Bulletin of the IAU Working Group on Star Names, No. 1

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WGSN Membership: Eric Mamajek (chair), Beatriz Garcia, Duane Hamacher, Thierry Montmerle, Jay Pasachoff, Ian Ridpath, Xiaochun Sun
WGSN operates under the auspices of IAU Division C: Education, Outreach and Heritage.
WWW: https://www.iau.org/science/scientific_bodies/working_groups/280/
Email: IAUWGSN@gmail.com

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1 Terms of Reference

The following Terms of Reference for the IAU Working Group on Star Names (WGSN) were approved by the IAU Executive Committee at the EC98 meeting 6 May 2016:

The Working Group on Star Names (WGSN) will consist of an international group of astronomers with expertise in stellar astronomy, astronomical history, and cultural astronomy. The group will catalog and standardize proper names for stars for the international astronomical community. Names will first be drawn upon the extensive historical and world-wide cultural astronomy literature. The WGSN will:

(1) establish IAU guidelines for the proposal and adoption of names for stars,

(2) carry out an exhaustive search of the international astronomical history and astronomical culture literature for candidate star names,

(3) drawing upon the historical and cultural literature, adopt new unique names for stars of scientific and historical value for community use following agreed upon guidelines,

(4) assemble, maintain, publish, and disseminate an official IAU star name catalog ("IAU-SNC") of names for stars and exoplanets (including updating the information about the naming of stars on iau.org and posting the IAU-SNC on iau.org),

While the first triennium is envisioned to focus on incorporating "past" names (from astronomical history and culture) into modern usage, in future triennia the WGSN would act as the IAU WG responsible for defining the rules and enabling the process by which new names for stars and substellar objects of scientific significance can be proposed by members of the international astronomical

community.

The naming purview for the WGSN will specifically be for stars, substellar objects, and stellar remnants, but will specifically exclude exoplanets (purview of EC WG Public Naming of Planets and the Planetary Systems), interstellar medium features (nebulae), and extragalactic objects. Exoplanet names will be catalogued as well so as to avoid duplication with star names.

2 Guidelines

WGSN naming guidelines should build upon the lessons from other long-standing IAU WGs on naming (e.g. WGPSN, SBN[1]), and so some of the guidelines are adopted verbatim from those WGs. We propose the following preliminary guidelines for unique alphabetic star names adopted by the WGSN:

- Names that preserve world heritage (astronomical heritage, cultural heritage, and natural heritage) are strongly encouraged. Common and cultural star names are to be preferred over new names to preserve continuity and recognize astronomical heritage.
- Names should preferably be between 4 and 16 characters in length. Variances may be granted for multi-word names or short names demonstrated to be in common historical use. Two and three-word names could be too easily confused with designations, acronyms, and abbreviations.
- Short names are preferred over long names.
- Where feasible, multiple word names may be concatenated into single word names, and long cultural names may be shortened in order to satisfy length requirements (which preserve the essense of the original cultural/historical name).
- Names should be pronounceable in some language.
- Names should be non-offensive.
- Names should not be too similar to an existing name of a star, planet, planetary satellite, or minor planet.
- Names of all individuals are prohibited for bright stars, except for rare cases with demonstrated historical precedence and widespread international diffusion.
- Contrived names are discouraged, except for rare cases with demonstrated historical precedence and widespread international diffusion.
- Names of events principally known for political or military activities are prohibited.
- Names of a purely or principally commercial nature are prohibited.
- Names of pet animals are prohibited.

[1] http://www.minorplanetcenter.net/iau/info/HowNamed.html, http://www.iau.org/public/themes/naming/

- Acronyms, or names based on acronyms, are prohibited for proper names (Acronyms could be confused with designations).
- Adopted names will follow the IAU Style Manual[2] [1]. Proper names are transliterated to Latin alphabet, have an initial capitalized letter, and never contain numbers. Punctuation marks are discouraged. The names will be reported in Latin alphabet (ASCII), but names may be quoted with original accents and diacritic marks where appropriate.
- The WGSN explicitly recognizes the names of exoplanets and their host stars approved by the EC WG Public Naming of Planets and Planetary Satellites.

This list represents a first draft of the WGSN's guidelines for star names, but improvements are inevitable. Community input on these guidelines should be addressed to IAUWGSN@gmail.com.

For the purposes of discussion and prioritization, "bright stars" refers to those with designations in the Bright Star Catalog (HR #s) [2] and any physical companions. "Faint stars" will refer to any other Galactic stars, substellar objects, and stellar remnants not in the "bright star" category.

For the rest of 2016, the WGSN will focus on standardizing common names/spellings for the brightest few hundred stars with published names, and compiling cultural names. The topic of names for faint stars will be discussed in the future.

3 Approved Star Names

The following table includes 1) the first two batches of names approved by the WGSN (30 June 2016 and 20 July 2016), and 2) names of stars adopted by the IAU Executive Committee Working Group on Public Naming of Planets and Planetary Satellites during the 2015 NameExoWorlds campaign[3] [3] and recognized by the WGSN (approval date set to 15 December 2015).

The new approved names are all "common" names and most of their etymologies are discussed in works like Richard Hinckley Allen's (1963) *Star Names: Their Lore and Meaning* published by Dover [4] (reprinted and retitled version of Allen's 1899 *Star-Names and Their Meanings* published by G.E. Stechert [5]), and Paul Kunitzsch & Tim Smart (2006) *A Short Guide to 254 Star Names and Their Derivations* (2nd Revised Edition, Sky Publishing, Cambridge) [6]. Designations in column (2) are SIMBAD-resolvable designations, where preference is first taken for HR and HD designations, where available. IDs in column (7) are either Bayer or Flamsteed designations, where available. Three-letter IAU constellation abbreviations follow the IAU Style Manual [1].

Additional common proper names for bright stars - drawn especially from the Bright Star Catalog and the compendia by Allen and Kunitzsch - will be vetted and approved in future bulletins.

[2] See §6 of https://www.iau.org/static/publications/stylemanual1989.pdf.
[3] http://nameexoworlds.iau.org/

Table 1: Star Names Approved by WGSN as of 20 July 2016

Proper Name	Designation ...	α(J2000) deg	δ(J2000) deg	Approval Date	m_V mag	ID ...	Con. ...	Refs. ...
Alpheratz	HR 15	2.096916	29.090431	2016-06-30	2.07	α	And	[4, 2, 6]
Caph	HR 21	2.294522	59.149781	2016-06-30	2.28	β	Cas	[4, 2, 6]
Algenib	HR 39	3.308963	15.183594	2016-06-30	2.83	γ	Peg	[4, 2, 6]
Ankaa	HR 99	6.570939	-42.306084	2016-07-20	2.40	α	Phe	[2, 6]
Mirach	HR 337	17.433013	35.620557	2016-06-30	2.07	β	And	[4, 2, 6]
Titawin	HR 458	24.199342	41.405457	2015-12-15	4.09	υ	And	[3]
Achernar	HR 472	24.428523	-57.236753	2016-06-30	0.45	α	Eri	[4, 2, 6]
Sheratan	HR 553	28.660046	20.808031	2016-07-20	2.64	β	Ari	[4, 2, 6]
Almach	HR 603	30.974804	42.329725	2016-07-20	2.10	γ^1	And	[4, 6],[2][a]
Hamal	HR 617	31.793357	23.462418	2016-07-20	2.01	α	Ari	[4, 2, 6]
Mira	HR 681	34.836617	-2.977640	2016-06-30	6.47	o	Cet	[4, 2, 6]
Polaris	HR 424	37.954561	89.264109	2016-06-30	1.97	α	UMi	[4, 2, 6]
Acamar	HR 897	44.565311	-40.304672	2016-07-20	2.88	θ	Eri	[4, 2, 6]
Menkar	HR 911	45.569885	4.089737	2016-06-30	2.54	α	Cet	[4, 2, 6]
Algol	HR 936	47.042215	40.955648	2016-06-30	2.09	β	Per	[4, 2, 6]
Mirfak	HR 1017	51.080709	49.861179	2016-07-20	1.79	α	Per	[4, 6],[2][b]
Ran	HR 1084	53.232687	-9.458259	2015-12-15	3.73	ϵ	Eri	[3]
Maia	HR 1149	56.456695	24.367751	2016-07-20	3.87	20	Tau	[4, 2, 6]
Merope	HR 1156	56.581552	23.948348	2016-07-20	4.14	23	Tau	[4, 2, 6]
Alcyone	HR 1165	56.871152	24.105136	2016-06-30	2.85	η	Tau	[4, 2, 6]
Pleione	HR 1180	57.296738	24.136710	2016-06-30	5.05	28	Tau	[4, 2, 6]
Zaurak	HR 1231	59.507360	-13.508516	2016-07-20	2.97	γ	Eri	[4, 2, 6]
Ain	HR 1409	67.154163	19.180435	2015-12-15	3.53	ϵ	Tau	[3]
Aldebaran	HR 1457	68.980163	16.509302	2016-06-30	0.87	α	Tau	[4, 2, 6]
Cursa	HR 1666	76.962440	-5.086446	2016-07-20	2.78	β	Eri	[4, 2, 6]
Rigel	HR 1713	78.634467	-8.201638	2016-06-30	0.18	β	Ori	[4, 2, 6]
Capella	HR 1708	79.172328	45.997991	2016-06-30	0.08	α	Aur	[4, 2, 6]
Bellatrix	HR 1790	81.282764	6.349703	2016-06-30	1.64	γ	Ori	[4, 2, 6]
Elnath	HR 1791	81.572971	28.607452	2016-07-20	1.65	β	Tau	[6],[4, 2][c]
Nihal	HR 1829	82.061346	-20.759441	2016-07-20	2.81	β	Lep	[4, 2, 6]
Mintaka	HR 1852	83.001667	-0.299095	2016-07-20	2.25	δ	Ori	[4, 2, 6]
Arneb	HR 1865	83.182567	-17.822289	2016-07-20	2.58	α	Lep	[4, 2, 6]
Meissa	HR 1879	83.784486	9.934156	2016-07-20	3.39	λ	Ori	[4, 2, 6]
Alnilam	HR 1903	84.053389	-1.201919	2016-07-20	1.69	ϵ	Ori	[4, 2, 6]
Phact	HR 1956	84.912254	-34.074110	2016-07-20	2.65	α	Col	[4, 2, 6]
Alnitak	HR 1948	85.189694	-1.942574	2016-07-20	1.74	ζ	Ori	[4, 2, 6]
Saiph	HR 2004	86.939120	-9.669605	2016-07-20	2.07	κ	Ori	[4, 2, 6]
Wazn	HR 2040	87.739968	-35.768310	2016-07-20	3.12	β	Col	[4, 2, 6]
Betelgeuse	HR 2061	88.792939	7.407064	2016-06-30	0.45	α	Ori	[4, 2, 6]
Menkalinan	HR 2088	89.882179	44.947433	2016-07-20	1.90	β	Aur	[4, 2, 6]
Propus	HR 2216	93.719405	22.506794	2016-07-20	3.31	η	Gem	[4, 2, 6]
Furud	HR 2282	95.078300	-30.063367	2016-07-20	3.02	ζ	CMa	[4, 2, 6]
Mirzam	HR 2294	95.674939	-17.955919	2016-07-20	1.98	β	CMa	[4, 2, 6]
Canopus	HR 2326	95.987958	-52.695661	2016-06-30	-0.62	α	Car	[4, 2, 6]

Proper Name	Designation ...	α(J2000) deg	δ(J2000) deg	Approval Date	m_V mag	ID ...	Con. ...	Refs. ...
Alhena	HR 2421	99.427960	16.399280	2016-07-20	1.93	γ	Gem	[4, 2, 6]
Mebsuta	HR 2473	100.983026	25.131127	2016-07-20	3.06	ϵ	Gem	[4, 2, 6]
Sirius	HR 2491	101.287155	-16.716116	2016-06-30	-1.44	α	CMa	[4, 2, 6]
Wezen	HR 2693	107.097850	-26.393200	2016-07-20	1.83	δ	CMa	[4, 2, 6]
Aludra	HR 2827	111.023760	-29.303106	2016-07-20	2.45	η	CMa	[4, 2, 6]
Gomeisa	HR 2845	111.787674	8.289316	2016-07-20	2.89	β	CMi	[4, 2, 6]
Castor	HR 2891	113.649428	31.888276	2016-06-30	1.98	α	Gem	[4, 2, 6]
Procyon	HR 2943	114.825493	5.224993	2016-06-30	0.40	α	CMi	[4, 2, 6]
Pollux	HR 2990	116.328958	28.026199	2016-06-30	1.16	β	Gem	[4, 2, 6]
Avior	HR 3307	125.628480	-59.509484	2016-07-20	1.86	ϵ	Car	[2, 6]
Muscida	HR 3323	127.566128	60.718170	2016-07-20	3.35	o	UMa	[4, 2, 6]
Copernicus	HR 3522	133.149212	28.330820	2015-12-15	5.95	55	Cnc	[3]
Acubens	HR 3572	134.621740	11.857687	2016-07-20	4.26	α	Cnc	[4, 2, 6]
Talitha	HR 3569	134.801890	48.041826	2016-07-20	3.12	ι	UMa	[4, 2, 6]
Miaplacidus	HR 3685	138.299906	-69.717208	2016-07-20	1.67	β	Car	[4, 2, 6]
Aspidiske	HR 3699	139.272529	-59.275232	2016-07-20	2.21	ι	Car	[4, 2, 6]
Alphard	HR 3748	141.896847	-8.658602	2016-07-20	1.99	α	Hya	[4, 2, 6]
Intercrus	HR 3743	142.166618	45.601482	2015-12-15	5.41	...	UMa	[3]
Regulus	HR 3982	152.092962	11.967209	2016-06-30	1.36	α	Leo	[4, 2, 6]
Adhafera	HR 4031	154.172567	23.417312	2016-07-20	3.43	ζ	Leo	[4, 2, 6]
Tania Borealis	HR 4033	154.274095	42.914356	2016-07-20	3.45	λ	UMa	[4, 2, 6]
Algieba	HR 4057	154.993144	19.841489	2016-07-20	2.61	γ^1	Leo	[4, 2, 6]
Tania Australis	HR 4069	155.582250	41.499519	2016-07-20	3.06	μ	UMa	[4, 2, 6]
Chalawan	HR 4277	164.866553	40.430256	2015-12-15	5.03	47	UMa	[3]
Merak	HR 4295	165.460319	56.382426	2016-06-30	2.34	β	UMa	[4, 2, 6]
Dubhe	HR 4301	165.931965	61.751035	2016-06-30	1.81	α	UMa	[4, 2, 6]
Zosma	HR 4357	168.527089	20.523718	2016-07-20	2.56	δ	Leo	[4, 2, 6]
Chertan	HR 4359	168.560019	15.429571	2016-07-20	3.33	θ	Leo	[2, 6]
Alula Australis	HR 4375	169.545423	31.529161	2016-07-20	4.41	ξ	UMa	[4, 2, 6]
Alula Borealis	HR 4377	169.619737	33.094305	2016-07-20	3.49	ν	UMa	[4, 2, 6]
Denebola	HR 4534	177.264910	14.572058	2016-06-30	2.14	β	Leo	[4, 2, 6]
Phecda	HR 4554	178.457679	53.694758	2016-07-20	2.41	γ	UMa	[4, 6],[2][d]
Tonatiuh	HR 4609	181.312995	76.905735	2015-12-15	5.80	...	Cam	[3]
Megrez	HR 4660	183.856503	57.032615	2016-06-30	3.32	δ	UMa	[4, 2, 6]
Acrux	HR 4730	186.649563	-63.099093	2016-07-20	1.33	α	Cru Aa	[4, 2, 6]
Algorab	HR 4757	187.466063	-16.515431	2016-07-20	2.94	δ	Crv	[4, 2, 6]
Gacrux	HR 4763	187.791498	-57.113213	2016-07-20	1.59	γ	Cru	[2, 6]
Chara	HR 4785	188.435603	41.357479	2016-07-20	4.24	β	CVn	[4, 2, 6]
Porrima	HR 4825	190.415181	-1.449373	2016-07-20	2.74	γ	Vir	[4, 2, 6]
Mimosa	HR 4853	191.930263	-59.688764	2016-07-20	1.25	β	Cru	[2, 6]
Alioth	HR 4905	193.507290	55.959823	2016-06-30	1.76	ϵ	UMa	[4, 2, 6]
Cor Caroli	HR 4915	194.006943	38.318376	2016-07-20	2.89	α^2	CVn	[4, 2, 6]
Lich	PSR B1257+12	195.012701	12.682417	2015-12-15	...	...	Vir	[3]
Vindemiatrix	HR 4932	195.544157	10.959149	2016-07-20	2.85	ϵ	Vir	[4, 2, 6]
Mizar	HR 5054	200.981429	54.925362	2016-06-30	2.23	ζ	UMa	[4, 2, 6]
Spica	HR 5056	201.298247	-11.161319	2016-06-30	0.98	α	Vir	[4, 2, 6]

Proper Name	Designation ...	α(J2000) deg	δ(J2000) deg	Approval Date	m_V mag	ID ...	Con. ...	Refs. ...
Alcor	HR 5062	201.306403	54.987954	2016-06-30	3.99	80	UMa	[4, 2, 6]
Alkaid	HR 5191	206.885157	49.313267	2016-06-30	1.85	η	UMa	[4, 2, 6]
Thuban	HR 5291	211.097291	64.375851	2016-06-30	3.67	α	Dra	[4, 2, 6]
Arcturus	HR 5340	213.915300	19.182409	2016-06-30	-0.05	α	Boo	[4, 2, 6]
Kochab	HR 5563	222.676357	74.155504	2016-07-20	2.07	β	UMi	[4, 6],[2][e]
Edasich	HR 5744	231.232396	58.966063	2015-12-15	3.29	ι	Dra	[6, 3],[4, 2][f]
Alphecca	HR 5793	233.671950	26.714693	2016-07-20	2.22	α	CrB	[4, 6],[2][g]
Antares	HR 6134	247.351915	-26.432003	2016-06-30	1.06	α	Sco	[4, 2, 6]
Ogma	HD 149026	247.623409	38.347311	2015-12-15	8.16	...	Her	[3]
Atria	HR 6217	252.166229	-69.027712	2016-07-20	1.91	α	TrA	[2, 6]
Rasalgethi	HR 6406	258.661910	14.390333	2016-06-30	3.37	α^1	Her	[2, 6],[4][h]
Shaula	HR 6527	263.402167	-37.103824	2016-07-20	1.62	λ	Sco	[4, 2, 6]
Rasalhague	HR 6556	263.733627	12.560035	2016-07-20	2.08	α	Oph	[2, 6],[4][i]
Cervantes	HR 6585	266.036255	-51.834051	2015-12-15	5.15	μ	Ara	[3]
Kaus Media	HR 6859	275.248508	-29.828104	2016-07-20	2.72	δ	Sgr	[4, 2, 6]
Kaus Australis	HR 6879	276.042993	-34.384616	2016-07-20	1.79	ϵ	Sgr	[4, 2, 6]
Fafnir	HR 6945	276.496406	65.563480	2015-12-15	4.82	42	Dra	[3]
Kaus Borealis	HR 6913	276.992668	-25.421701	2016-07-20	2.82	λ	Sgr	[4, 2, 6]
Vega	HR 7001	279.234735	38.783689	2016-06-30	0.03	α	Lyr	[4, 2, 6]
Rukbat	HR 7348	290.971570	-40.615940	2016-07-20	3.96	α	Sgr	[4, 2, 6]
Albireo	HR 7417	292.680351	27.959692	2016-07-20	3.05	β^1	Cyg	[4, 2, 6]
Altair	HR 7557	297.695827	8.868321	2016-06-30	0.76	α	Aql	[4, 2, 6]
Libertas	HR 7595	298.562008	8.461453	2015-12-15	4.71	ξ	Aql	[3]
Peacock	HR 7790	306.411904	-56.735090	2016-07-20	1.94	α	Pav	[2, 6]
Deneb	HR 7924	310.357980	45.280339	2016-06-30	1.25	α	Cyg	[4, 2, 6]
Musica	HR 8030	314.608058	10.839286	2015-12-15	5.48	18	Del	[3]
Alderamin	HR 8162	319.644885	62.585574	2016-07-20	2.45	α	Cep	[4, 2, 6]
Enif	HR 8308	326.046484	9.875009	2016-07-20	2.38	ϵ	Peg	[4, 2, 6]
Alnair	HR 8425	332.058270	-46.960974	2016-07-20	1.73	α	Gru	[2, 6],[4][j]
Helvetios	HR 8729	344.366583	20.768831	2015-12-15	5.49	51	Peg	[3]
Fomalhaut	HR 8728	344.412693	-29.622237	2015-12-15	1.17	α	PsA	[4, 2, 6, 3]
Scheat	HR 8775	345.943572	28.082785	2016-06-30	2.44	β	Peg	[4, 2, 6]
Markab	HR 8781	346.190223	15.205267	2016-06-30	2.49	α	Peg	[4, 2, 6]
Veritate	HR 8930	352.822556	39.236197	2015-12-15	5.22	14	And	[3]
Errai	HR 8974	354.836655	77.632313	2015-12-15	3.21	γ	Cep	[3]

[a]: [2] has *Almaak* as preferred spelling, but *Almach* as spelling variation.
[b]: [2] has *Mirphak* as preferred spelling, but *Mirfak* as spelling variation.
[c]: [4] has *El Nath*, [2] has *Alnath* and *El Nath* as preferred spellings.
[d]: [2] has *Phad* as preferred spelling, but *Phecda* as spelling variation.
[e]: [2] has *Kocab* as preferred spelling, but *Kochab* as spelling variation.
[f]: [4] and [2] have *Ed Asich*.
[g]: [2] has *Alphekka* as preferred spelling, but *Alphecca* as spelling variation.
[h]: [4] has *Ras Algethi*.

[i]: [4] has *Ras alhague*.
[j]: [4] has *Al Na'ir*.

References

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