

HERA Calibrator Sources

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Here is a quick look at some bright sources in the HERA Field of View. First I've taken the TGSS ADR¹ (the most recent complete survey at 150MHz) and applied the following cuts.²

- $-25 > \text{DEC} > -35$
- Peak Flux > 10 Jy
- Total flux within 50% of Peak Flux. (fractional difference between total and peak is listed as "resolvedness")

Source_name	RA	DEC	Total_flux	Peak_flux	resolvedness
TGSSADR J211810.6-301915	319.5444	-30.32096	14077.6	12245.6	0.14960476076626
TGSSADR J203547.5-345404	308.948	-34.90121	32806.5	23012.3	0.42560712689494
TGSSADR J182319.4-272628	275.83124	-27.44129	13929.7	11492.5	0.21206875747770
TGSSADR J171447.8-251437	258.69943	-25.24373	20405.4	17422.7	0.17119627300143
TGSSADR J171257.3-280936	258.2388	-28.16007	37725.7	30117.1	0.25263387603919
TGSSADR J170541.5-321925	256.42303	-32.32379	18157.3	13110.4	0.38495394802998
TGSSADR J170109.7-295441	255.2907	-29.91163	11497.6	11050.0	0.04050675197963
TGSSADR J165956.9-305205	254.98723	-30.86814	11182.1	10641.3	0.05082084093235
TGSSADR J162555.4-310809	246.48102	-31.13588	12690.9	11250.2	0.12805996073854
TGSSADR J142529.1-295956	216.37163	-29.999	20589.9	16865.8	0.22080775515356
TGSSADR J133108.6-255945	202.786	-25.99602	12046.4	11169.9	0.07846981345828
TGSSADR J114134.5-285052	175.39398	-28.84798	13370.1	10630.5	0.25771126563896
TGSSADR J103312.9-341845	158.30411	-34.31253	13005.2	11328.6	0.14799716149823
TGSSADR J102011.6-324535	155.04874	-32.75985	11491.3	10661.6	0.07782136130707
TGSSADR J101809.2-314415	154.53835	-31.73773	15222.4	13791.0	0.10379235665470
TGSSADR J095804.8-290407	149.52016	-29.06868	10842.7	10094.0	0.07417279525584
TGSSADR J071717.6-250454	109.32351	-25.0817	19328.7	13275.4	0.45597862588007
TGSSADR J020012.1-305327	30.05044	-30.89106	22309.2	16858.0	0.32335978281824
TGSSADR J002549.1-260210	6.45484	-26.0363	16843.8	13726.0	0.22714562008232

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¹<http://tgssadr.strw.leidenuniv.nl/doku.php>

²Note that the tables are left rough (eg no caption or sigfig sanity) so I can drop the raw latex output from topcat without any prettification. Total Flux and Peak Flux are in units of mJy.

Unfortunately, most of these sources are in or near the galactic plane. Making the further cut $RA < 8h$, limiting us to the coldest half of the sky. We get three bright sources.

Source_name	RA	DEC	Total_flux	Peak_flux	resolvedness
TGSSADR J071717.6-250454	109.32351	-25.0817	19328.7	13275.4	0.45597862588007
TGSSADR J020012.1-305327	30.05044	-30.89106	22309.2	16858.0	0.32335978281824
TGSSADR J002549.1-260210	6.45484	-26.0363	16843.8	13726.0	0.22714562008232

These three sources look to be nice strong 20Jy sources with little spectral deviation.

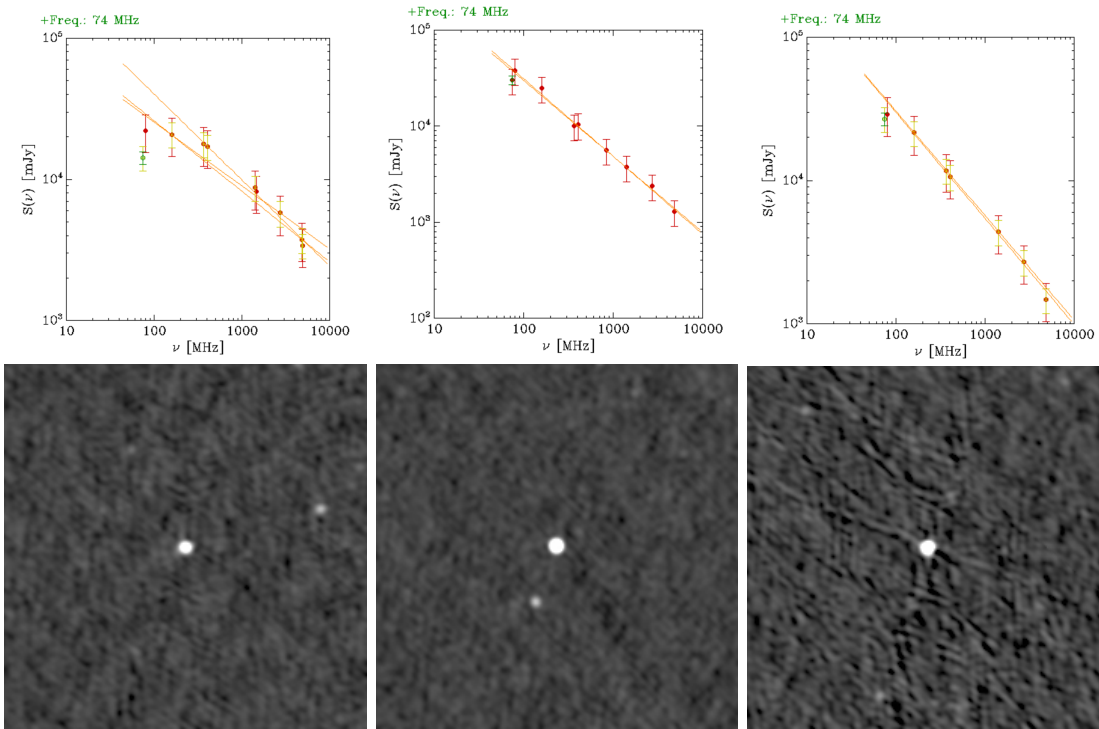


Fig. 1.— Top: spectra for top 3 calibrators, left to right: 0025.8-2602, 0200.2-3053, 0717.2-2504 as cross-matched by Vollmer et al and plotted by [Vizier](#). In this scheme the red points are cross-matched in spectral and position space. Yellow are just cross-matched in position space. Green is the VLSS point. All cross-matched error bars have increased by 50%. Note that VLSS is on a flux scale which is 15% different from the Baars et al scale used by the rest of the catalogs. Bottom: Matching VLSS 74 MHz postage stamps, 1deg on a side.