

Scenario — PV

Old house to improve Austria - Inning 48.182, 15.417

Name	Slope °	Azimuth °	Wp	Wall d/h m	Face	Bifacial	Wp counted
Garage roof	1	0	10740	—	front	—	yes
Garage side wall south	90	0	3475	5 / 4	front	—	yes
Garage side wall north	90	180	3475	5 / 4	front	—	yes
Garage door side	90	90	700	5 / 4	front	—	yes
Garage back side	90	-90	2540	5 / 4	front	—	yes
Total counted			20930				

Location: My most visited location in “lower Austria”, just at the Tesla SuC.

Database PVGIS-SARAH3 2005–2023 loss 14 % azimuth 0 = south, 90 = west, –90 = east.

Price bands and charts use UTC+1 from longitude (15° per hour), not the political time zone.

Peak hour 2021-04-23 11:10 local (10:10 UTC) 10733 W 0.513 W/Wp of 20930 Wp.

Database gaps: 10 days with 0 yield while the sun reached the horizon at noon. 2008-01-23, 2008-03-01, 2008-03-06, 2008-05-17, 2008-05-18, 2009-04-18, 2009-04-19, 2009-08-15, 2009-08-16, 2016-10-16. Yield charts skip them. The simulation uses the lowest-yield day of that month.

Sell when the export price is above 0. At 0 cent export PV yield only, not the battery. Do not sell when the earning is negative. At 15:00 winter time, battery export is only the kWh that would not fit in the next 72 h.



Scenario — house, heat pump, battery
 Old house to improve Austria - Inning 48.182, 15.417

Chapter	Parameter	Value
Building	Design out / in / heat	-10.0 °C / 20.0 °C / 3300.0 W
	Heat on / cool on / ground	20.0 °C / 25.0 °C / 10.0 °C
	Curve / flow min / max	0.35 / 25.0 °C / 55.0 °C
	Thermal mass of the house	25.0 kWh/K
	Household only	4.0 kWh/day
DHW	Litres at 40 °C / tank	200.0 L tank 62.0 °C 8-18 h
	Water out of the pipe Q1-Q4	8 °C 10 °C 12 °C 10 °C
Heat pump	Source	air and ground
	COP –10/0/10 @ 35 °C	2.4 3.4 4.5
	COP –10/0/10 @ 50 °C	1.9 2.6 3.3
	kW –10/0/10 @ 35 °C	4 5 6
	kW –10/0/10 @ 50 °C	3.5 4.5 5
Battery	kWh / C-rate / SOC min-max-start	45.0 kWh C 0.5 5 / 95 / 50 %
	Nameplate	—
	Charge / discharge η	95 % / 90 %
Grid	Inverter / grid connection	12.0 kW / 12.0 kW
	Max export	12.0 kW
	Import cap Jan-Jun kW	Jan 3 Feb 3 Mar 3 Apr 3 May 3 Jun 3
	Import cap Jul-Dec kW	Jul 3 Aug 3 Sep 3 Oct 3 Nov 3 Dec 3
Cars	Lunch DC / night AC	0.0 kWh @ 30.0 kW night 10.0 kWh @ 4.0 kW

Records 1-10 — contribution of each PV
Austria - Inning 48.182, 15.417

PV	2021-04-23 10:10	2005-04-22 10:10	2020-05-07 10:10	2005-04-22 11:10	2006-05-01 10:10	2022-04-04 10:10	2020-05-24 10:10	2012-05-18 10:10	2020-04-21 10:10	2017-04-30 10:10
Garage roof	7920	7815	8024	8152	7973	7413	8175	8050	7720	7877
Garage side wall south	2078	2075	1842	2180	1941	2378	1648	1711	2072	1937
Garage side wall north	124	135	152	115	113	131	168	195	154	149
Garage door side	25	27	31	80	23	26	34	39	31	30
Garage back side	587	593	564	84	562	655	567	583	600	576
Watt at record	10733	10645	10612	10612	10611	10604	10592	10578	10577	10568
Percent of installed peak	51.3	50.9	50.7	50.7	50.7	50.7	50.6	50.5	50.5	50.5

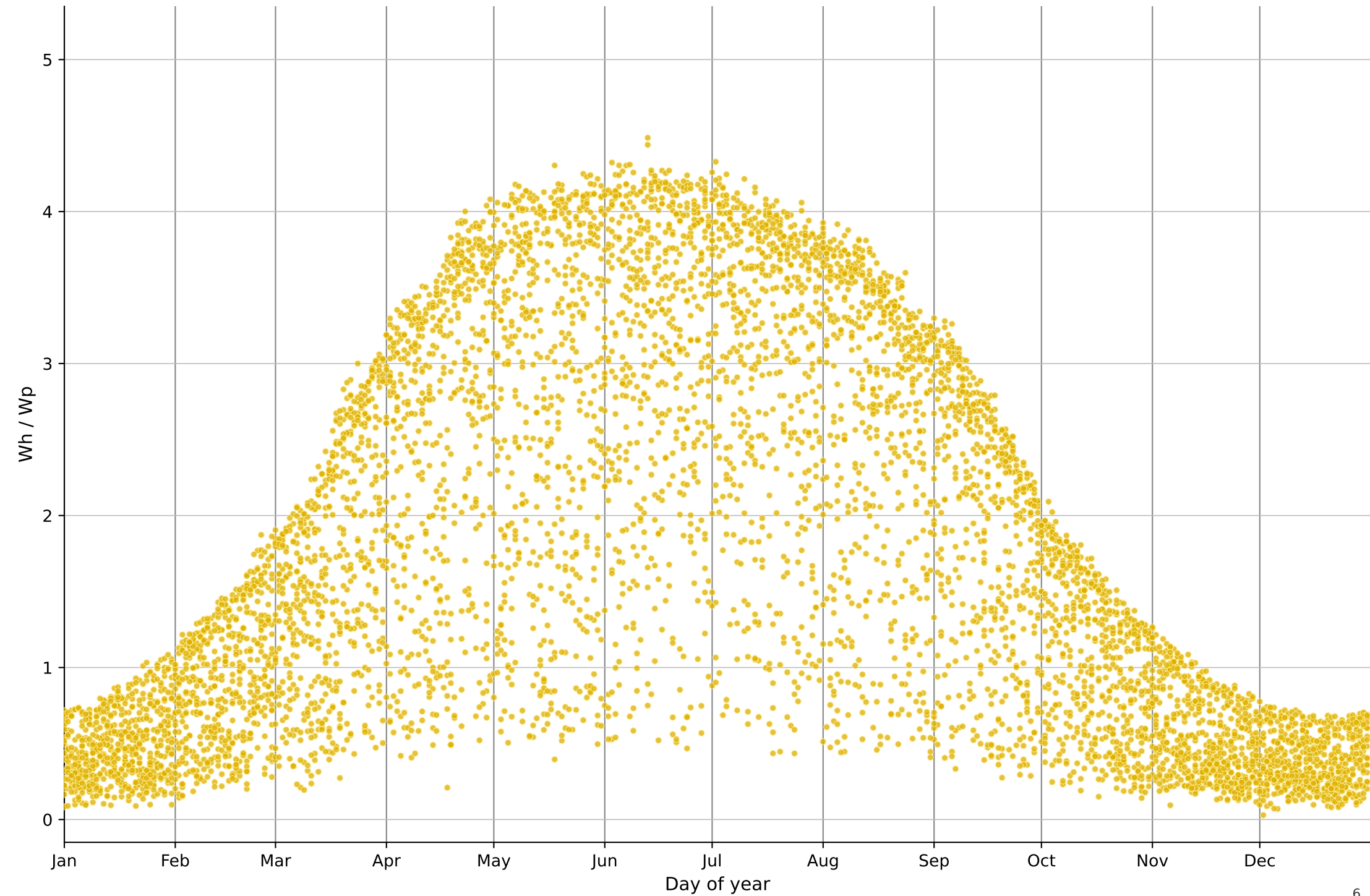
Hours at or above a share of the record
Austria - Inning 48.182, 15.417

Of the record	Hours	Watts
98 %	12	10518 W
96 %	75	10303 W
94 %	236	10089 W
92 %	599	9874 W
90 %	1245	9659 W

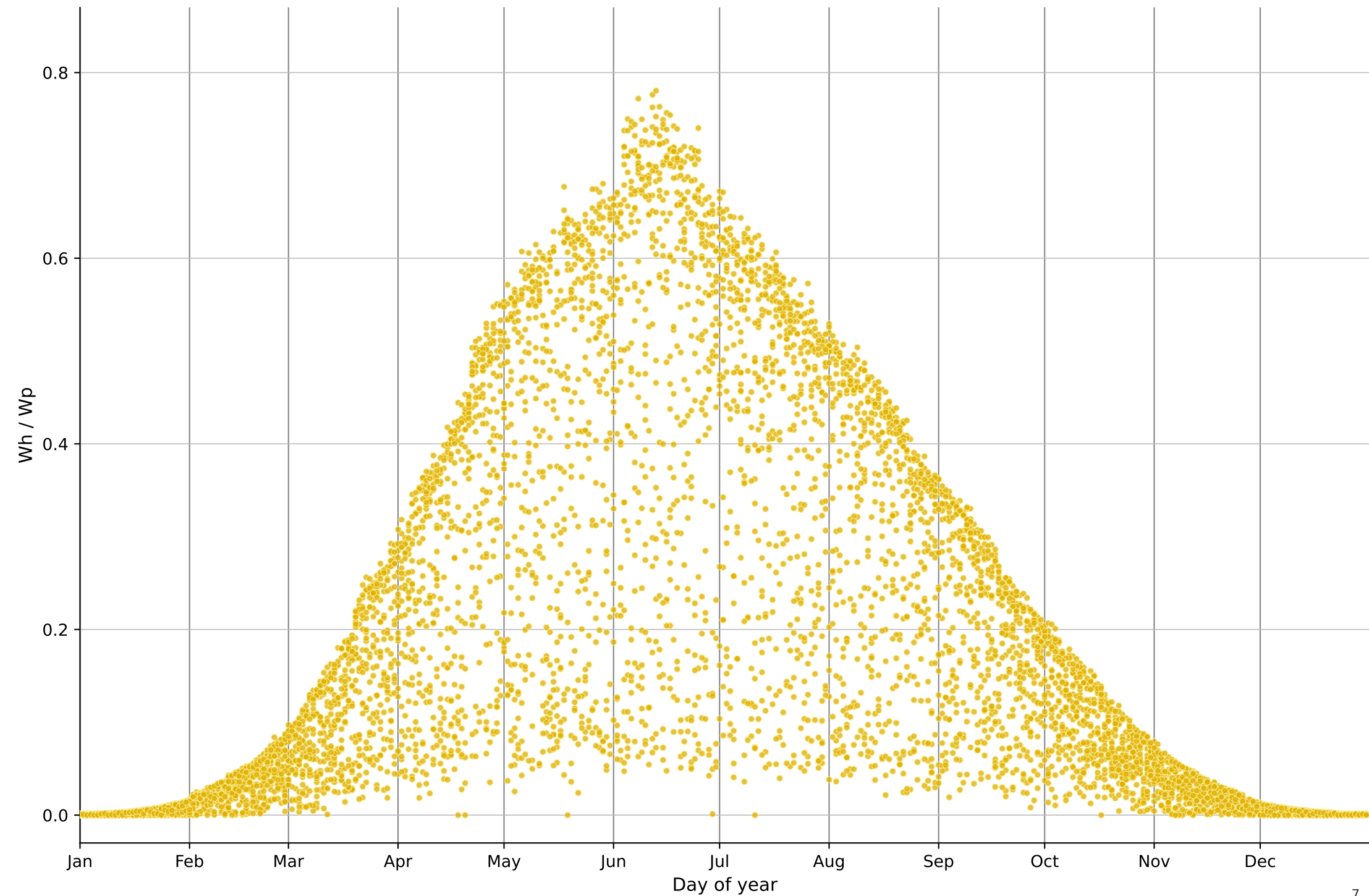
Records of each photovoltaic field
Austria - Inning 48.182, 15.417

PV	Date	Watts	%	h ≥98%	h ≥96%	h ≥94%	h ≥92%	h ≥90%
Garage roof	2009-06-13 11:10	8369	77.9	8	33	112	320	671
Garage side wall south	2009-03-22 11:10	2638	75.9	8	17	26	45	75
Garage side wall north	2023-06-13 05:10	611	17.6	1	8	25	50	108
Garage door side	2005-05-08 14:10	473	67.6	1	3	5	16	49
Garage back side	2009-06-13 07:10	1695	66.7	3	8	16	44	84

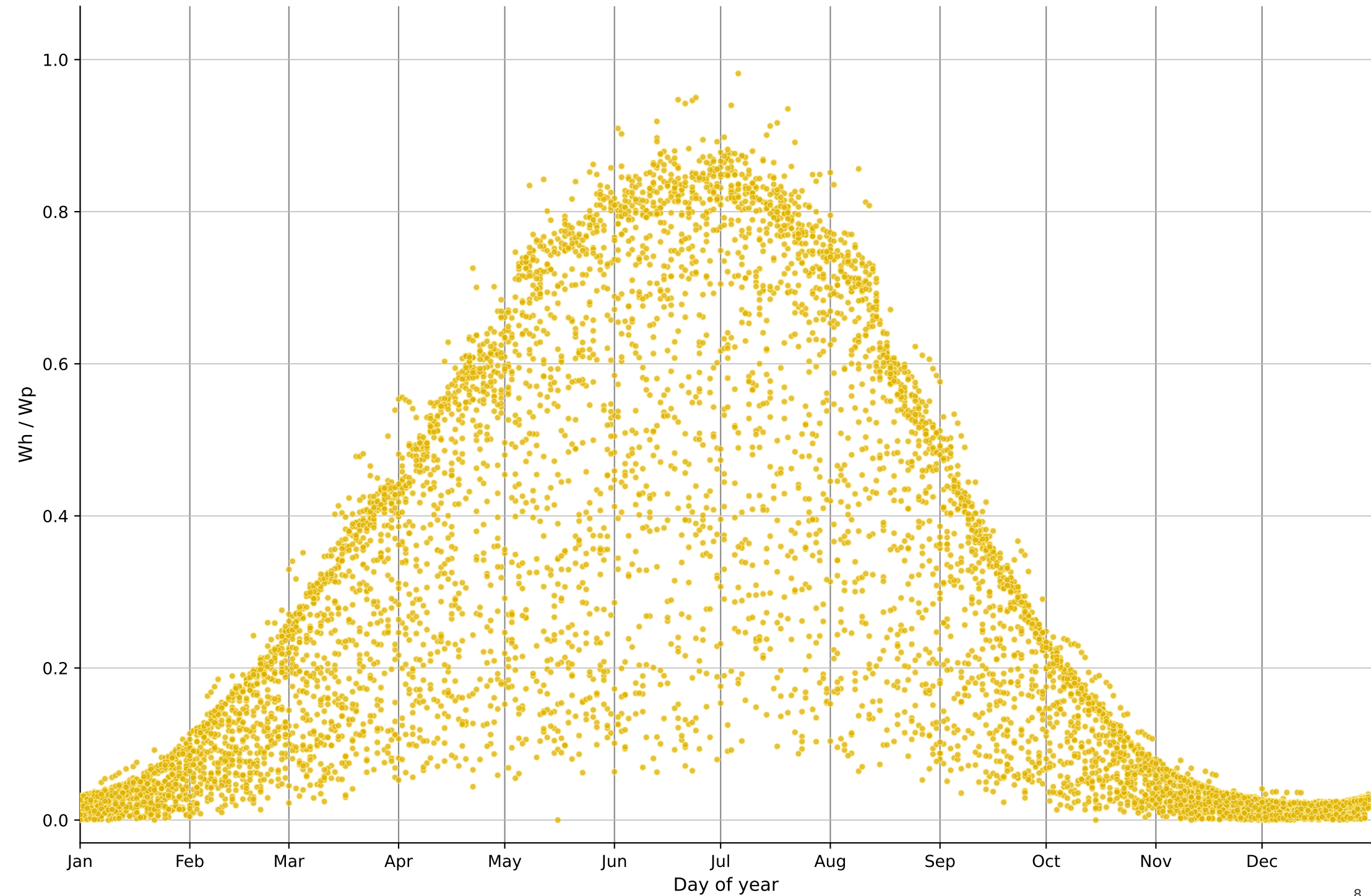
Yield distribution for each day — W_h / W_p of all PV together
Austria - Inning 48.182, 15.417



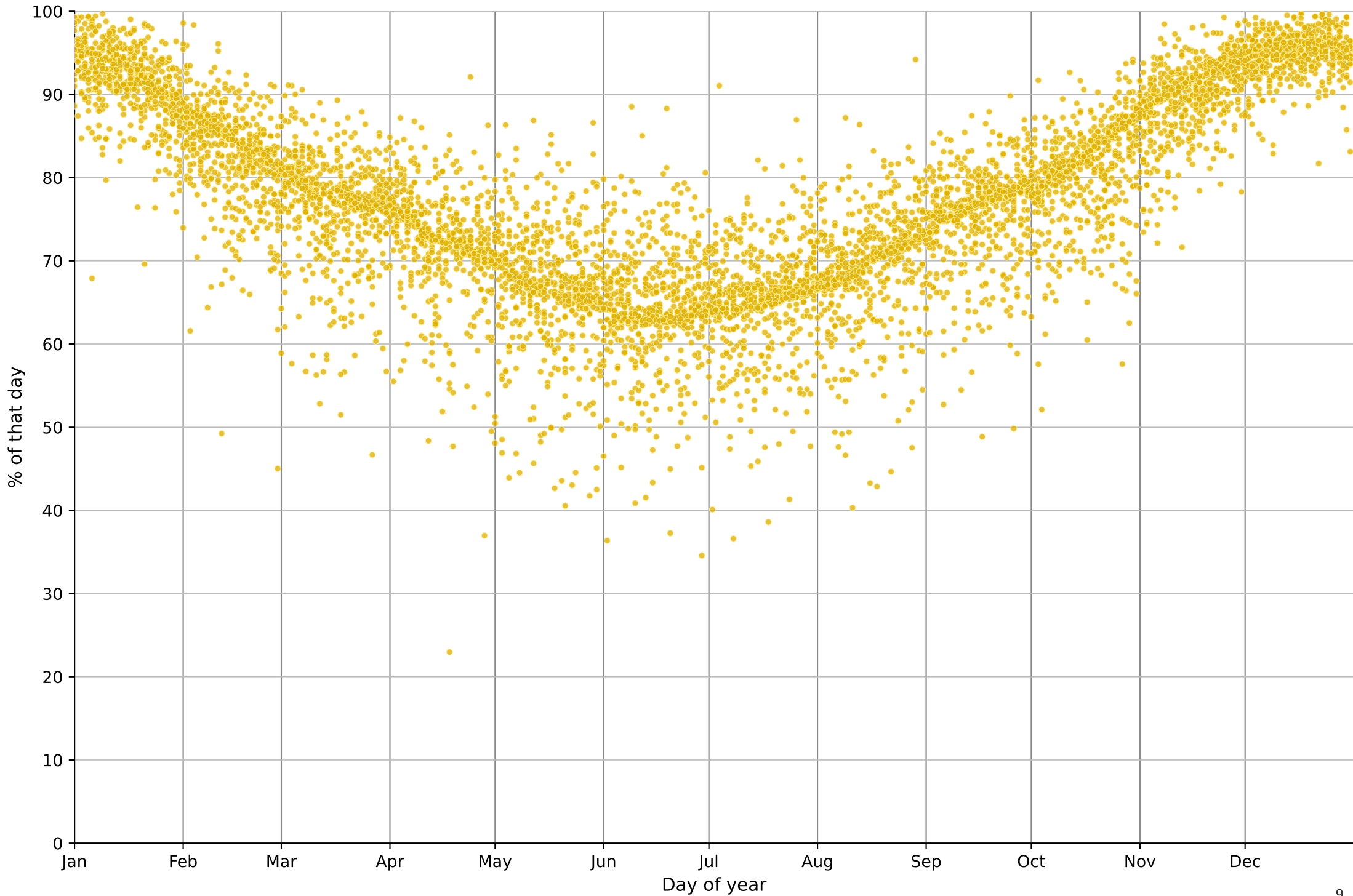
Yield distribution for each day — Wh / Wp of all PV together — 00:00-09:00
Austria - Inning 48.182, 15.417



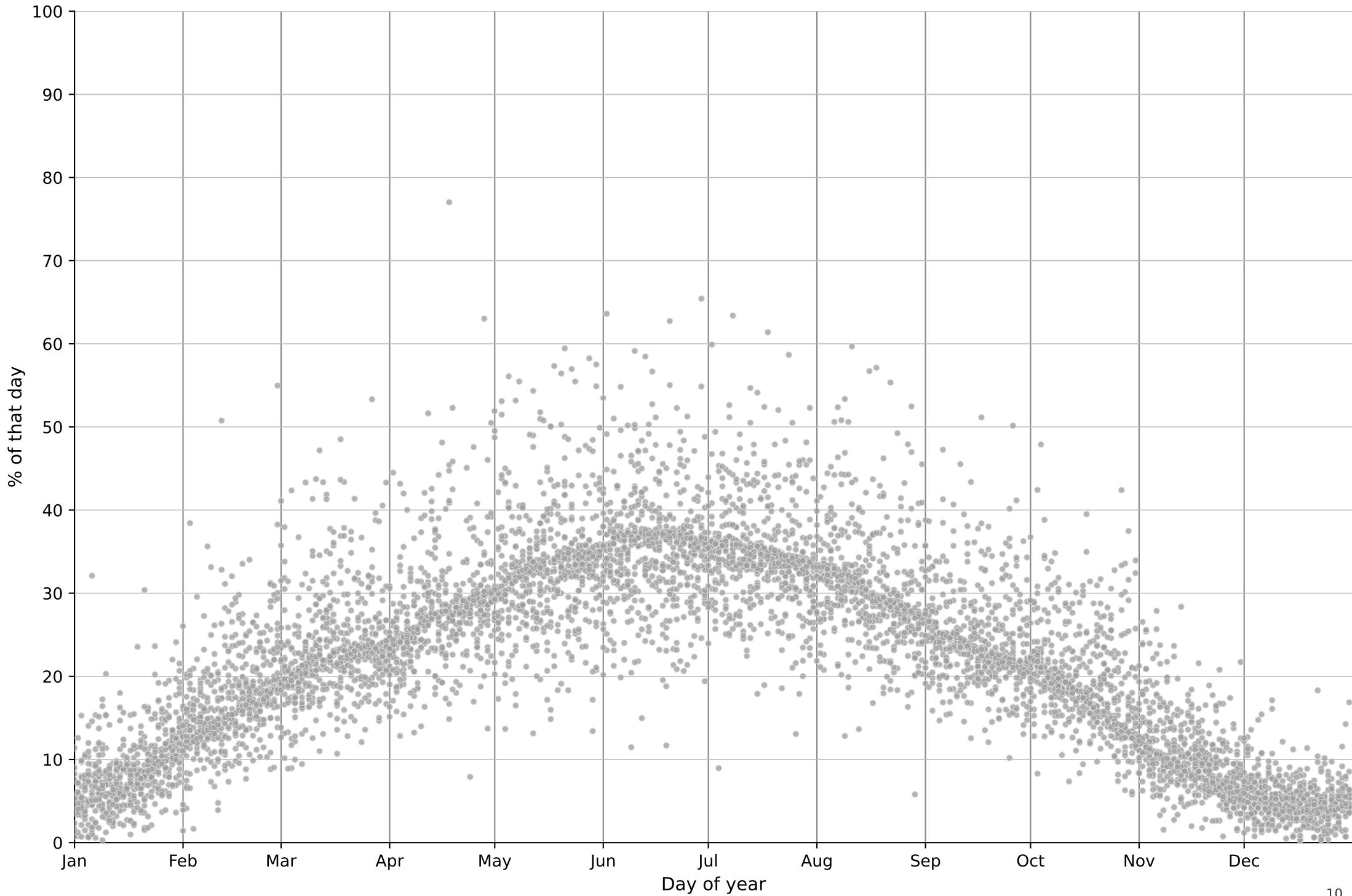
Yield distribution for each day — Wh / Wp of all PV together — 15:00-23:59
Austria - Inning 48.182, 15.417



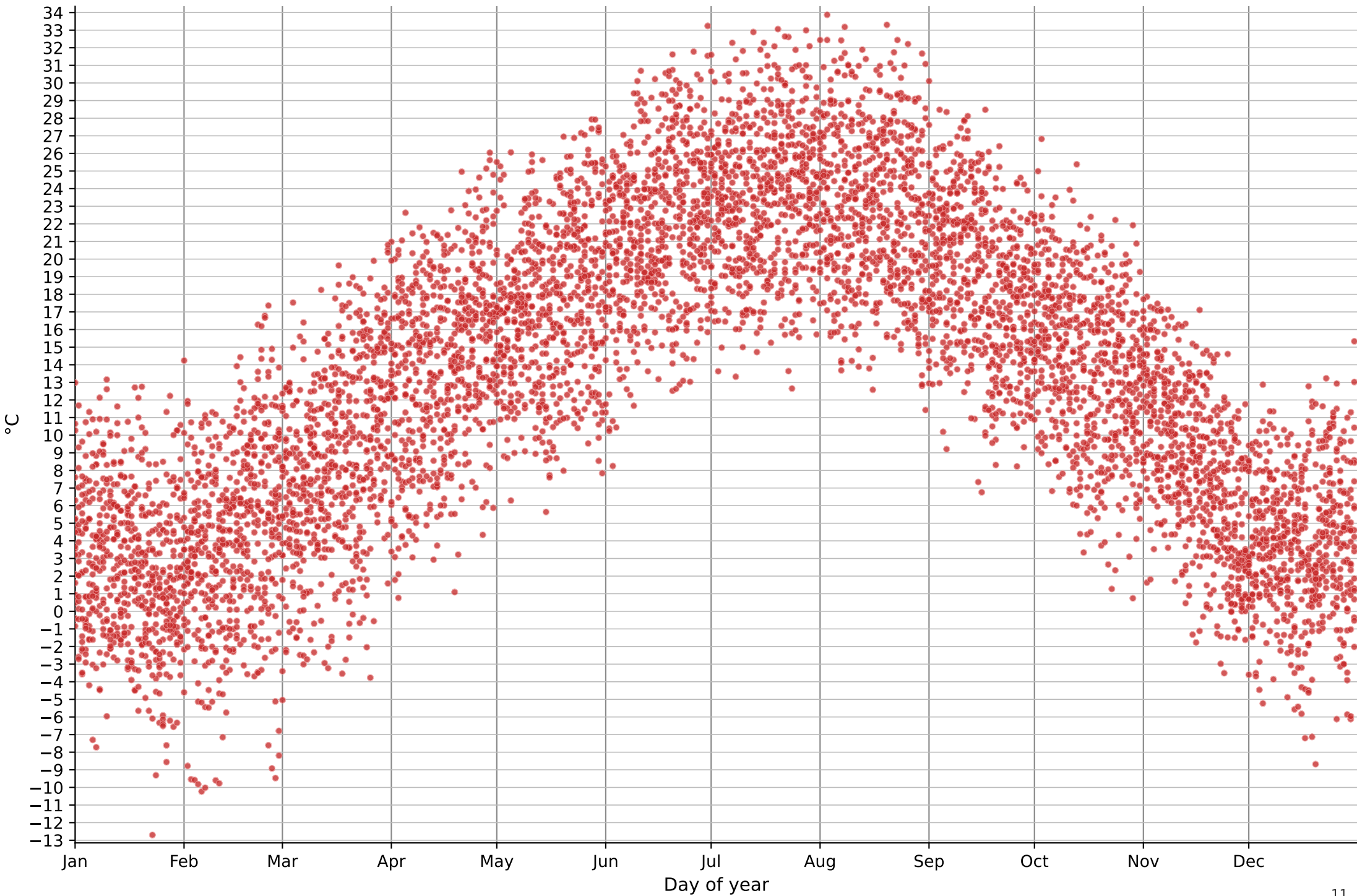
Share of the day's yield in 09:00-15:00 winter time
Austria - Inning 48.182, 15.417



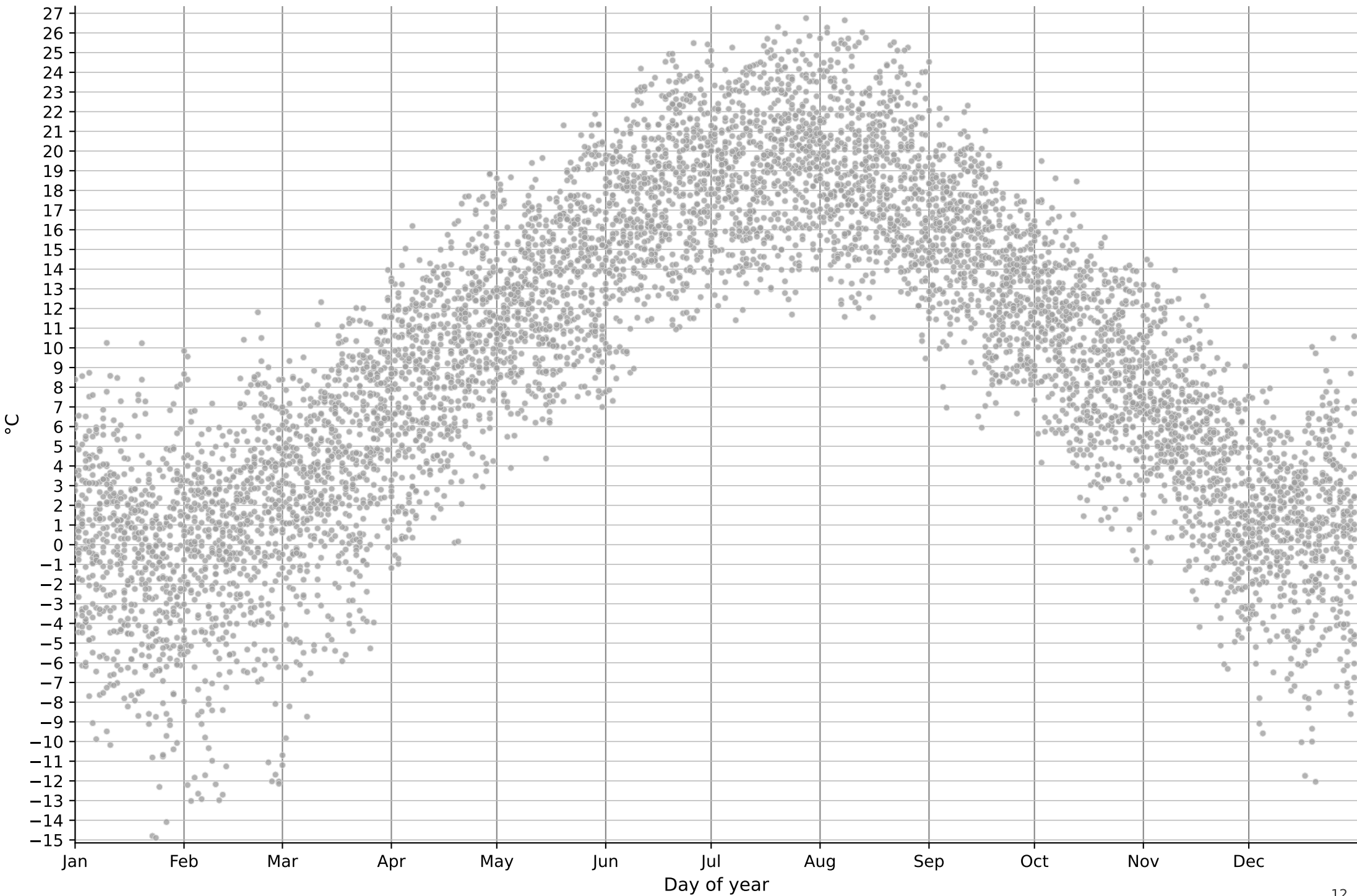
Share of the day's yield outside 09:00-15:00 winter time
Austria - Inning 48.182, 15.417



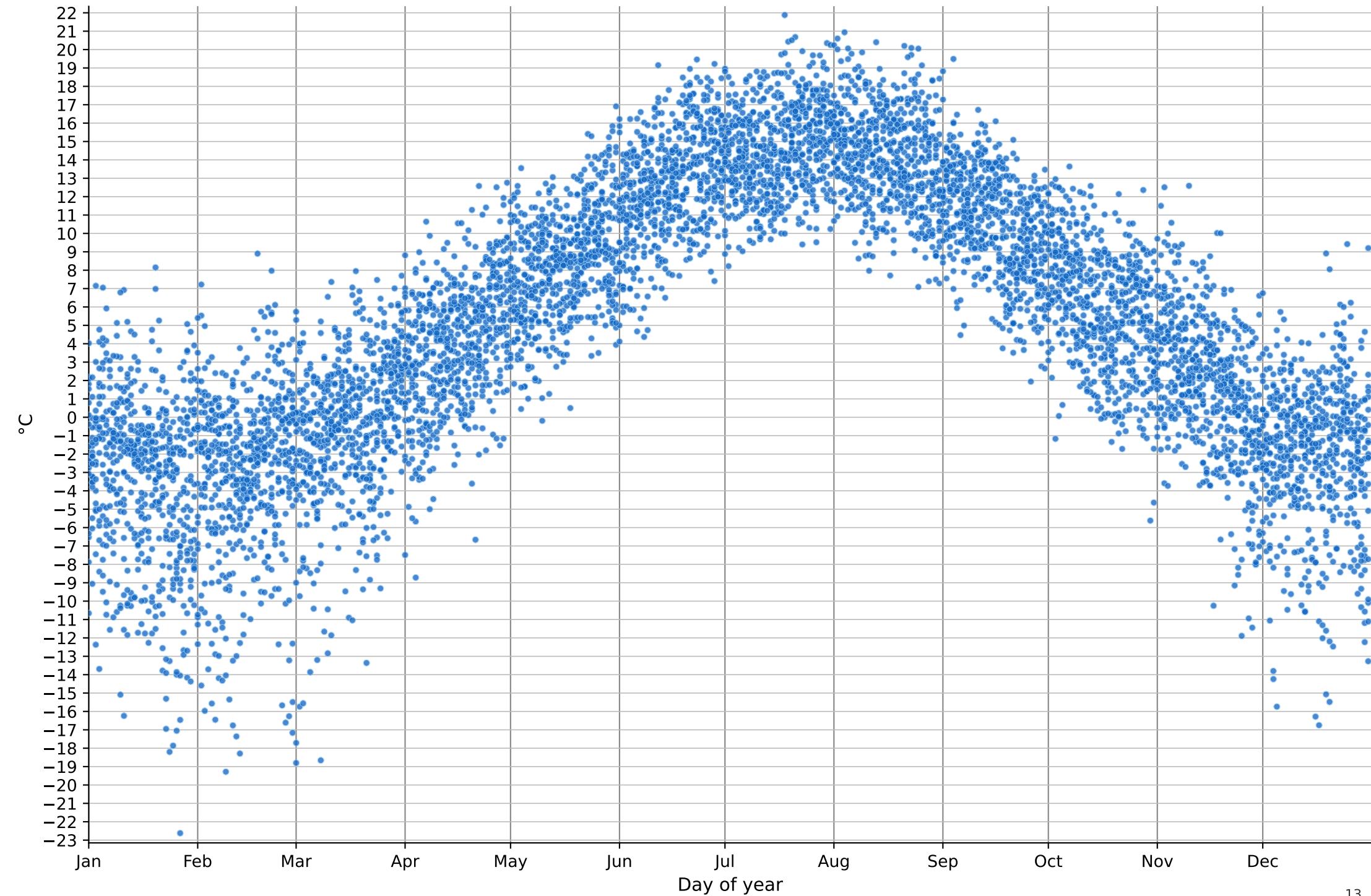
Highest temperature of each day
Austria - Inning 48.182, 15.417



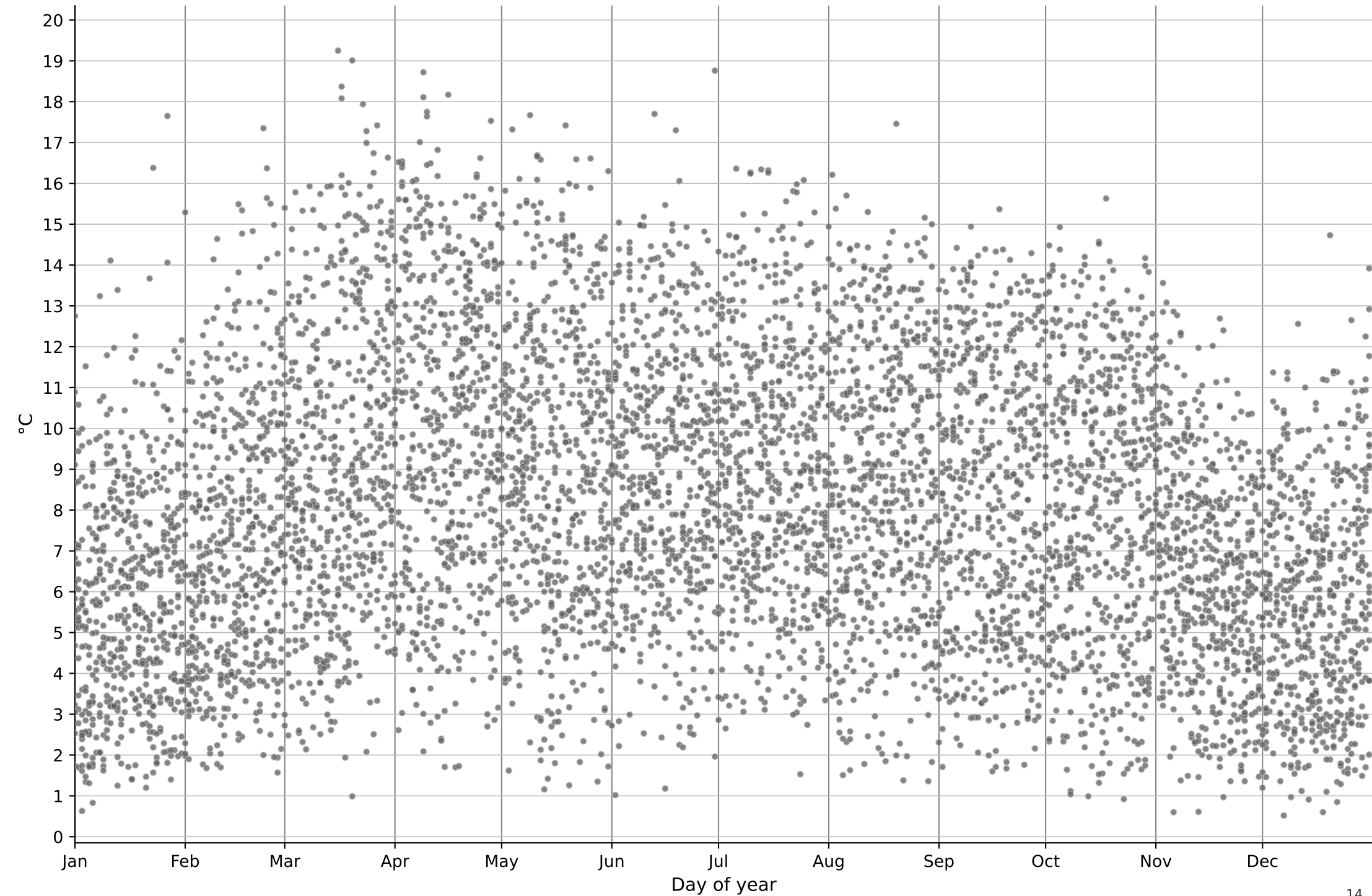
Average temperature of each day
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Lowest temperature of each day
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Difference between highest and lowest temperature of each day
Austria - Inning 48.182, 15.417



Monthly and yearly specific yield (kWh/kWp = Wh/Wp)
Austria - Inning 48.182, 15.417

Month / year		Garage roof 1°/0° 10740 Wp	Garage side wall south 90°/0° 3475 Wp	Garage side wall north 90°/180° 3475 Wp	Garage door side 90°/90° 700 Wp	Garage back side 90°/-90° 2540 Wp	All together
January	Maximum	32.84	7.26	7.26	8.02	9.10	19.76
	average	23.62	5.26	5.26	5.93	6.73	14.88
	minimum	17.95	4.09	4.09	4.60	5.29	11.80
February	Maximum	51.56	9.78	9.78	11.74	11.07	30.57
	average	41.81	8.23	8.23	10.69	9.69	25.72
	minimum	30.53	7.01	7.01	9.55	8.85	20.23
March	Maximum	103.67	40.02	16.17	20.69	20.57	64.78
	average	78.18	32.13	14.12	18.52	18.64	50.68
	minimum	60.95	23.96	12.21	16.23	16.11	40.73
April	Maximum	138.59	85.87	20.80	35.62	37.00	93.94
	average	110.61	68.54	18.98	32.57	33.18	76.41
	minimum	87.14	54.04	16.79	27.32	27.21	60.77
May	Maximum	144.59	75.98	26.21	49.99	44.67	97.69
	average	124.01	66.13	24.16	43.00	39.77	84.89
	minimum	91.48	48.94	22.30	34.42	32.92	64.02
June	Maximum	163.28	73.17	28.27	50.65	56.41	108.79
	average	135.71	62.75	26.40	45.09	48.98	91.89
	minimum	109.40	51.97	24.08	39.28	41.53	75.44
July	Maximum	158.88	77.19	27.83	49.85	48.86	106.24
	average	138.27	67.74	25.64	45.09	43.52	93.25
	minimum	102.76	50.02	23.06	36.77	33.52	70.23
August	Maximum	132.11	79.19	22.99	40.50	40.39	90.31
	average	117.75	70.61	19.99	36.73	36.67	81.14
	minimum	102.53	60.77	17.60	32.59	33.27	71.64
September	Maximum	104.79	59.73	16.42	24.07	22.91	69.54
	average	86.69	49.11	14.08	21.48	20.85	58.22
	minimum	69.95	40.19	11.80	18.89	18.24	47.76
October	Maximum	68.41	11.30	11.26	12.90	12.98	40.16
	average	54.55	9.83	9.80	11.44	11.69	33.06
	minimum	37.60	8.60	8.60	9.79	9.93	23.68
November	Maximum	33.54	6.47	6.47	7.53	7.71	20.26
	average	26.62	5.75	5.75	6.77	6.86	16.63
	minimum	20.26	5.33	5.33	6.04	6.01	13.13
December	Maximum	25.37	5.19	5.19	5.84	6.52	15.15
	average	19.18	4.19	4.19	4.82	5.42	12.05
	minimum	15.84	2.90	2.90	3.46	3.86	9.68
All years	Maximum	1005.5	478.1	182.9	291.4	295.1	670.0
	average	957.0	450.3	176.6	282.1	282.0	638.8
	minimum	908.1	423.9	171.8	274.0	269.5	609.6

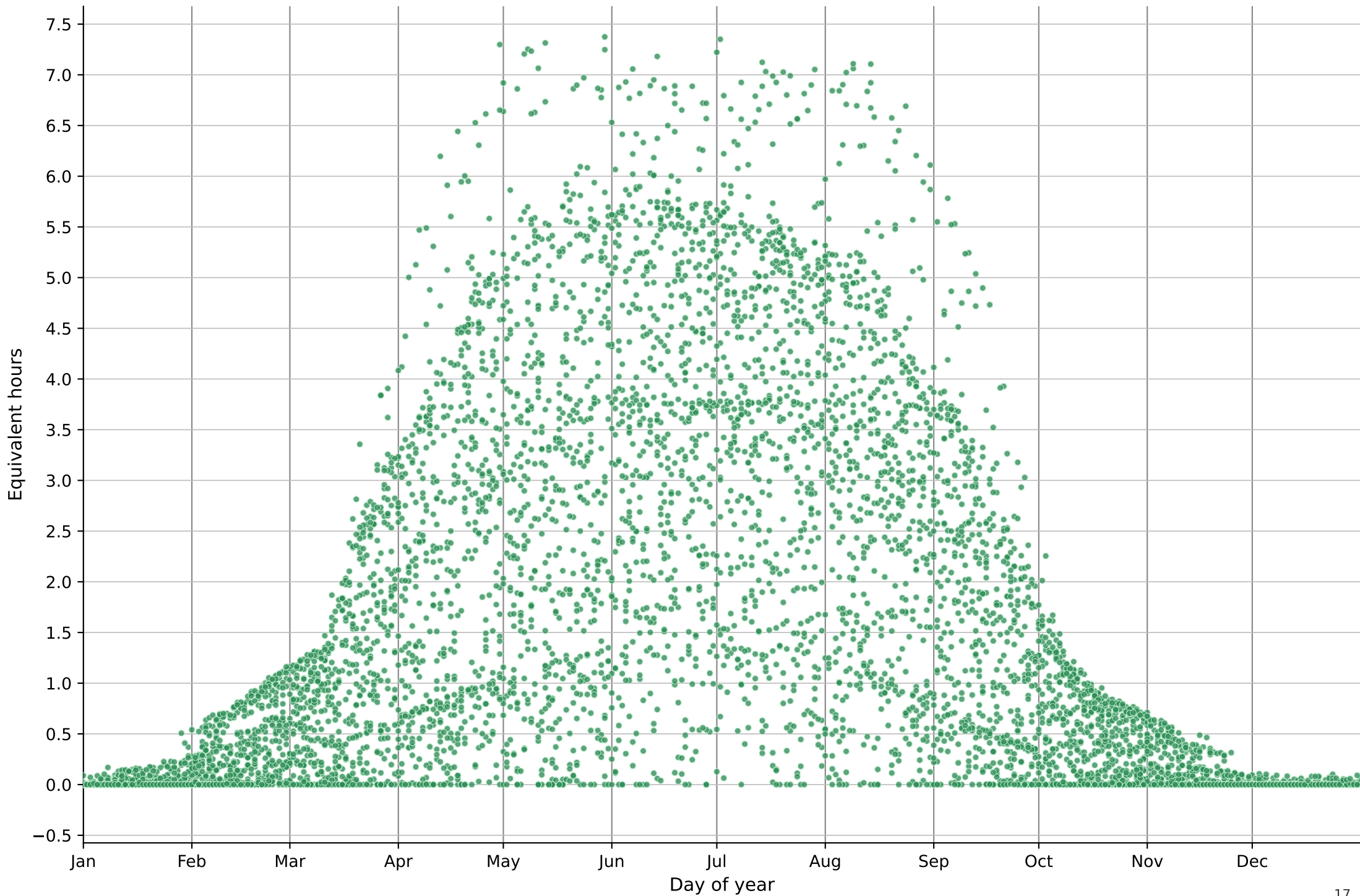
Highest combined yield hour: 2021-04-23 10:10 UTC 10732.7 W (0.513 W/Wp) of 20930 Wp installed. Use this hour to size battery charge power.

Monthly and yearly total yield (kWh)
Austria - Inning 48.182, 15.417

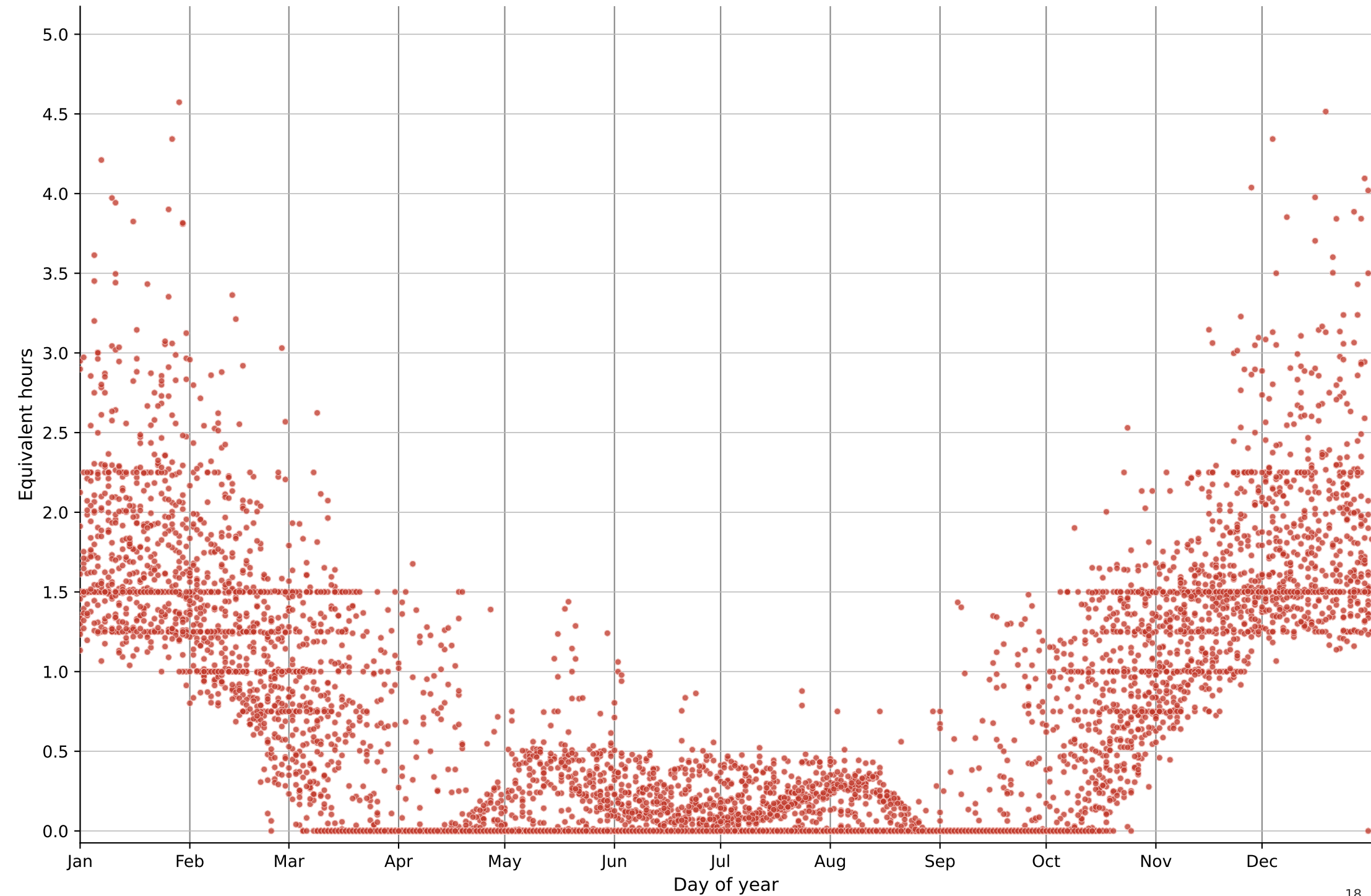
Month / year		Garage roof 1°/0° 10740 Wp	Garage side wall south 90°/0° 3475 Wp	Garage side wall north 90°/180° 3475 Wp	Garage door side 90°/90° 700 Wp	Garage back side 90°/-90° 2540 Wp	All together
January	Maximum	352.7	25.2	25.2	5.6	23.1	413.6
	average	253.6	18.3	18.3	4.2	17.1	311.5
	minimum	192.8	14.2	14.2	3.2	13.4	246.9
February	Maximum	553.7	34.0	34.0	8.2	28.1	639.8
	average	449.0	28.6	28.6	7.5	24.6	538.4
	minimum	327.9	24.3	24.3	6.7	22.5	423.5
March	Maximum	1113.4	139.1	56.2	14.5	52.2	1355.8
	average	839.7	111.7	49.1	13.0	47.3	1060.7
	minimum	654.6	83.3	42.4	11.4	40.9	852.4
April	Maximum	1488.4	298.4	72.3	24.9	94.0	1966.2
	average	1188.0	238.2	65.9	22.8	84.3	1599.2
	minimum	935.8	187.8	58.3	19.1	69.1	1272.0
May	Maximum	1552.9	264.0	91.1	35.0	113.5	2044.6
	average	1331.9	229.8	83.9	30.1	101.0	1776.8
	minimum	982.4	170.1	77.5	24.1	83.6	1339.9
June	Maximum	1753.7	254.3	98.2	35.5	143.3	2277.0
	average	1457.5	218.1	91.8	31.6	124.4	1923.3
	minimum	1175.0	180.6	83.7	27.5	105.5	1578.9
July	Maximum	1706.4	268.2	96.7	34.9	124.1	2223.5
	average	1485.0	235.4	89.1	31.6	110.5	1951.6
	minimum	1103.6	173.8	80.1	25.7	85.1	1469.8
August	Maximum	1418.8	275.2	79.9	28.4	102.6	1890.2
	average	1264.6	245.4	69.5	25.7	93.1	1698.3
	minimum	1101.1	211.2	61.2	22.8	84.5	1499.4
September	Maximum	1125.4	207.6	57.1	16.8	58.2	1455.5
	average	931.1	170.6	48.9	15.0	53.0	1218.6
	minimum	751.2	139.7	41.0	13.2	46.3	999.6
October	Maximum	734.7	39.3	39.1	9.0	33.0	840.6
	average	585.9	34.2	34.1	8.0	29.7	691.8
	minimum	403.9	29.9	29.9	6.9	25.2	495.7
November	Maximum	360.3	22.5	22.5	5.3	19.6	424.0
	average	285.9	20.0	20.0	4.7	17.4	348.0
	minimum	217.6	18.5	18.5	4.2	15.3	274.8
December	Maximum	272.5	18.0	18.0	4.1	16.6	317.1
	average	206.0	14.5	14.5	3.4	13.8	252.3
	minimum	170.1	10.1	10.1	2.4	9.8	202.5
All years	Maximum	10799	1662	636	204	750	14023
	average	10278	1565	614	197	716	13370
	minimum	9753	1473	597	192	684	12759

Highest combined yield hour: 2021-04-23 10:10 UTC 10732.7 W (0.513 W/Wp) of 20930 Wp installed. Use this hour to size battery charge power.

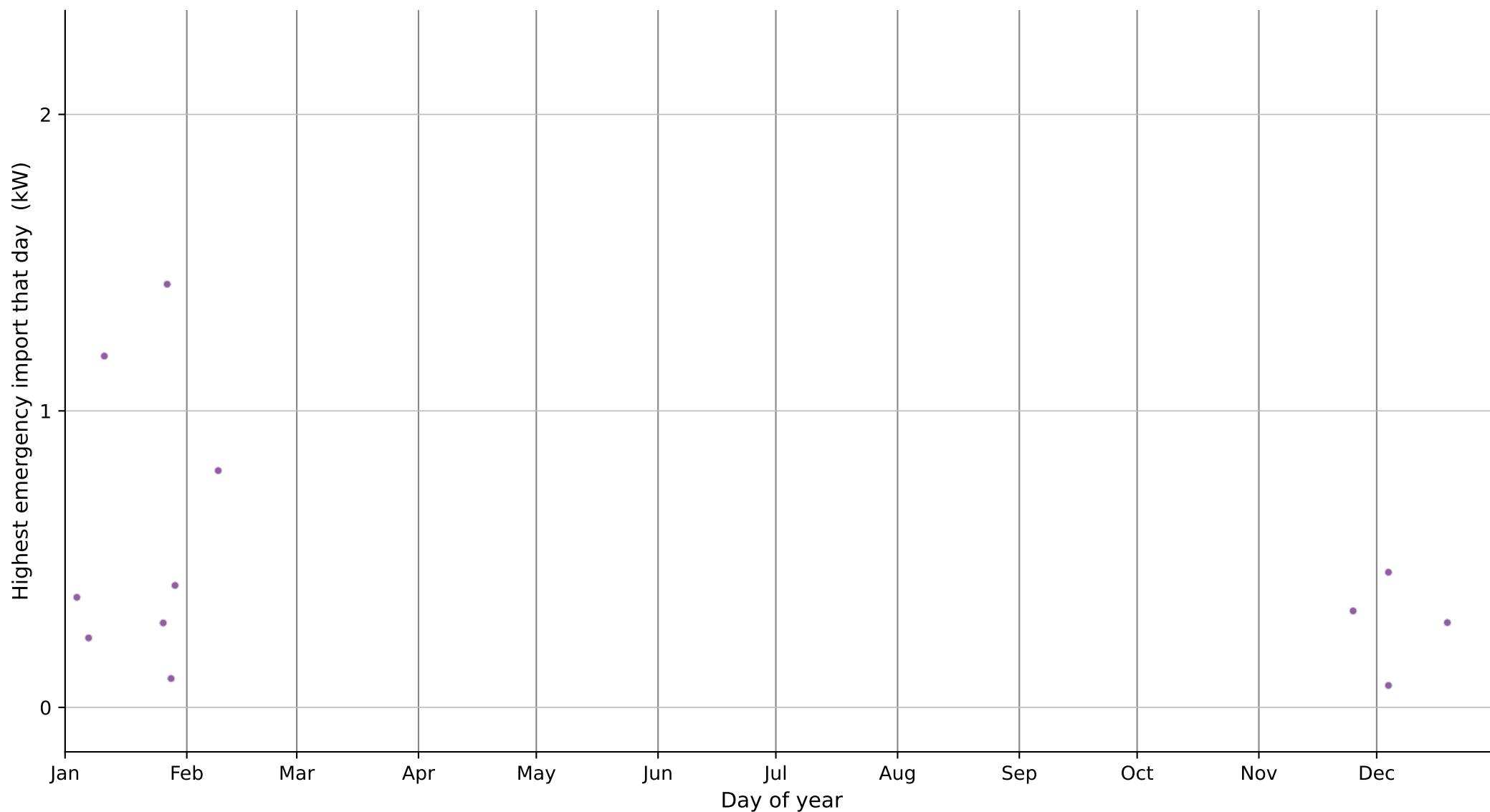
Export energy as equivalent hours (kWh / grid kW)
Austria - Inning 48.182, 15.417



Import energy as equivalent hours (kWh / grid kW)
Austria - Inning 48.182, 15.417



Emergency import hours: 26 days with an emergency: 12
Austria - Inning 48.182, 15.417



Emergency = this hour's grid import is above the month's max import kW. 2 kW means up to 48 kWh in 24 hours. More than 2 kW in an hour is the higher grid fee. Import inside that cap is not an emergency. Preferred cheap hours are 00:00-06:00 and 09:00-15:00 winter time.

Energy in kWh
Austria - Inning 48.182, 15.417

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Export to grid													
month Maximum	18	164	581	1153	1358	1614	1612	1245	798	258	78	7	7337
month average	9	105	386	802	1045	1263	1298	1053	557	192	38	2	6748
month minimum	3	35	238	473	632	932	761	815	355	123	14	0	6036
day Maximum	6.1	13.9	46.9	87.6	88.5	86.2	88.2	85.3	69.4	27.1	8.5	1.3	88.5
day average	0.3	3.7	12.4	26.7	33.7	42.1	41.9	34.0	18.6	6.2	1.3	0.1	18.5
day minimum	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.0
Import from grid													
month Maximum	778	643	295	97	122	78	52	43	131	396	622	810	3307
month average	673	435	189	37	54	41	41	25	34	237	509	685	2961
month minimum	581	336	92	4	16	13	29	8	0	148	433	554	2660
day Maximum	54.9	40.4	31.5	20.1	17.3	12.7	10.5	9.0	17.8	30.4	48.5	54.2	54.9
day average	21.7	15.4	6.1	1.2	1.8	1.4	1.3	0.8	1.1	7.7	17.0	22.1	8.1
day minimum	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0
Total energy used for house													
month Maximum	1050	1013	872	721	661	556	548	555	611	736	811	991	8599
month average	888	794	797	668	614	525	513	518	563	678	750	853	8160
month minimum	802	721	737	592	559	493	499	495	508	614	711	789	7898
day Maximum	52.2	47.2	44.3	28.5	25.9	25.5	23.2	23.1	24.3	28.2	34.2	44.5	52.2
day average	28.6	28.1	25.7	22.3	19.8	17.5	16.6	16.7	18.8	21.9	25.0	27.5	22.3
day minimum	16.3	20.7	19.3	15.7	15.6	15.6	15.5	15.5	15.5	15.8	18.9	21.5	15.5

Month rows: kWh in that month. Day rows: best / average / worst day.
Total energy used for house = household + car + heating + cooling + DHW + direct electric.
PV not exported and not marked wasted is still in the battery, or could not leave because the grid was already full. It is not house use.

Energy by price
Austria - Inning 48.182, 15.417

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Export													
month Maximum	1	10	51	140	188	223	232	177	111	17	4	0	966
month average	1	6	32	90	137	178	186	146	66	12	2	0	855
month minimum	0	2	15	36	76	135	101	103	32	6	1	0	758
day Maximum	0.4	0.9	6.6	13.9	14.6	14.4	14.7	14.9	10.7	4.3	0.5	0.1	14.9
day average	0.0	0.2	1.0	3.0	4.4	5.9	6.0	4.7	2.2	0.4	0.1	0.0	2.3
day minimum	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.0
Import													
month Maximum	189	155	68	17	24	15	13	10	22	92	152	196	784
month average	161	102	44	6	12	9	10	6	6	55	120	164	695
month minimum	137	78	21	1	4	3	6	2	0	34	101	130	621
day Maximum	13.7	9.5	8.0	3.8	2.8	2.2	1.9	1.6	3.2	7.7	13.1	13.3	13.7
day average	5.2	3.6	1.4	0.2	0.4	0.3	0.3	0.2	0.2	1.8	4.0	5.3	1.9
day minimum	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Peak grid fee													
month Maximum	28	24	19	19	19	19	19	19	19	19	21	22	224
month average	20	19	19	17	16	12	10	12	15	19	19	19	199
month minimum	19	19	19	6	10	7	7	7	0	19	19	19	163
day Maximum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Import incl. peak fee													
month Maximum	211	174	87	36	43	34	27	27	41	111	173	216	996
month average	181	122	63	24	28	21	20	18	21	74	139	184	894
month minimum	156	97	40	7	16	10	16	9	0	53	120	149	801
day Maximum	13.7	9.5	8.0	3.8	2.8	2.2	1.9	1.6	3.2	7.7	13.1	13.3	13.7
day average	5.2	3.6	1.4	0.2	0.4	0.3	0.3	0.2	0.2	1.8	4.0	5.3	1.9
day minimum	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Balance													
month Maximum	-155	-87	11	131	161	199	210	158	111	-37	-115	-149	111
month average	-181	-115	-31	67	109	157	166	128	45	-62	-137	-184	-39
month minimum	-211	-171	-72	2	43	106	76	95	2	-105	-171	-216	-238
day Maximum	-2.3	0.6	6.6	13.9	14.3	14.4	14.7	14.9	10.7	4.3	-0.8	0.0	14.9
day average	-5.2	-3.4	-0.4	2.8	4.0	5.6	5.7	4.5	2.0	-1.4	-3.9	-5.3	0.4
day minimum	-13.7	-9.5	-8.0	-3.8	-2.7	-2.1	-1.8	-1.5	-3.2	-7.7	-13.1	-13.3	-13.7

Currency in Your units. Import and export use the cent/kWh of that hour. Peak fee 6.33 / kW / month is the highest import hour of the month (hourly stand-in for the 15-minute peak) and is added to that month's Sell only when export is above 0. At 0 cent, export PV yield only, not the battery. Do not sell when the earning is negative.

Export in kWh during price hours

Austria - Inning 48.182, 15.417

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Export total													
month Maximum	18	164	581	1153	1358	1614	1612	1245	798	258	78	7	7337
month average	9	105	386	802	1045	1263	1298	1053	557	192	38	2	6748
month minimum	3	35	238	473	632	932	761	815	355	123	14	0	6036
day Maximum	6.1	13.9	46.9	87.6	88.5	86.2	88.2	85.3	69.4	27.1	8.5	1.3	88.5
day average	0.3	3.7	12.4	26.7	33.7	42.1	41.9	34.0	18.6	6.2	1.3	0.1	18.5
day minimum	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.0
Export during high price hours													
month Maximum	0	0	129	574	786	960	1006	758	473	28	0	0	4035
month average	0	0	56	352	574	775	806	618	260	5	0	0	3446
month minimum	0	-0	-0	133	309	561	429	439	99	0	0	0	3005
day Maximum	0.0	0.0	25.2	58.2	60.5	61.8	62.1	62.6	44.7	15.8	0.0	0.0	62.6
day average	0.0	0.0	1.8	11.7	18.5	25.8	26.0	19.9	8.7	0.2	0.0	0.0	9.4
day minimum	0.0	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0
Export during medium price hours													
month Maximum	9	47	135	218	258	279	304	244	148	66	11	2	1476
month average	3	32	98	167	203	235	253	207	114	41	5	0	1358
month minimum	0	15	62	117	144	183	189	176	72	19	1	-0	1252
day Maximum	1.4	3.8	7.7	10.3	12.6	12.4	12.7	12.1	8.8	4.0	1.1	0.5	12.7
day average	0.1	1.1	3.2	5.6	6.5	7.8	8.2	6.7	3.8	1.3	0.2	0.0	3.7
day minimum	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	-0.0
Export during low price hours													
month Maximum	12	124	332	392	368	378	308	308	230	191	67	5	2159
month average	6	73	231	283	268	254	238	228	183	146	33	2	1945
month minimum	-0	17	159	206	179	167	143	164	157	104	14	0	1760
day Maximum	4.9	10.4	31.2	44.3	47.4	42.1	39.9	37.3	39.7	17.3	7.4	1.3	47.4
day average	0.2	2.6	7.5	9.4	8.6	8.5	7.7	7.4	6.1	4.7	1.1	0.1	5.3
day minimum	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0

kWh exported while that price band was active. Not the money. Winter time. High 06:00–09:00 and 17:00–20:00, sold first. Low 09:00–15:00, sold last. Medium is the rest.

Heat pump

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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Heating													
month Maximum	546	542	369	240	166	81	62	68	137	238	328	491	2763
month average	384	336	294	189	122	52	29	32	91	182	267	354	2331
month minimum	298	266	235	116	70	23	15	8	40	121	230	290	2073
day Maximum	35.9	31.0	28.1	12.4	10.0	9.6	7.4	7.5	8.5	12.1	18.1	28.4	35.9
day average	12.4	11.9	9.5	6.3	3.9	1.7	0.9	1.0	3.0	5.9	8.9	11.4	6.4
day minimum	0.0	4.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	5.4	0.0
Cooling													
month Maximum	0.00	0.00	0.00	0.00	0.00	0.48	5.93	5.93	0.00	0.00	0.00	0.00	8.74
month average	0.00	0.00	0.00	0.00	0.00	0.03	0.86	1.03	0.00	0.00	0.00	0.00	1.92
month minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
day Maximum	0.00	0.00	0.00	0.00	0.00	0.48	4.44	4.00	0.00	0.00	0.00	0.00	4.44
day average	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.01
day minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DHW													
month Maximum	70	65	70	62	61	55	52	53	54	64	63	66	722
month average	70	63	69	59	59	53	49	50	52	62	63	66	714
month minimum	70	62	68	55	55	50	48	48	48	59	62	65	701
day Maximum	2.5	2.3	2.3	2.1	2.1	2.1	1.9	2.0	2.0	2.1	2.1	2.1	2.5
day average	2.3	2.3	2.2	2.0	1.9	1.8	1.6	1.6	1.7	2.0	2.1	2.1	2.0
day minimum	2.2	2.1	1.9	1.6	1.6	1.6	1.5	1.5	1.5	1.7	1.9	2.0	1.5
Direct electric													
month Maximum	110	157	39	0	0	0	0	0	0	0	4	59	164
month average	16	17	4	0	0	0	0	0	0	0	0	7	44
month minimum	0	0	0	0	0	0	0	0	0	0	0	0	0
day Maximum	19.9	15.0	12.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	3.5	12.4	19.9
day average	0.5	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
day minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

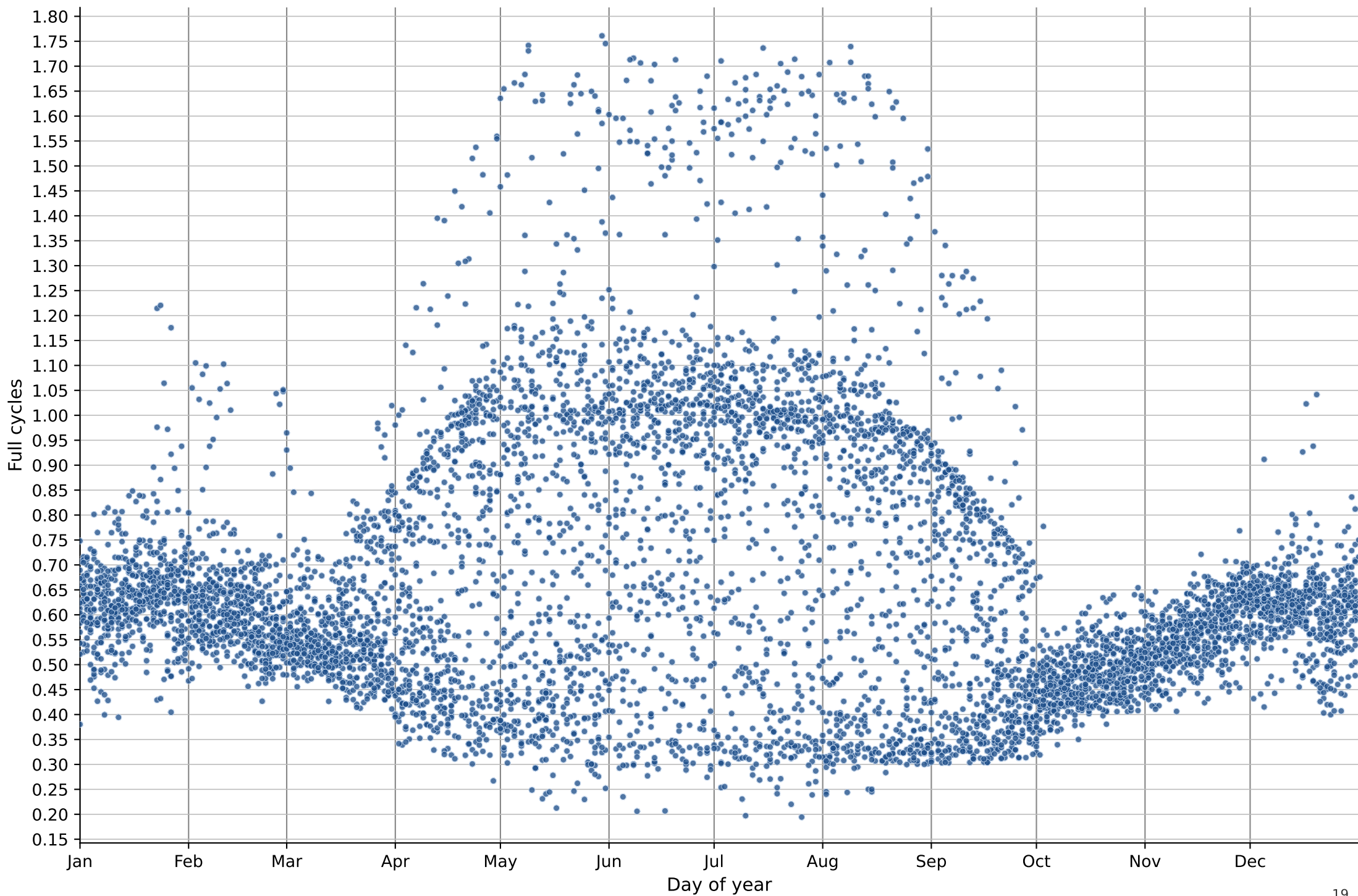
Heating, cooling and DHW are electricity. Direct electric is the part the heat pump could not cover.

Battery
Austria - Inning 48.182, 15.417

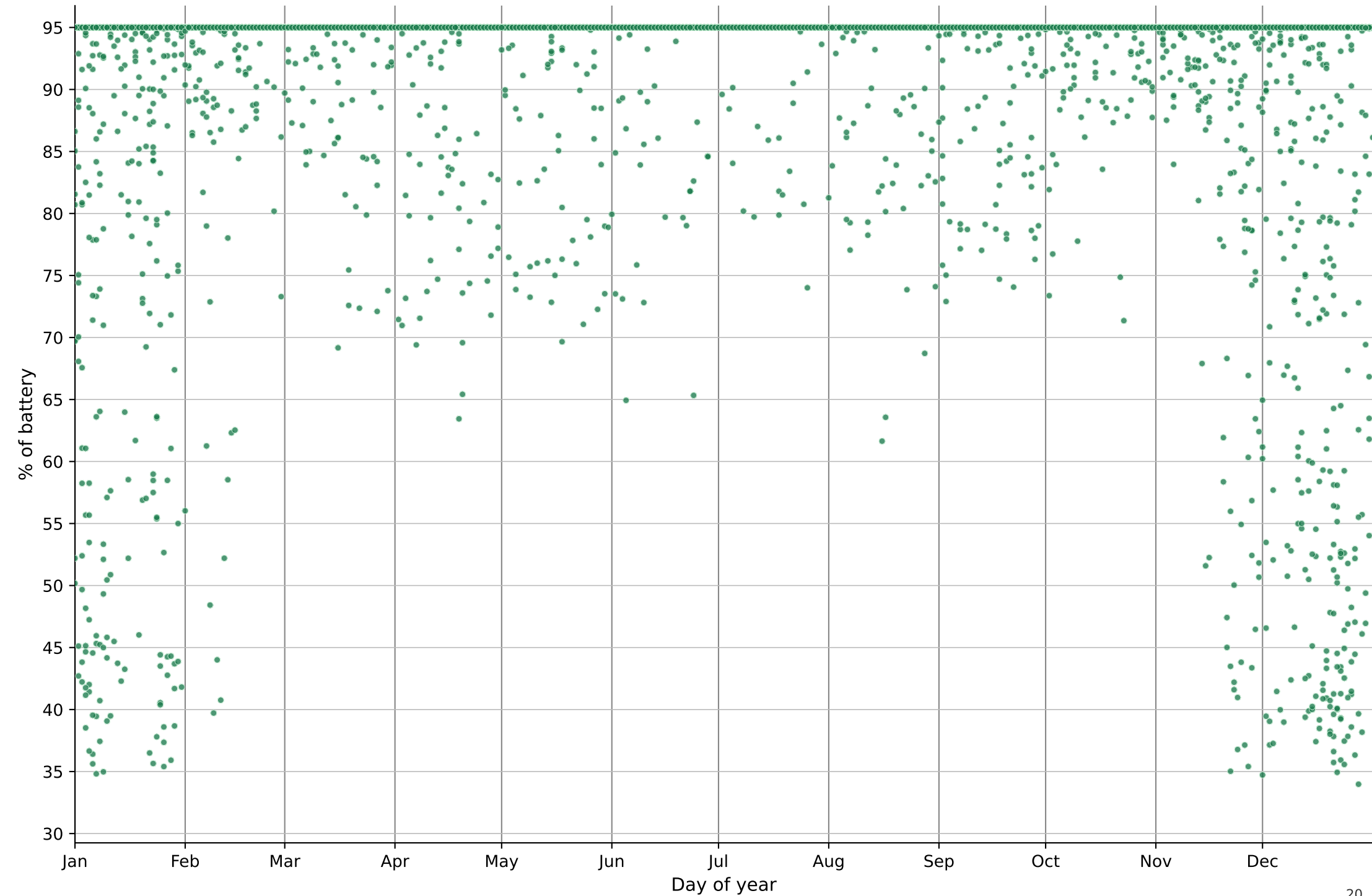
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	All
Wasted													
month Maximum	0	0	0	155	114	159	112	90	79	0	0	0	550
month average	0	0	0	91	86	83	78	59	56	0	0	0	453
month minimum	0	0	0	39	59	31	35	23	28	0	0	0	352
day Maximum	0.0	0.0	0.0	40.3	32.0	49.7	23.1	34.7	29.2	0.0	0.0	0.0	49.7
day average	0.0	0.0	0.0	3.0	2.8	2.8	2.5	1.9	1.9	0.0	0.0	0.0	1.2
day minimum	0.0	0.0	0.0	0.0	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0
Full cycles													
month Maximum	24.37	22.98	19.34	24.74	28.08	29.68	30.87	26.36	21.27	15.94	18.53	22.27	254.04
month average	19.81	17.34	17.82	20.86	23.75	26.35	26.66	23.50	17.38	14.76	16.90	18.98	244.10
month minimum	17.47	15.49	16.38	16.73	18.65	21.86	18.86	20.32	14.51	13.59	15.92	17.39	234.34
day Maximum	1.22	1.11	1.02	1.64	1.76	1.72	1.74	1.74	1.37	0.78	0.77	1.04	1.76
day average	0.64	0.61	0.57	0.70	0.77	0.88	0.86	0.76	0.58	0.48	0.56	0.61	0.67
day minimum	0.38	0.43	0.41	0.27	0.21	0.21	0.19	0.24	0.30	0.32	0.41	0.40	0.19
Charge C													
month Maximum	0.10	0.14	0.22	0.23	0.23	0.23	0.22	0.21	0.21	0.15	0.10	0.07	2.04
month average	0.09	0.13	0.21	0.22	0.22	0.22	0.22	0.21	0.20	0.13	0.10	0.07	2.01
month minimum	0.08	0.11	0.20	0.21	0.22	0.21	0.21	0.20	0.19	0.12	0.09	0.06	1.98
day Maximum	0.10	0.14	0.22	0.23	0.23	0.23	0.22	0.21	0.21	0.15	0.10	0.07	0.23
day average	0.05	0.08	0.13	0.17	0.17	0.18	0.18	0.17	0.14	0.09	0.06	0.04	0.12
day minimum	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.02	0.01	0.01	0.01	0.01
Discharge C													
month Maximum	0.13	0.11	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.08	0.10	2.49
month average	0.07	0.07	0.24	0.28	0.28	0.28	0.28	0.28	0.28	0.08	0.06	0.07	2.26
month minimum	0.05	0.05	0.08	0.27	0.28	0.28	0.28	0.28	0.26	0.04	0.05	0.05	2.08
day Maximum	0.13	0.11	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.08	0.10	0.28
day average	0.05	0.05	0.07	0.15	0.18	0.22	0.22	0.19	0.14	0.04	0.05	0.05	0.12
day minimum	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.03

Wasted = PV left when the export price is negative and the battery is full. Full cycles = discharge kWh / 45 kWh. Battery export only into hours whose export price is above 0, highest price first. At 0 cent only P

Battery cycles per day (discharge / 45 kWh)
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Battery max charge state per day (45 kWh = 100 %)
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Battery min charge state per day (45 kWh = 100 %)
Austria - Inning 48.182, 15.417

