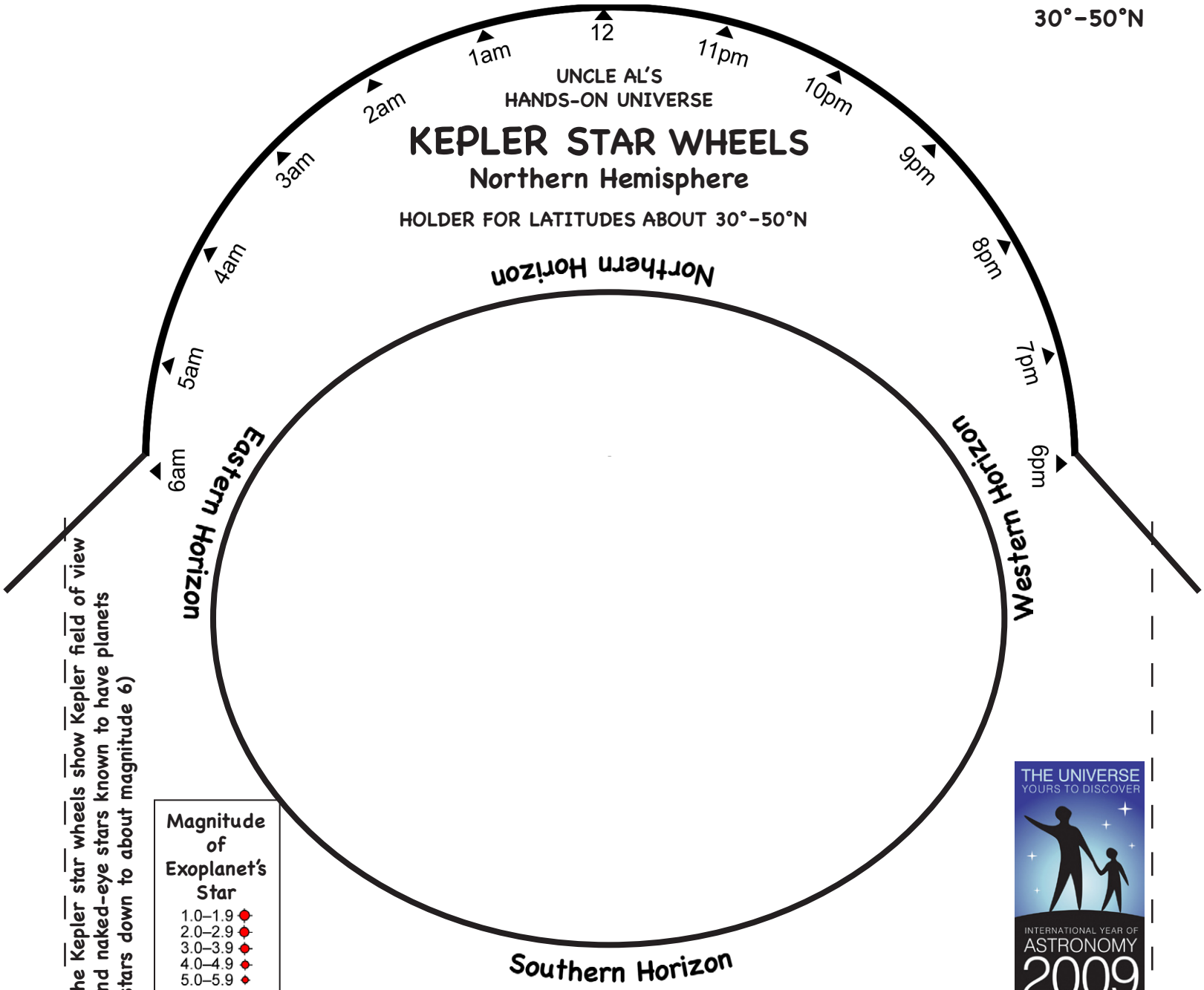
Star Wheel Holder
for latitudes about
30°–50°N



The Kepler star wheels show Kepler field of view and naked-eye stars known to have planets (stars down to about magnitude 6)

Instructions for Using Uncle Al's Star Wheels

1. Align your date and time, and then look up at the sky
2. Locate the constellation you want to find on the map.
3. Turn your map so the horizon it is closest to is at the bottom.
4. The star positions in the sky should match those on the wheel.

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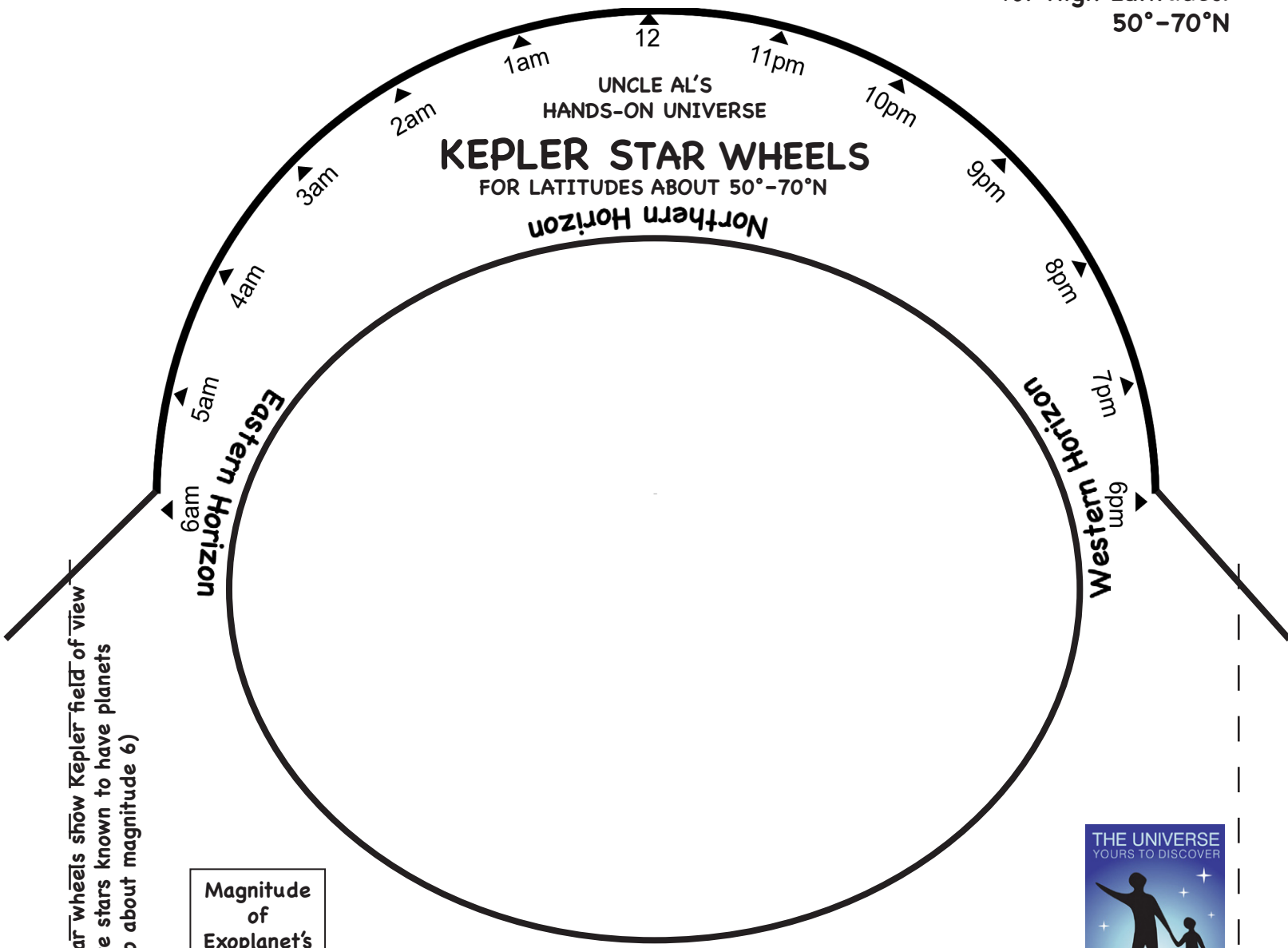
Uncle Al's Star Wheels are based on LHS Sky Challengers created by Budd Wentz and available through LHS Museum Store510-642-1016 http://www.lhs.berkeley.edu/pass/astl10&111&121.html
Uncle'Al's Star Wheels - http://lhs.berkeley.edu/hou/img/uncleal
Kepler Star Wheel - http://kepler.nasa.gov/ed/skywheel

Version: July 2009

Star Wheel Holder for High Latitudes: 50°–70°N



For Northern Hemisphere—High Latitudes

Magnitude of Exoplanet's Star

- 1.0–1.9
- 2.0–2.9
- 3.0–3.9
- 4.0–4.9
- 5.0–5.9

The Kepler star wheels show Kepler field of view and naked-eye stars known to have planets (stars down to about magnitude 6)

Instructions for Using Uncle Al's Star Wheels

1. Align your date and time, and then look up at the sky
2. Locate the constellation you want to find on the map.
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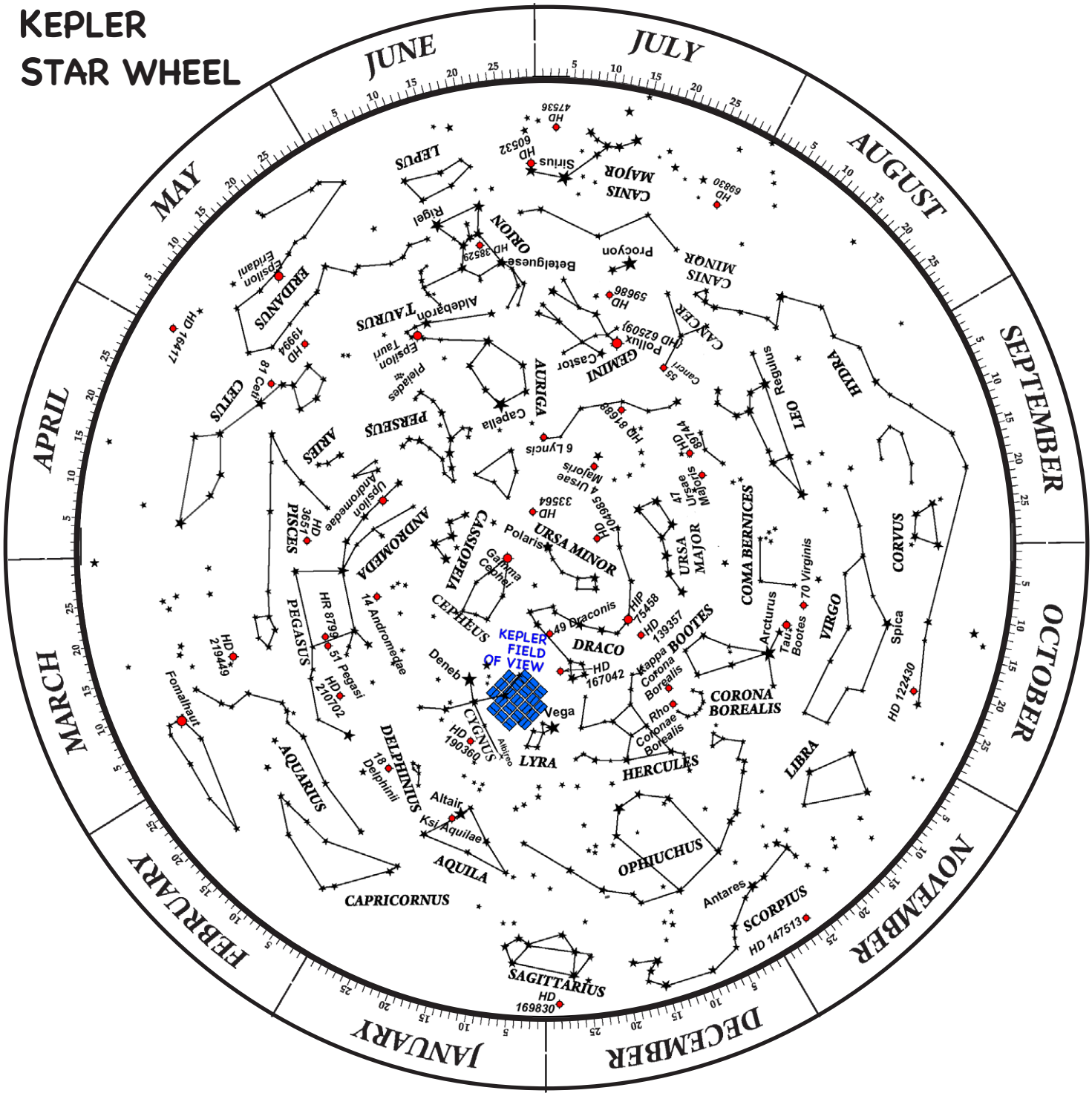
Uncle Al's Star Wheels are based on LHS Sky Challengers created by Budd Wentz and available through LHS Museum Store
510-642-1016 http://www.lhs.berkeley.edu/pass/astl10&111&121.html
Download Uncle'Al's Sky Wheels from http://lhs.berkeley.edu/hou/img/unclea1

Version: July 2009

KEPLER STAR WHEEL



INSTRUCTIONS FOR ASSEMBLING UNCLE AL'S STAR WHEELS

Step 1: Print out all pages either on heavy cardstock or paste them onto a file folder or any other sturdy piece of cardboard.

Step 2: Cut along the black outer circle of the Star Wheel and along the solid lines on the Star Wheel Holder. Remove the interior oval shape on the Star Wheel Holder.

Step 3: On the Star Wheel Holder, fold the cardboard along the dashed lines.

Step 4: Tape or staple along the edges of the Star Wheel Holder forming a pocket.

Step 5: Place the Star Wheel in the Star Wheel Holder.

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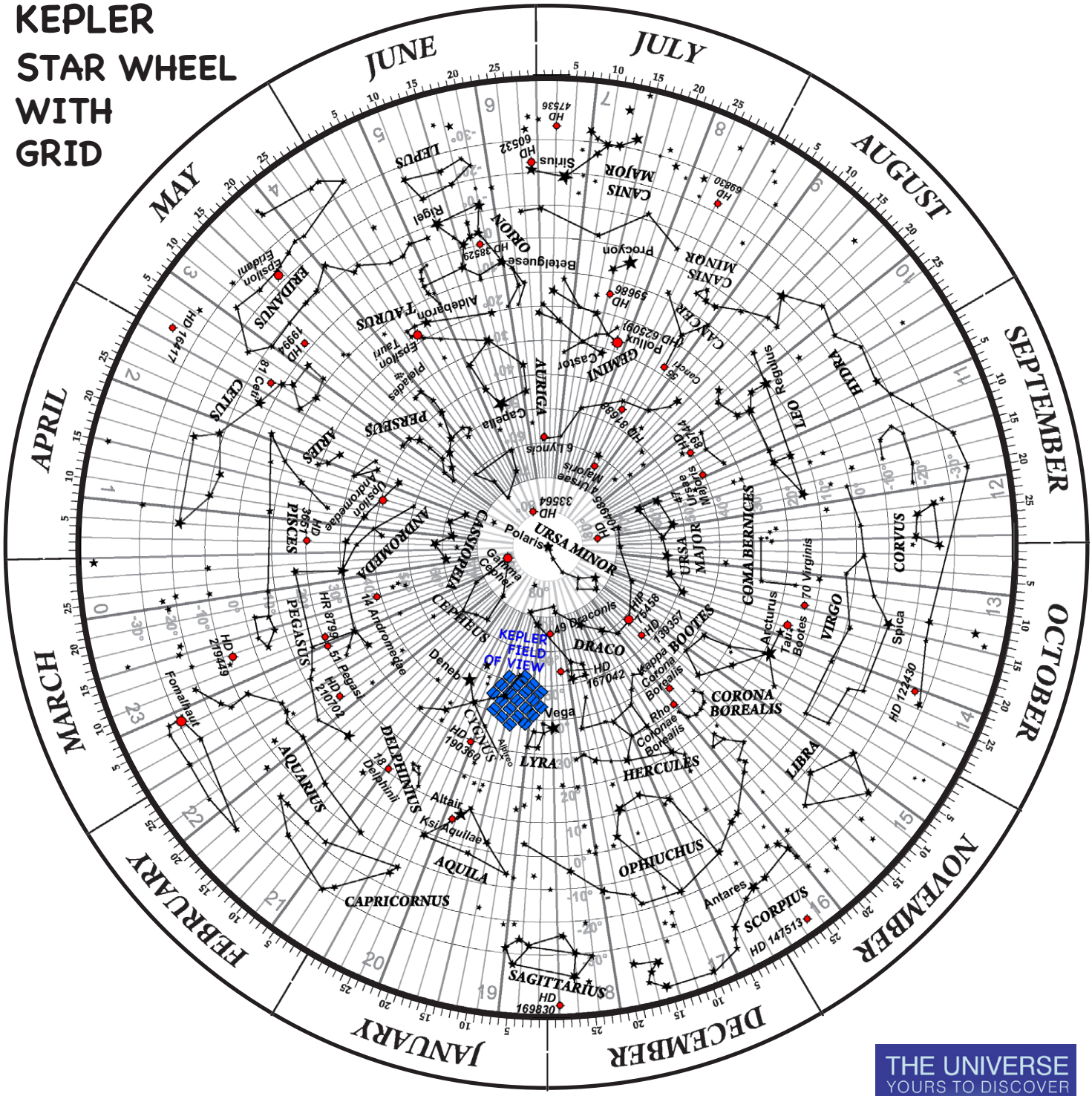
Uncle Al's Star Wheels are based on LHS Sky Challengers created by Budd Wentz and available through LHS Museum Store510-642-1016 http://www.lhs.berkeley.edu/pass/ast110&111&121.html

Uncle'Al's Star Wheels - http://lhs.berkeley.edu/hou/img/uncleal

Kepler Star Wheel - http://kepler.nasa.gov/ed/skywheel

Version:
July 2009

KEPLER STAR WHEEL WITH GRID



THE UNIVERSE
YOURS TO DISCOVER
INTERNATIONAL YEAR OF
ASTRONOMY
2009

Version:
July 2009

Planets on the Kepler Star Wheel
in order of the brightness of the planet's star

(those at declinations south of -34° are not plotted)

Kepler Star Wheel constructed with data from Interactive Extra-solar Planets Catalog, maintained by Jean Schneider (CNRS-LUTH, Paris Observatory)
http://exoplanet.eu/catalog-all.php?mdAff=output#tc

	Planet Characteristics			Star Characteristics						
Star/Planet	Mass	Period	Orbit Rad	Distance	Type	Mass	RA	DEC	Mag. V.	Radius
	(Jupiters)	(Days)	(AU)	(parsecs)		(Suns)				(Suns)
HD 62509 b	2.9	589.64	1.69	10.34	K0IIIb	1.86	07 45 18	+28 01 34	1.15	8.8
Fomalhaut b	3	320000	115	7.7	A3 V	2.06	22 57 39	-29 37 20	1.16	1.82
γ Cephei b	1.6	902.9	2.044	13.79	K2 V	1.4	23 39 20	+77 37 56	3.22	6.2
HIP 75458 b	8.82	511.098	1.275	31.5	K2 III	1.05	15 24 55	+58 57 57	3.31	13.5
eps Tau b	7.6	594.9	1.93	45	K0 III	2.7	04 28 37	+19 10 50	3.53	13.7
eps Eridani b	1.55	2502	3.39	3.2	K2 V	0.83	03 32 55	-09 27 29	3.73	0.895
beta Pic b	8	6000	8	19.3	A6V	1.8	05 47 17	-51 03 59	3.86	
ups And b, c, d	0.69	4.61708	0.059	13.47	F8 V	1.27	01 36 48	+41 24 38	4.09	1.631
HD 219449 b	2.9	182	0.3	45	K0 III		23 15 53	-09 05 15	4.21	
HD 27442 b	1.28	423.841	1.18	18.1	K2 IV a	1.2	04 16 29	-59 18 07	4.44	6.6
HD 60532 b, c	3.15	201.83	0.77	25.7	F6IV-V	1.44	07 34 03	-22 17 46	4.45	
tau Boo b	3.9	3.3135	0.046	15	F7 V	1.3	13 47 17	+17 27 22	4.5	1.331
HD 11977 b	6.54	711	1.93	66.5	G8.5 III	1.91	01 54 56	-67 38 50	4.7	13
ksi Aql b	2.8	136.75	0.68	62.7	G9IIIb	2.2	19 54 15	+08 27 41	4.72	12
kappa CrB b	1.8	1191	2.7	31.1	K1IVa	1.8	15 51 14	+35 39 27	4.79	4.71
42 Dra b	3.88	479.1	1.19	97.3	K1.5III	0.98	18 25 59	+65 33 49	4.83	22.03
70 Vir b	7.44	116.689	0.48	22	G4 V	1.1	13 28 26	+13 47 12	5	1.968
HD 19994 b	2	454	1.3	22.38	F8 V	1.35	03 12 46	-01 11 45	5.07	1.93
HD 33564 b	9.1	388	1.1	20.98	F6 V	1.25	05 22 33	+79 13 52	5.08	1.1
47 Uma b, c	2.6	1083.2	2.11	13.97	G0V	1.03	10 59 29	+40 25 46	5.1	1.24
HD 160691 b-e	1.68	643.25	1.5	15.3	G3 IV-V	1.08	17 44 08	-51 50 02	5.15	1.245
14 And b	4.8	185.84	0.83	76.4	K0III	2.2	23 31 17	+39 14 10	5.22	11
HD 47536 b, c	5	430		121.36	K1 III	0.94	06 37 47	-32 20 23	5.25	23.47
rho CrB b	1.04	39.845	0.22	17.43	G0V or G2V	0.99	16 01 03	+33 18 51	5.4	1.284
HR 810 b	1.94	311.288	0.91	15.5	G0V pecul.	1.11	02 42 31	-50 48 12	5.4	1.85
HD 81688 b	2.7	184.02	0.81	88.26	K0III-IV	2.1	09 28 40	+45 36 05	5.41	13
HD 59686 b	5.25	303	0.911	92	K2 III		07 31 48	+17 05 09	5.45	11.62
HD 122430 b	3.71	344.95	1.02	135	K3III	1.39	14 02 22	-27 25 47	5.48	22.9
51 Peg b	0.47	4.23077	0.052	14.7	G2 IV	1.11	22 57 27	+20 46 07	5.49	1.266
HD 10647 b	0.91	1040	2.1	17.3	F8V	1.07	01 42 29	-53 44 27	5.52	1.1
18 Del b	10.3	993.3	2.6	73.1	G6III	2.3	20 58 26	+10 50 21	5.52	8.5
81 Cet b	5.3	952.7	2.5	97.2	G5III	2.4	02 37 42	-03 23 46	5.65	11
HD 39091 b	10.4	2063.818	3.29	20.55	G1 IV	1.1	05 37 09	-80 28 08	5.67	2.1
HD 142 b	1	337.112	0.98	20.6	G1 IV	1.1	00 06 19	-49 04 30	5.7	0.86
HD 190360 b, c	0.06	17.1	0.128	15.89	G6 IV	1.04	20 03 37	+29 53 48	5.71	1.2
HD 89744 b	7.99	256.605	0.89	40	F7 V	1.4	10 22 10	+41 13 46	5.74	1.1
HD 16417 b	0.07	17.24	0.14	25.5	G1V	1.18	02 36 59	-34 34 41	5.78	
HD 104985 b	6.3	198.2	0.78	102	G9 III	1.5	12 05 15	+76 54 20	5.79	10.87
4 Uma b	7.1	269.3	0.87	62.39	K1III	1.234	08 40 13	+64 19 41	5.79	
HD 3651 b	0.2	62.23	0.284	11	K0 V	0.79	00 39 21	+21 15 01	5.8	0.947
6 Lyn b	2.4	899	2.2	56.9	K0IV	1.7	06 30 47	+58 09 46	5.86	5.2
HD 169830 b, c	2.88	225.62	0.81	36.32	F8 V	1.4	18 27 49	-29 49 00	5.9	1.84
HD 210702 b	2	341.1	1.17	56	K1III	1.85	22 11 51	+16 02 2	5.93	4.72
HD 38529 b, c	0.78	14.309	0.129	42.43	G4 IV	1.39	05 46 34	+01 10 05	5.94	2.44
55 Cnc b-f	0.03	2.81705	0.038	13.02	G8 V	1.03	08 52 37	+28 20 02	5.95	1.15
HD 69830 b, c, d	0.06	197	0.63	12.6	K0V	0.86	08 18 23	-12 37 55	5.95	0.895
HR 8799 b, c, d	7	170000	68	39.4	A5V	1.5	23 07 29	+21 08 03	5.96	
HD 167042 b	1.6	416.1	1.3	50	K1III	1.64	18 10 32	+54 17 12	5.97	4.3
HD 139357 b	9.76	1125.7	2.36	121.4	K4III	1.35	15 35 16	+53 55 20	5.98	11.47

Names in this color were discovered after the previous edition of this starwheel (between March 2008 and June 2009)