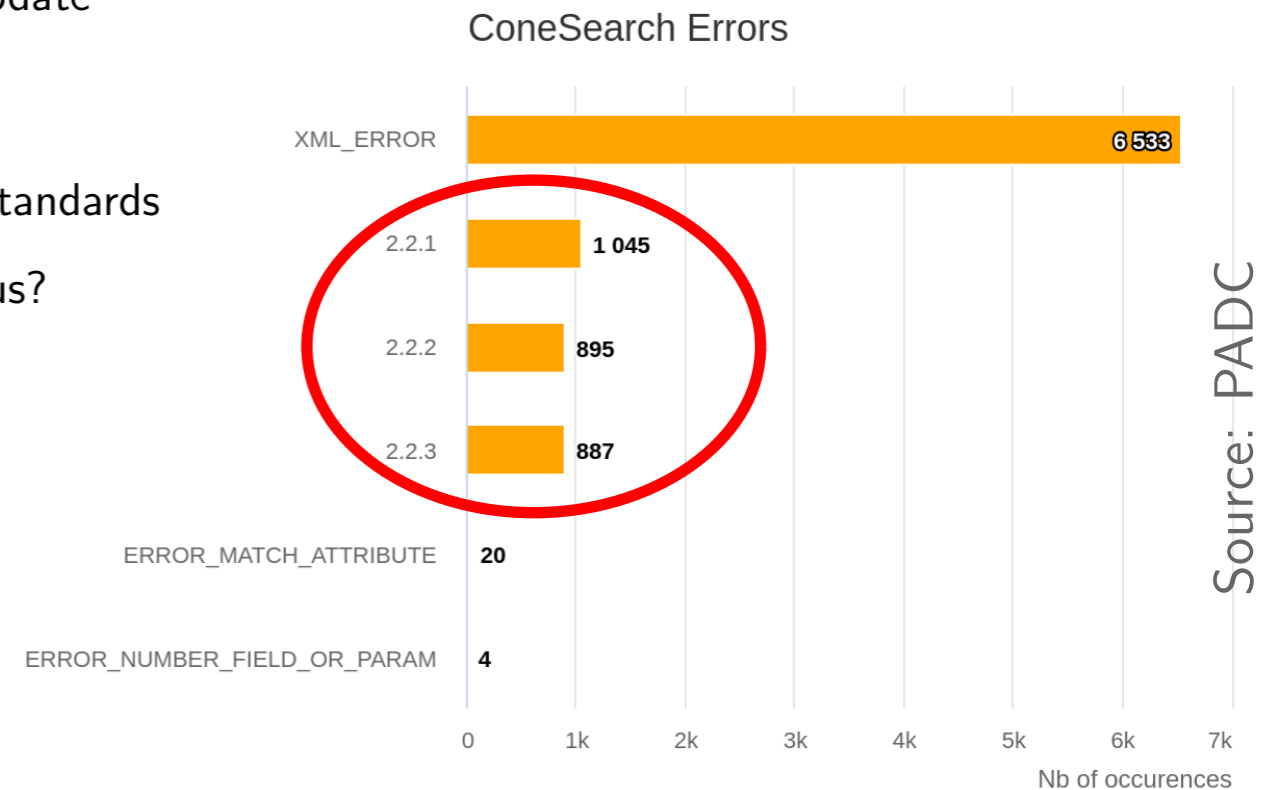
How to mark up sexagesimal quantities by UCD/Utype/Xtype

- Raised by Sébastien [last time](#) (p. 7)
 - ▷ Vizier uses `unit="h:m:s"/"d:m:s"` — but that's not really right
- Stalled discussion in DAL (<http://mail.ivoa.net/pipermail/dal/2022-March/008530.html> ff.)
- My take: recommend `xtypes` `"hms"` and `"dms"`.
 - ▷ Do people agree/disagree/have better ideas?
 - ▷ Can we schedule this for inclusion in DALI 1.2?
 - ▷ Can data providers use these values in the mean time?

Cone Search

UCD1 vs. UCD1+ in required output

- Cone Search 1.0 and 1.1 require UCD1s
`ID_MAIN, POS_EQ_RA_MAIN, POS_EQ_DEC_MAIN`
- UCD1 is a very old standard, current UCD1+ would be
`meta.id;meta.main, pos.eq.ra;meta.main, pos.eq.dec;meta.main`
- Well-known problem: <https://github.com/ivoa-std/ConeSearch/issues/20>, DAL Running Meeting #7
- Tricky to resolve: backwardly incompatible change → major version update
- Why is it a problem?
 - ▷ Validation statistics look bad
 - ▷ Service providers want to annotate output using non-obsolete standards
- DAL: not currently listed on (2022A) roadmap — what is current status?



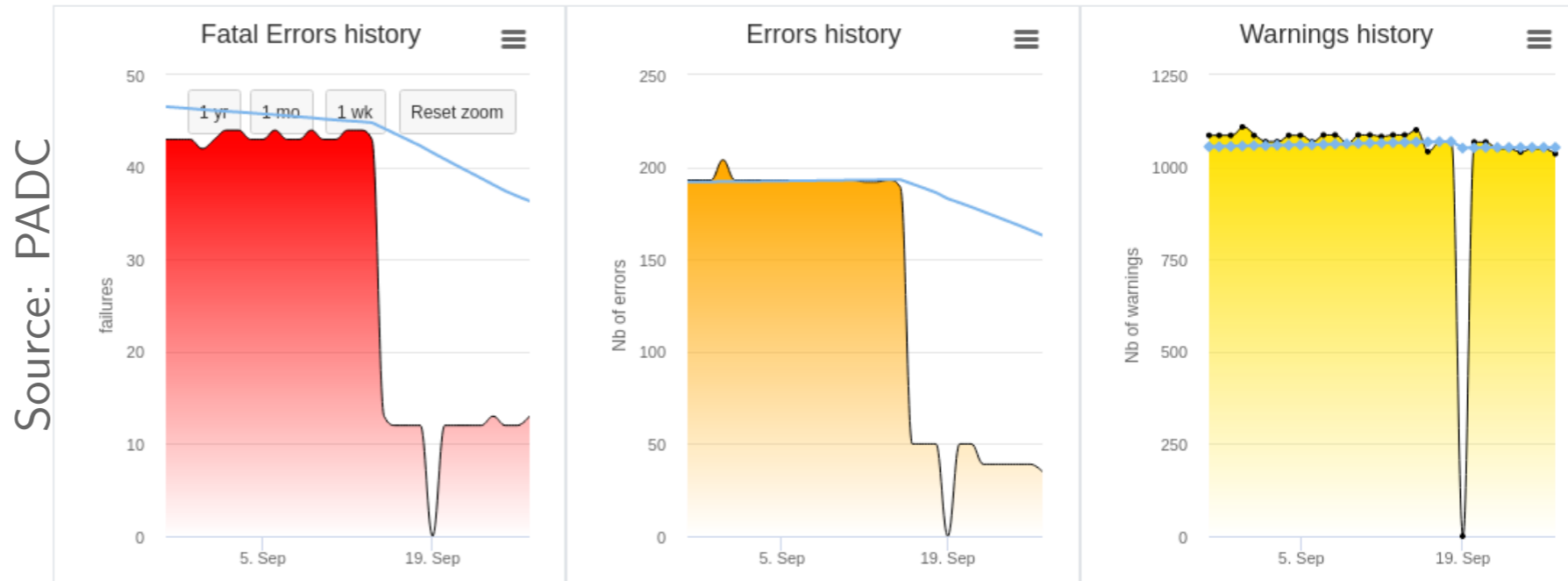
SSA: Improvements

Standards issues successfully addressed recently:

- Clarify trailing “/” in base URL → [SSA Erratum #1](#) (Jan 2022): registered URL should include trailing separator
- Fix illegal coverage UCD requirements [SSA Erratum #2](#) (Mar 2022): e.g. `instr.fov` → `pos.outline;instr.fov`
- Fix illegal curation UCD requirements [UCD1+ 1.5](#) (in progress): `meta.curation` position **P** → **Q**

Compliance improvements!

- Thanks to Renaud/PADC (Errors identified by [PADC validator](#))
- Thanks to Carlos/SVO (Problematic VOTables fixed up)
- ... and anybody else who's cleaned up their services



SSA: Remaining Issues (1)

Theoretical SSA services not well served by standard

- SSA 1.1 sec 4.2.5.10 states **MAN**datory coverage information (`Char.SpatialAxis.Coverage.Location.Value` + 2 others), but they are missing from example in Appendix A
 - ▷ Appendix A is output from an SVO service; that service now fixed to contain (blank) missing columns
- ⇒ SSA Erratum replacing MAN → OPT for coverage information?
- Extension parameter interval specification is not well-specified (and theoretical services need extension parameters)

Unclear utype prefixing

- Utypes in examples have “ssa:” prefix, not explained in document
 - ▷ Some CASDA services following the normative text but not examples omitted prefixes; prefixes now added
- Is this real namespacing, supposed to reference the xmlns declaration? Not clear. See also Markus’s [2012 presentation](#).
 - ⇒ SSA Erratum explicitly requiring “ssa:” prefix for UTypes? (James Dempsey suggestion), or other clarification?

SSA: Remaining Issues (2)

Other items? SSA is not much loved...

- Anomaly: CoordSys.SpectralFrame.RefPos has `ucd="sdm:spect.frame"` (but remaining UCDs look OK now)
- Fuzzy language on ignored/unsupported parameters
- Numerous details never implemented (hard to implement?)
- more ... ?

Future action on SSA

- Errata as above, plus maybe more in future?
- Slack off on validation?
- Encourage migration to SIAv2? DAP??
- Overhaul/rewrite/new version?

Activities/Roadmap

Ongoing activities

- Monitor VO health
 - ▷ Coordinate weather reports (→ [Euro-VO Weather report](#), [Christophe Arviset](#))
- Address non-compliance (→ [see above](#))
 - ▷ Identify common/persistent errors
 - ▷ Support/encourage service operators to improve service compliance
 - ▷ Work with WGs on standards-related issues
 - Cone Search, SSA, sexagesimal markup
- Validation
 - ▷ Ensure validators are available (→ [IvoaValidatorsSummary wiki page](#))
 - ▷ Encourage use of validators
- Facilitate discussion
 - ▷ Compare experiences (→ [HEASARC site report](#), [Tess Jaffe](#))

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Upcoming themes

- Operations in the Cloud (→ [“VO in the Cloud” plenary session](#), Tuesday)
- Authentication as an operational necessity (to manage/trace/throttle usage)