



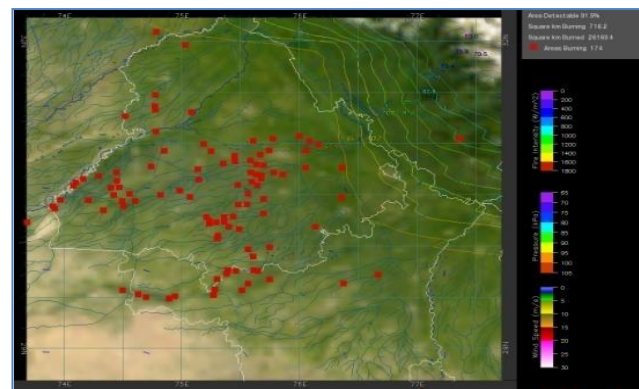
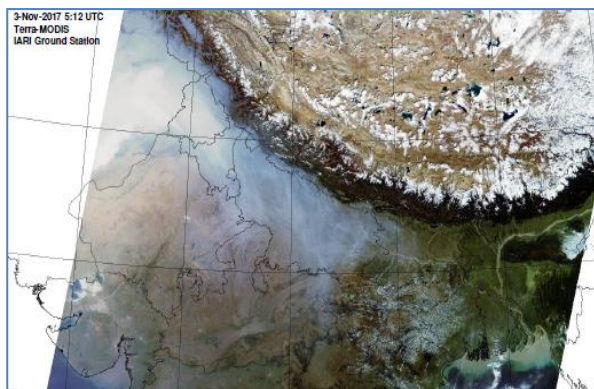
**Bulletin
No. 52**

**Events Date:
21-Nov-2018**

**Issued on:
22-Nov-2018**



MONITORING PADDY RESIDUE BURNING IN NORTH INDIA USING SATELLITE REMOTE SENSING DURING 2018



Prepared by:

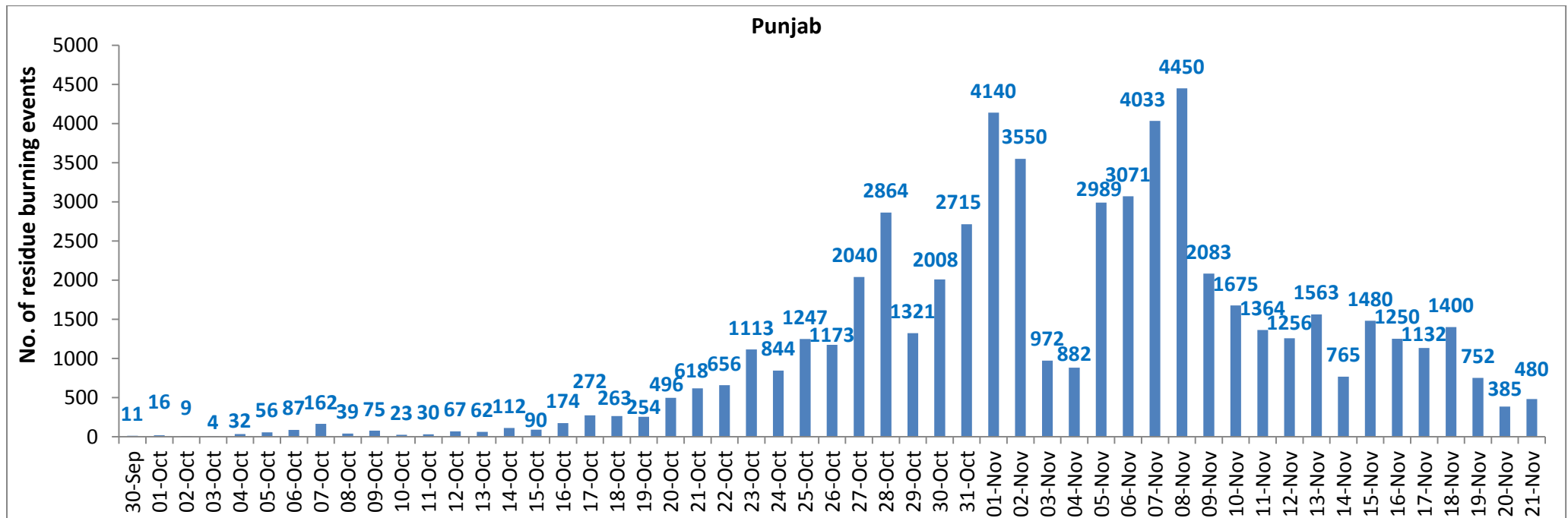
**Consortium for Research on Agroecosystem Monitoring and Modeling from Space (CREAMS) Laboratory,
Division of Agricultural Physics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012**

<http://creams.iari.res.in>

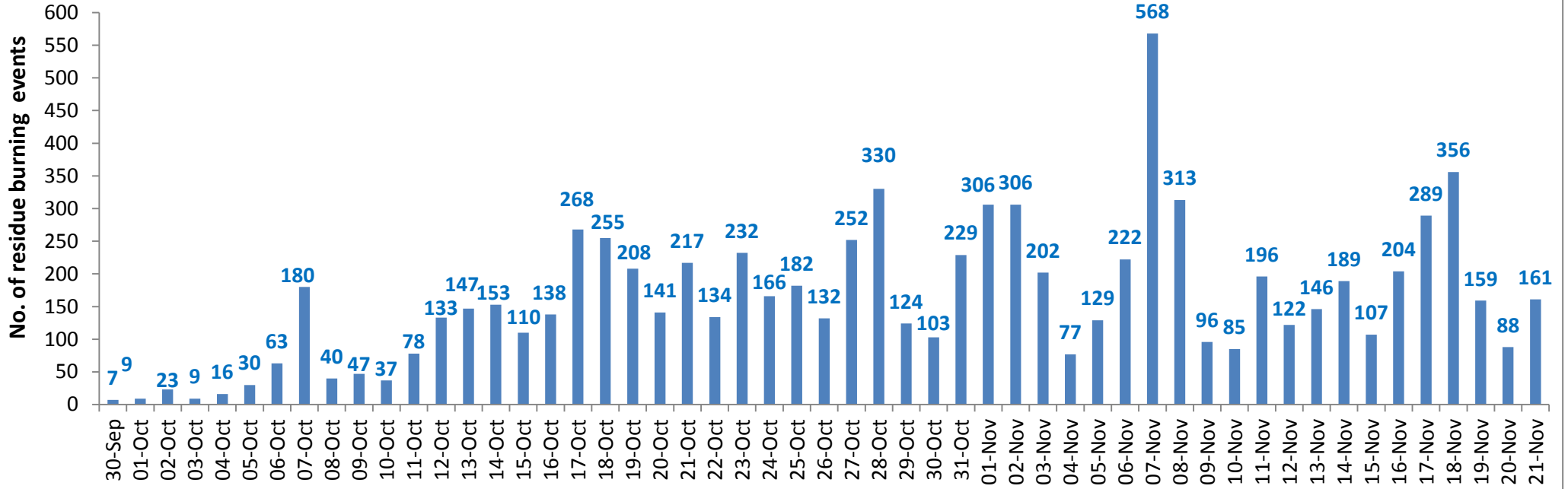
Highlights for 21-November-2018

- Satellites detected **748** residue burning events in the three States (Punjab, Haryana & UP) on **21-Nov-2018**.
- The burning events detected on **21-Nov-2018** are **480**, **161** and **107** in Punjab, Haryana, and UP, respectively.
- The number of events has increased from **716** on **20-Nov-2018** to **748** on **21-Nov-2018** in the three States.
- Total **72743** burning events were detected in the three States between **30-Sept-2018** and **21-Nov-2018**, which are distributed as **58605**, **8514** and **5624** in Punjab, Haryana and UP, respectively.
- Till **21-Nov-2018**, the burning events in the current year are about **88.1%** of the events detected in 2017 and about **57.8%** of the events detected in 2016.
- Overall, about **12%** and **42%** reduction in burning events are observed in current year (2018) till date as compared to that in 2017 and 2016, respectively.

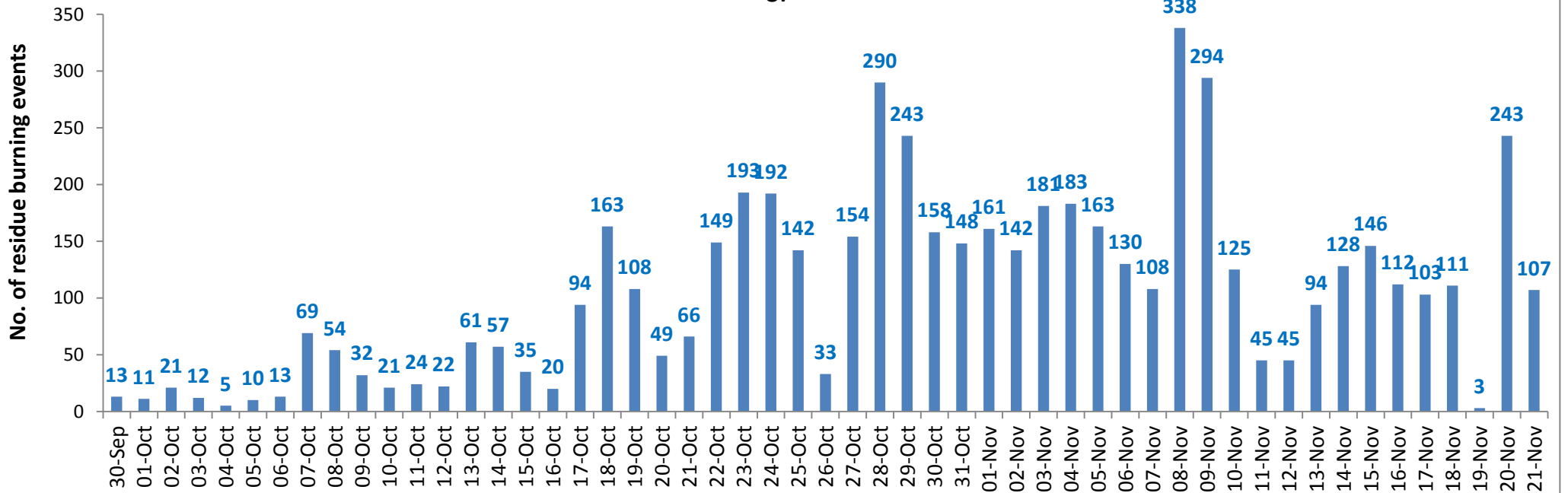
Temporal distribution of residue burning events for the three study States



Haryana

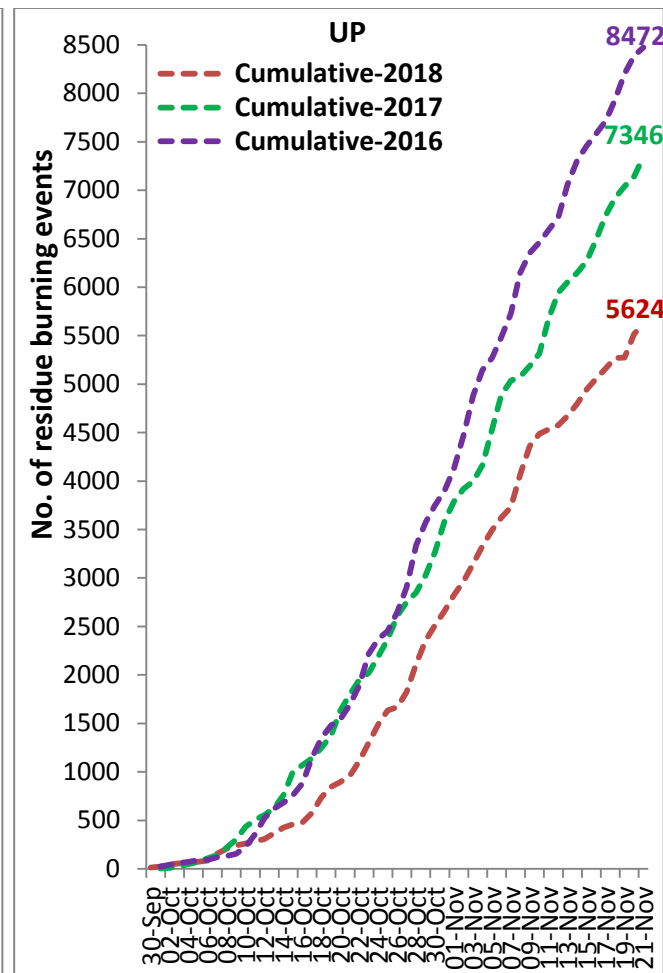
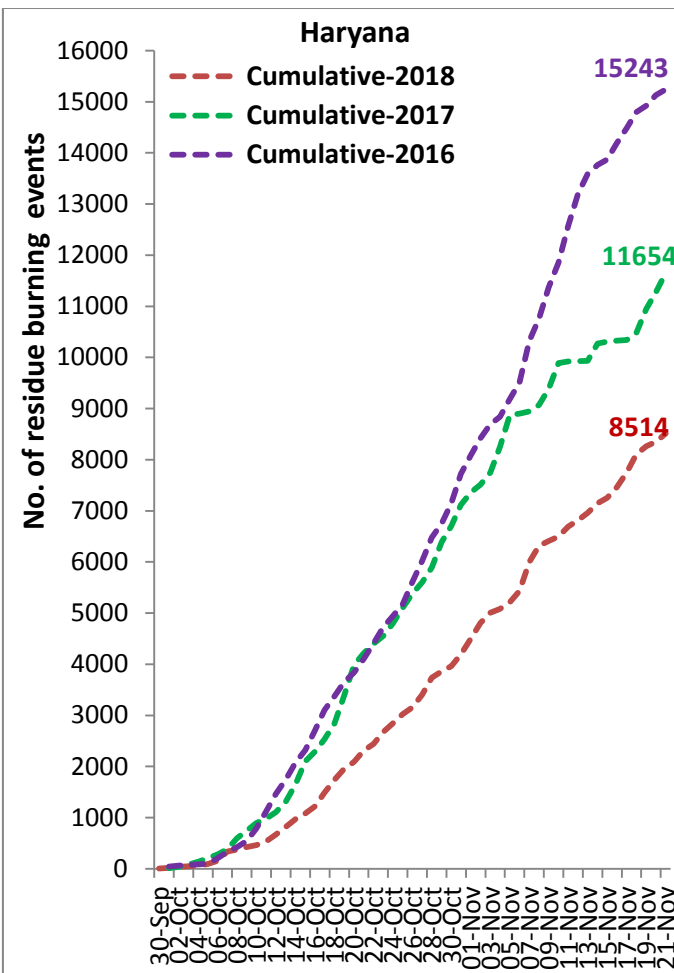
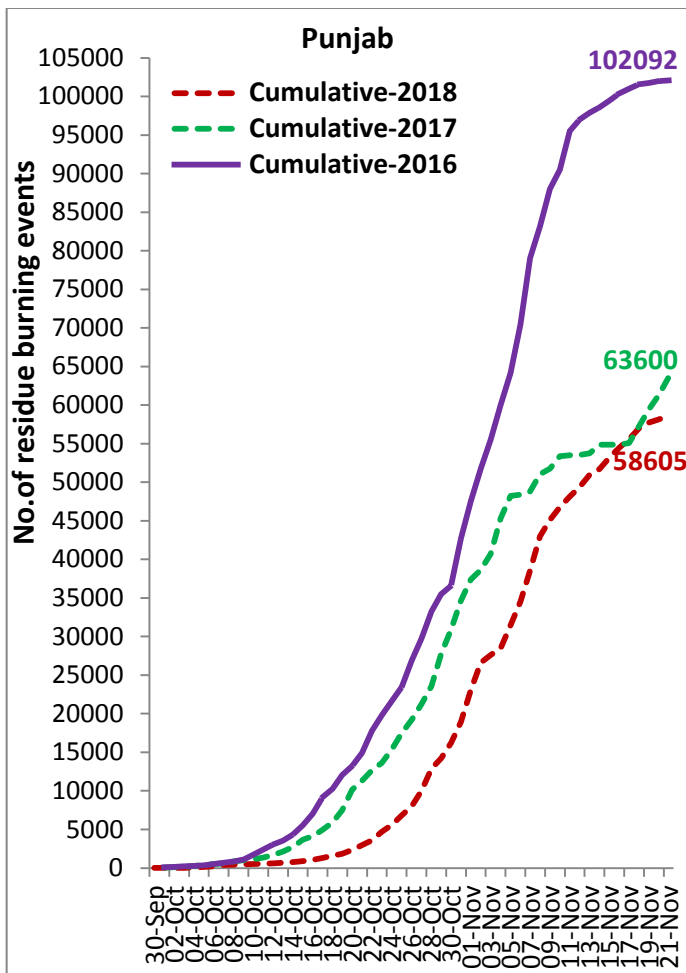


UP

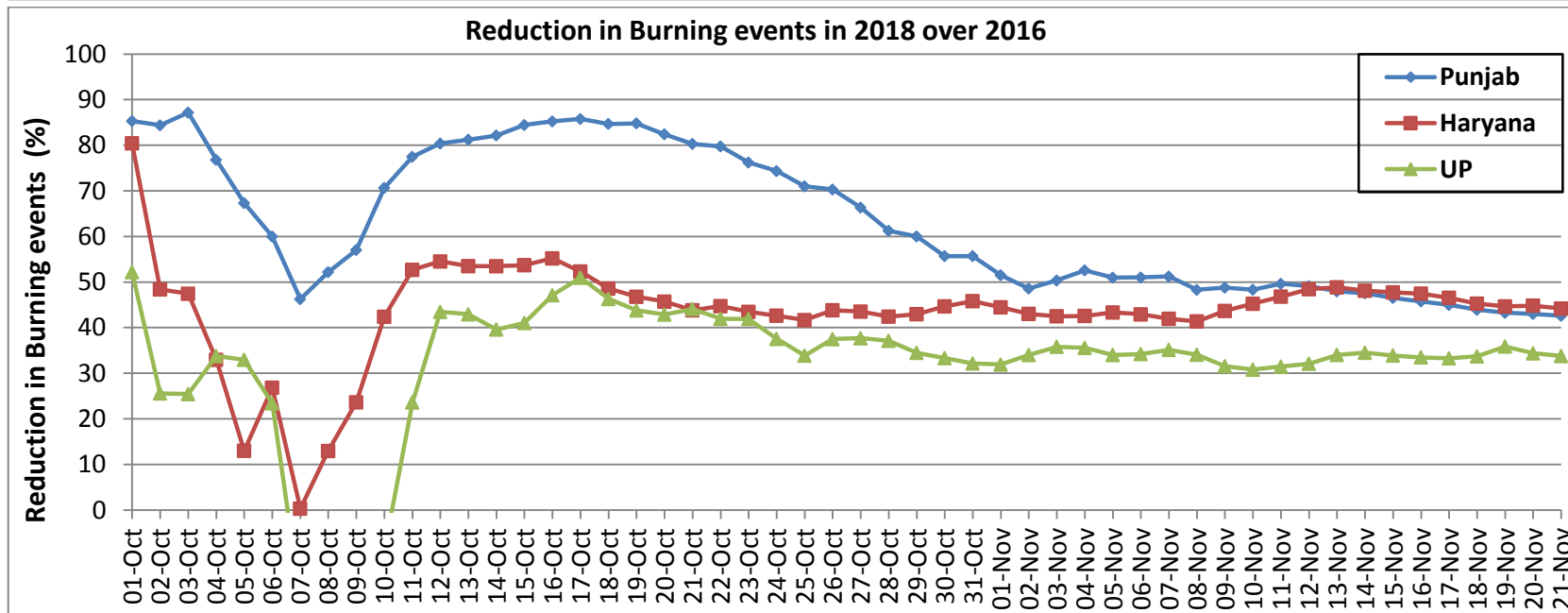
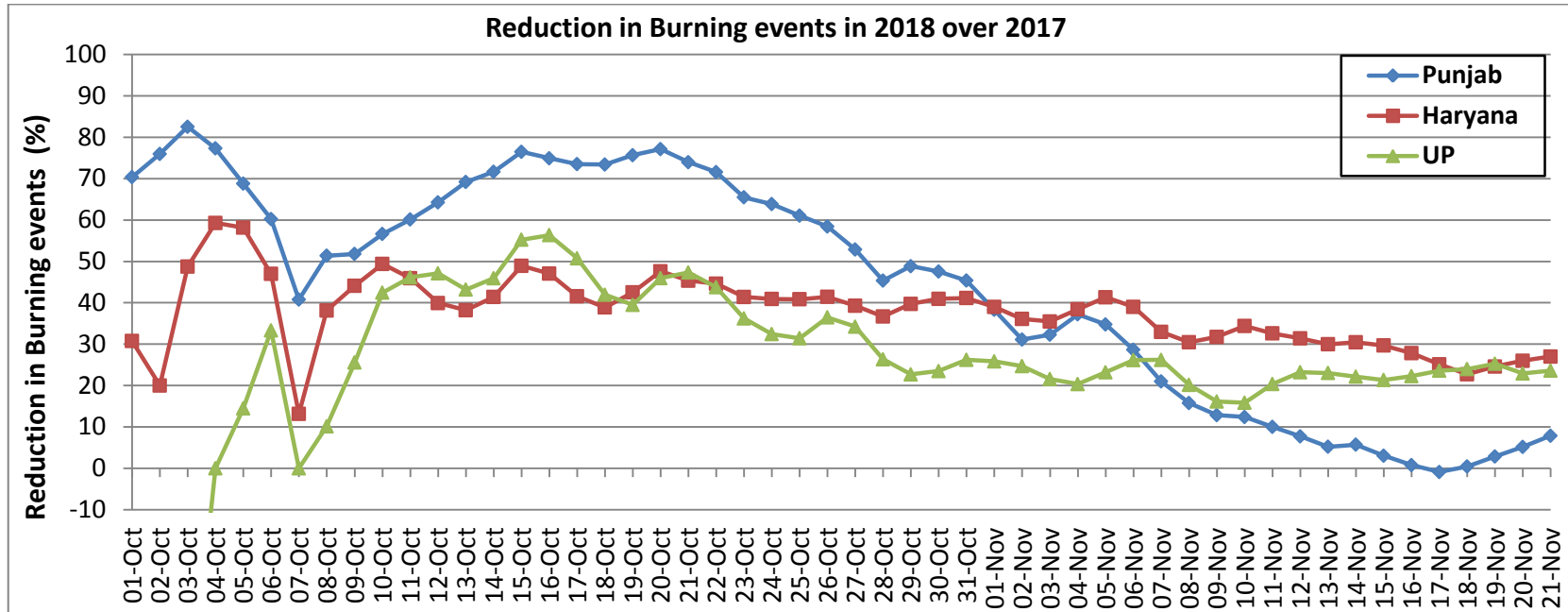


Comparison of residue burning events in current year (2018) with previous years (2017& 2016) for the three study States

(30-Sep to 21-Nov)

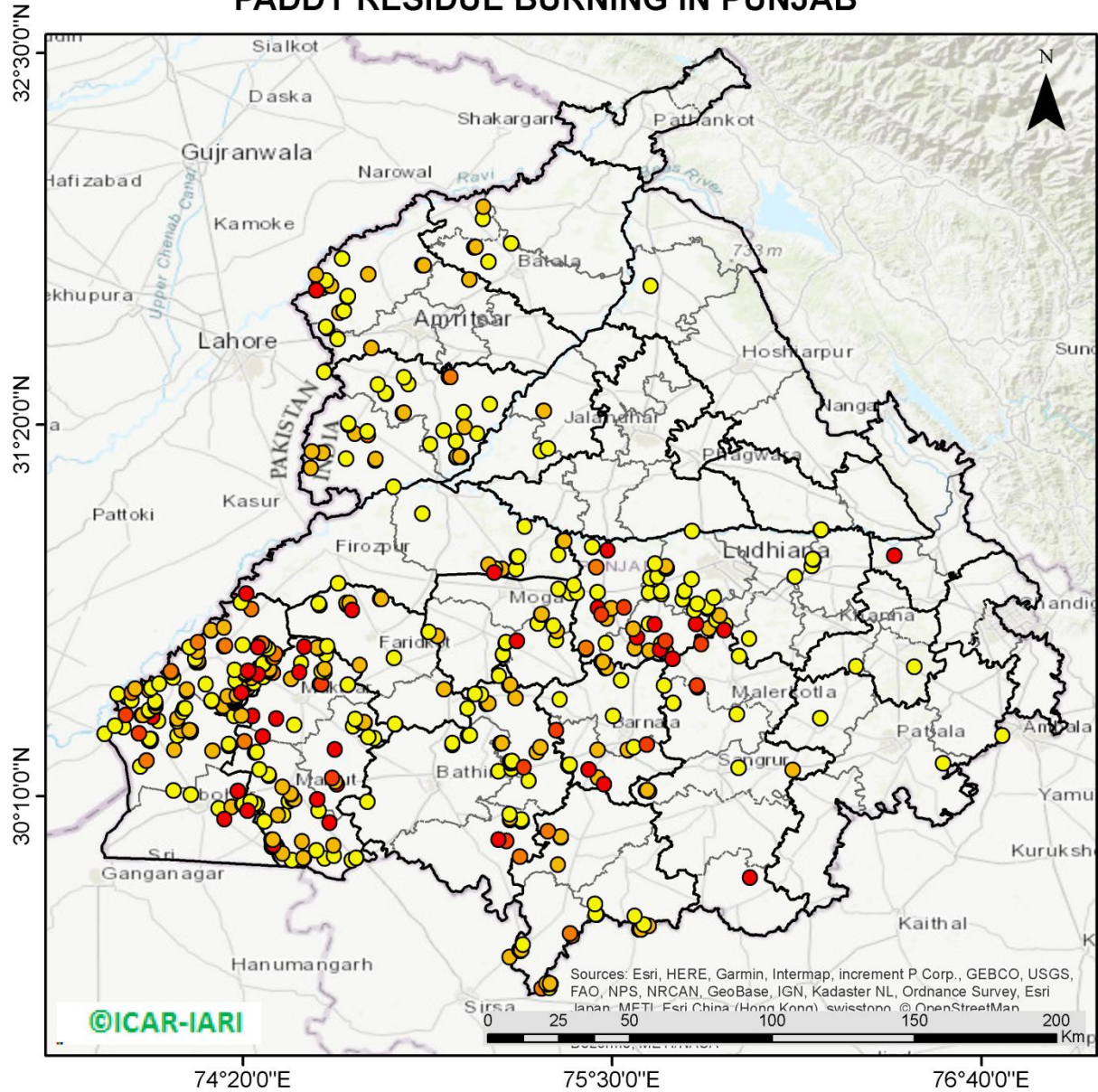


Percent Reduction in Burning events in 2018 over 2017 and 2016 (Daily Cumulative)



(a) Punjab

PADDY RESIDUE BURNING IN PUNJAB



480 burning events detected in Punjab on 21st November, 2018

Fire Intensity (W/m2)

-  0 - 5
-  6 - 10
-  11 - 15
-  16 - 20
-  >20

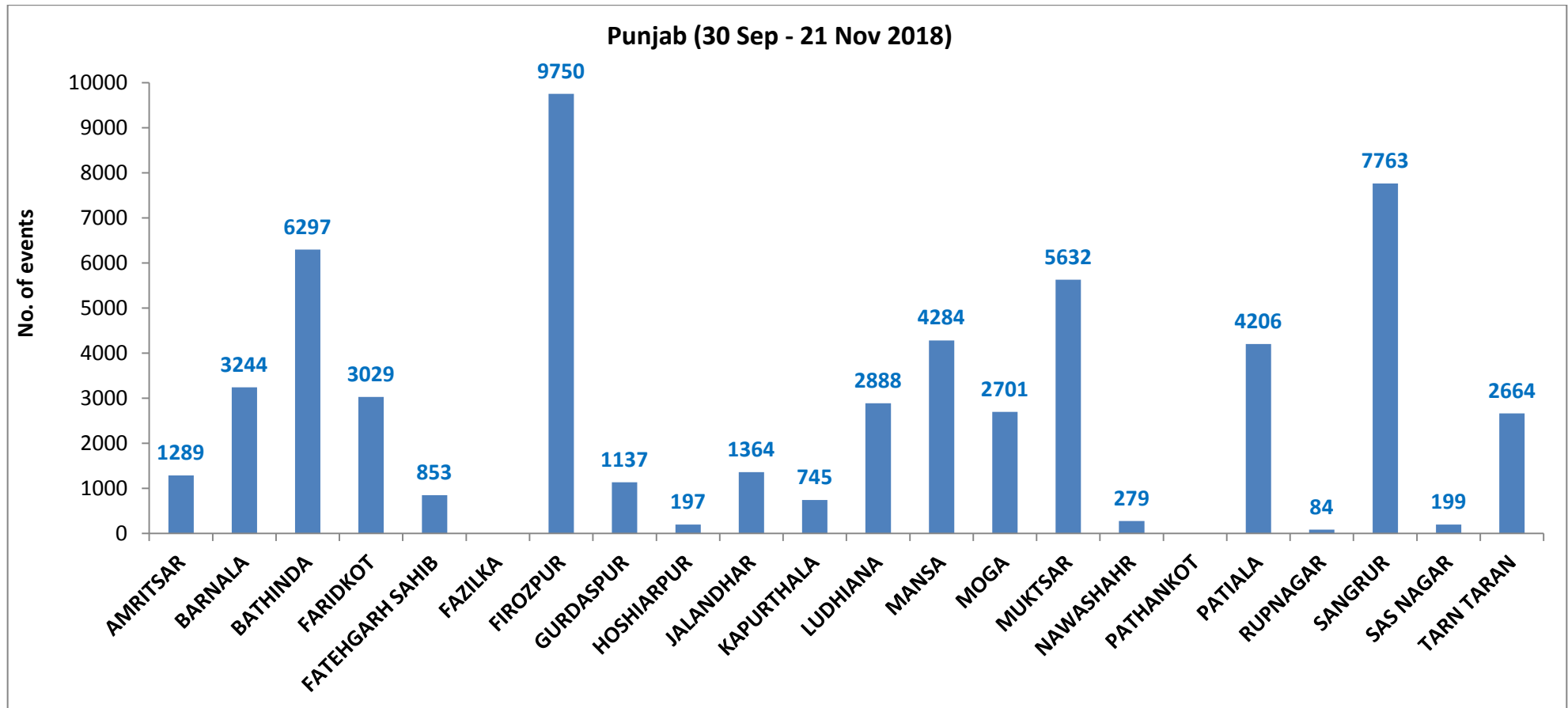
©ICAR-IARI

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community



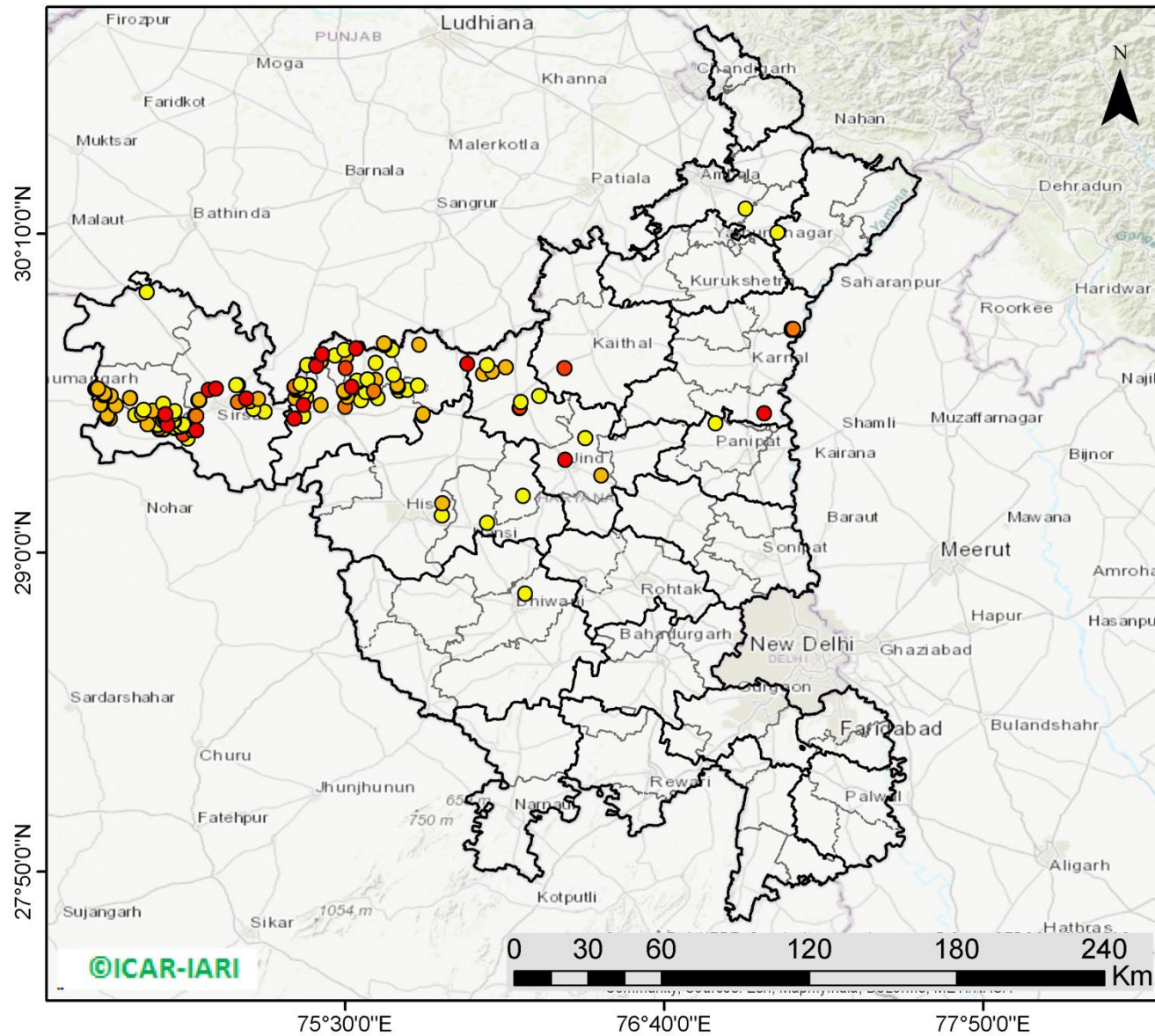
<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residue burning events in Punjab (30-Sep-2018 to 21-Nov-2018)



(b) Haryana

PADDY RESIDUE BURNING IN HARYANA



161 burning events detected in Haryana on 21st November, 2018

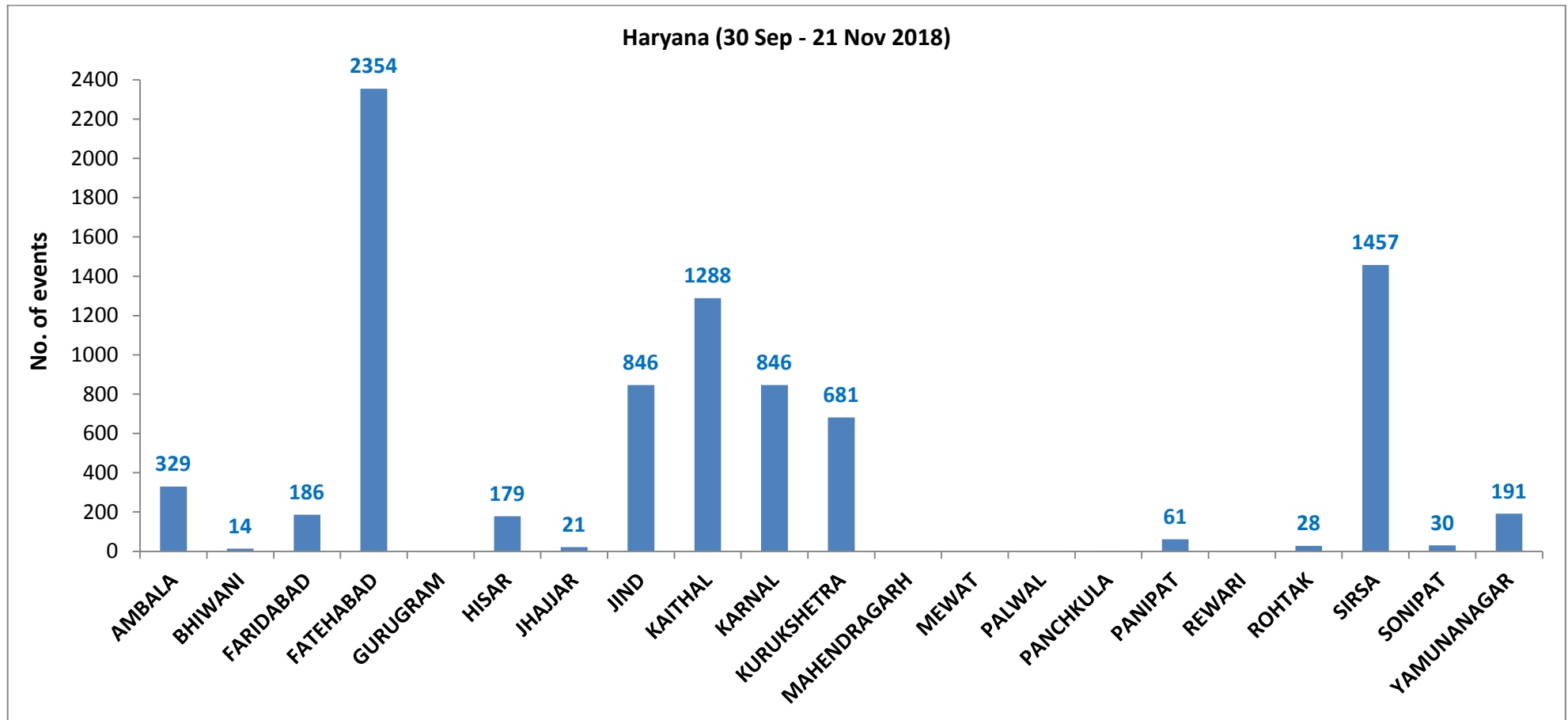
Fire Intensity (W/m²)

- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- >20

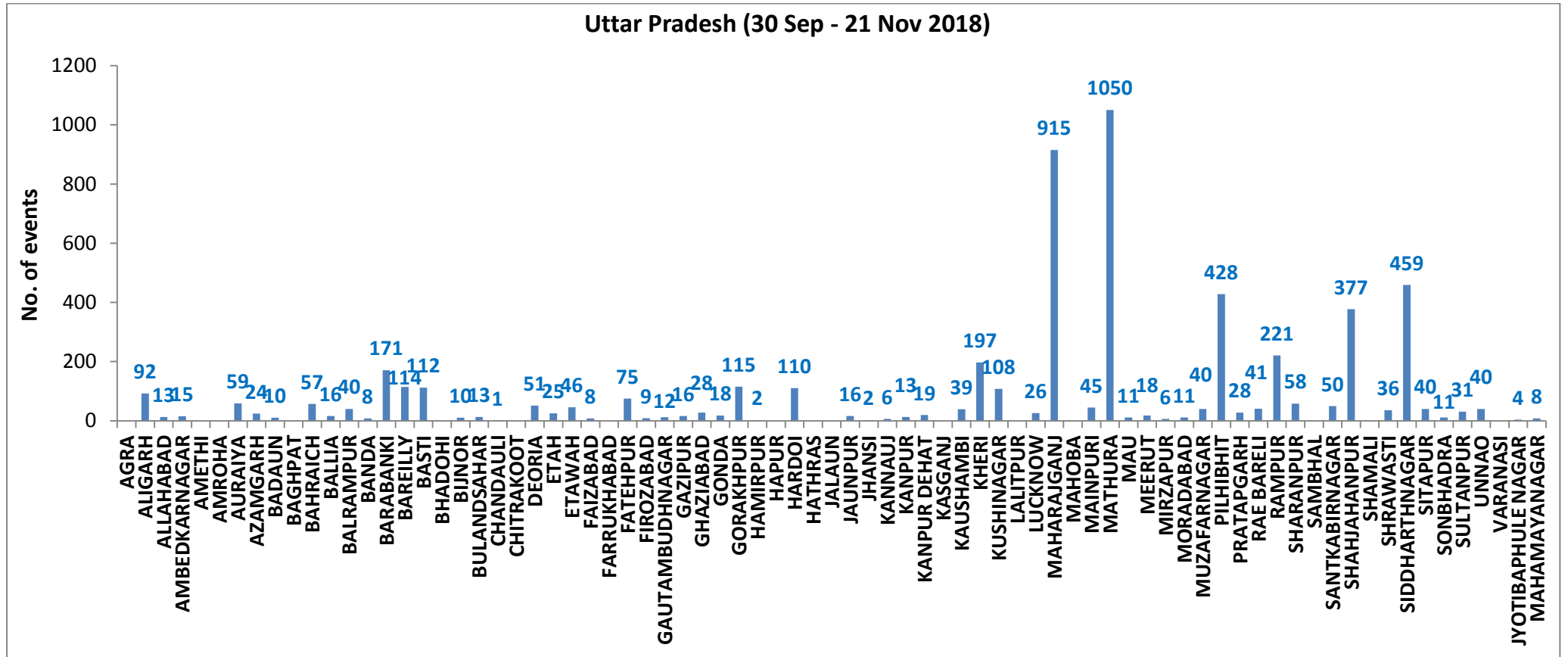


<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

District-wise cumulative number of residue burning events in Haryana (30-Sep-2018 to 21-Nov-2018)



District-wise cumulative number of residue burning events in Uttar Pradesh (30-Sep-2018 to 21-Nov-2018)



State wise, date wise and district-wise number of residue burning events detected in 2016, 2017 and 2018
(Period: 30-Sep to 21-Nov)

Date	Punjab			Haryana			UP			Total		
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
30-Sep	--	--	11	--	---	7	--	---	13	--	---	31
1-Oct	109	54	16	46	13	9	23	2	11	178	69	36
2-Oct	51	50	9	16	27	23	20	8	21	87	85	53
3-Oct	66	62	4	16	40	9	16	17	12	98	119	25
4-Oct	37	103	32	7	60	16	15	22	5	59	185	53
5-Oct	95	106	56	15	68	30	14	20	10	124	194	96
6-Oct	152	138	87	105	75	65	6	39	13	263	252	165
7-Oct	171	105	162	126	97	180	24	31	69	321	233	411
8-Oct	166	215	39	94	218	40	14	75	54	274	508	133
9-Oct	270	163	75	121	148	47	22	87	32	413	398	154
10-Oct	597	164	23	242	151	37	74	126	21	913	441	81
11-Oct	652	177	30	336	87	78	128	74	24	1116	338	132
12-Oct	694	342	67	338	123	133	164	51	22	1196	516	222
13-Oct	467	470	62	284	207	147	102	69	61	853	746	270
14-Oct	812	582	112	328	333	153	60	137	57	1200	1052	322
15-Oct	1215	943	90	248	458	110	76	237	35	1539	1638	235
16-Oct	1478	465	174	385	186	138	125	71	20	1988	722	332
17-Oct	2173	807	272	399	244	268	261	69	94	2833	1120	634
18-Oct	1065	970	263	270	306	255	204	108	163	1539	1384	681
19-Oct	1762	1591	254	276	541	208	132	128	108	2170	2260	570
20-Oct	1175	2653	496	188	597	141	62	255	49	1425	3505	686
21-Oct	1726	1139	618	257	233	217	152	168	66	2135	1540	901
22-Oct	2837	1356	656	309	186	134	194	151	149	3340	1693	939
23-Oct	2040	994	1113	313	155	232	331	72	193	2684	1221	1538
24-Oct	1836	1714	844	221	244	166	152	171	192	2209	2129	1202

25-Oct	1813	2104	1247	229	303	182	83	175	142	2125	2582	1571
26-Oct	3390	1715	1173	434	276	132	195	240	33	4019	2231	1338
27-Oct	2904	2069	2040	417	224	252	255	145	154	3576	2438	2446
28-Oct	3493	2318	2864	458	292	330	435	99	290	4386	2709	3484
29-Oct	2258	4184	1321	278	502	124	237	180	243	2773	4866	1688
30-Oct	1076	3152	2008	395	307	103	175	238	158	1646	3697	2269
31-Oct	6132	3743	2715	575	413	229	153	321	148	6860	4447	3092
01-Nov	4843	2736	4140	362	250	306	223	199	161	5628	3185	4607
02-Nov	4183	1246	3550	332	145	306	345	131	142	4860	1522	3998
03-Nov	3806	2109	972	275	240	202	409	75	181	4409	2424	1355
04-Nov	4477	4603	882	146	499	77	265	168	183	4888	5270	1142
05-Nov	4137	2876	2989	345	625	129	125	367	163	4607	3868	3281
06-Nov	6303	171	3071	322	26	222	215	357	130	6840	327	3423
07-Nov	8575	420	4033	821	46	568	244	149	108	9640	615	4709
08-Nov	4129	2256	4450	432	128	313	419	43	338	4874	2427	5101
09-Nov	4857	675	2083	608	311	96	205	107	294	5670	1093	2473
10-Nov	2468	1642	1675	484	509	85	109	131	125	3061	2282	1885
11-Nov	5040	103	1364	716	29	196	129	358	45	5885	490	1605
12-Nov	1477	33	1256	634	3	122	129	269	45	2240	305	1423
13-Nov	885	237	1563	389	7	146	338	109	94	1612	353	1803
14-Nov	692	1101	765	171	340	189	247	95	128	1110	1536	1082
15-Nov	871	5	1480	107	40	107	154	123	146	1132	168	1733
16-Nov	911	8	1250	318	17	204	123	218	112	1352	243	1566
17-Nov	638	217	1132	299	12	289	130	249	103	1067	478	1524
18-Nov	568	2147	1400	312	139	356	217	180	111	1097	2466	1867
19-Nov	168	2200	752	125	471	159	273	122	3	566	2793	914
20-Nov	240	1857	385	204	325	88	183	101	243	627	2283	716
21-Nov	112	2310	480	115	378	161	86	205	107	313	2893	748
Total	102092	63600	58605	15243	11654	8514	8472	7346	5624	125807	82600	72743

(a) Punjab

Districts	01 Oct - 21Nov		
	2016	2017	2018
AMRITSAR	2164	1314	1289
BARNALA	5691	3189	3244
BATHINDA	8822	5348	6297
FARIDKOT	4622	3383	3029
FATEHGARH SAHIB	2459	1622	853
FAZILKA	0	0	0
FIROZPUR	13565	9198	9750
GURDASPUR	2208	1559	1137
HOSHIARPUR	899	483	197
JALANDHAR	4658	2054	1364
KAPURTHALA	3134	1594	745
LUDHIANA	9524	4329	2888
MANSA	5626	4370	4284
MOGA	6392	2406	2701
MUKTSAR	7001	4973	5632
NAWASHAHR (SBS Nagar)	1358	670	279
PATHANKOT	0	0	0
PATIALA	6536	5027	4206
RUPNAGAR	717	326	84
SANGRUR	11860	8345	7763
SAS NAGAR	362	243	199
TARN TARAN	4494	3167	2664
Total	102092	63600	58605

(b) Haryana

Districts	01 Oct - 21Nov		
	2016	2017	2018
AMBALA	530	494	329
BHIWANI	74	31	14
FARIDABAD	286	341	186
FATEHABAD	4771	3417	2354
GURUGRAM	0	0	0
HISAR	386	175	179
JHAJJAR	29	17	21
JIND	853	931	846
KAITHAL	1747	1512	1288
KARNAL	1625	1500	846
KURUKSHETRA	1078	1144	681
MAHENDRAGARH	0	0	0
MEWAT	0	0	0
PALWAL	0	0	0
PANCHKULA	0	0	3
PANIPAT	82	82	61
REWARI	0	0	0
ROHTAK	85	62	28
SIRSA	3377	1577	1457
SONIPAT	81	61	30
YAMUNANAGAR	239	310	191
Total	15243	11654	8514

(c) Uttar Pradesh

Distrites	01 Oct - 21Nov			GAUTAMBUDH NAGAR			RAE BARELI		
	2016	2017	2018						
AGRA	0	0	0	21	37	12	80	69	41
ALIGARH	53	78	92	13	11	16	618	622	221
ALLAHABAD	5	8	13	68	46	28	98	115	58
AMBEDKARNAGAR	67	34	15	46	33	18	0	0	0
AMETHI	0	0	0	62	104	115	54	59	50
AMROHA	0	0	0	0	0	2	1130	678	377
AURAIYA	217	197	59	0	0	0	0	0	0
AZAMGARH	33	28	24	236	196	110	32	29	36
BADAUN	6	7	10	0	0	0	238	171	459
BAGHPAT	0	0	0	0	0	0	121	72	40
BAHRAICH	65	39	57	0	0	0	15	13	11
BALLIA	17	26	16	0	0	0	61	30	31
BALRAMPUR	34	27	40	0	0	0	61	51	40
BANDA	2	14	8	30	15	6	1	0	0
BARABANKI	214	158	171	14	8	13	10	13	4
BAREILLY	244	204	114	51	53	19	2	2	8
BASTI	140	180	112	0	0	0	8472	7346	5624
BHADOHI	0	0	0	20	42	39			
BIJNOR	54	47	10	426	260	197			
BULANDSAHAR	29	30	13	45	105	108			
CHANDAULI	8	7	1	0	0	0			
CHITRAKOOT	0	0	0	60	30	26			
DEORIA	57	59	51	605	924	915			
ETAH	17	31	25	0	0	0			
ETAWAH	129	107	46	81	85	45			
FAIZABAD	13	10	8	1442	1082	1050			
FARRUKHABAD	0	0	0	12	12	11			
FATEHPUR	58	43	75	74	75	18			
FIROZABAD	23	18	9	4	12	6			
				49	35	11			
				123	133	40			
				933	719	428			
				36	38	28			

Details of residue burning events in Punjab on 21-Nov-2018

Event S. No.	District	Tehsil/Block	Satellite	Longitude	Latitude	Time (IST)	Day/Night	Fire Power (W/m²)
1	AMRITSAR	AJNALA	AQUA-1	74.56366	31.75608	13:11:00	D	24.90
2	AMRITSAR	AJNALA	S-NPP	74.59915	31.63717	14:18:00	D	6.10
3	AMRITSAR	AJNALA	S-NPP	74.59562	31.64136	14:18:00	D	4.40
4	AMRITSAR	AJNALA	S-NPP	74.63678	31.68514	14:18:00	D	6.90
5	AMRITSAR	AJNALA	S-NPP	74.65115	31.69190	14:18:00	D	3.70
6	AMRITSAR	AJNALA	S-NPP	74.66302	31.73415	14:18:00	D	4.10
7	AMRITSAR	AJNALA	S-NPP	74.66363	31.73755	14:18:00	D	4.60
8	AMRITSAR	AJNALA	S-NPP	74.58265	31.76266	14:18:00	D	4.20
9	AMRITSAR	AJNALA	S-NPP	74.60678	31.76995	14:18:00	D	5.40
10	AMRITSAR	AJNALA	S-NPP	74.61169	31.77023	14:18:00	D	6.90
11	AMRITSAR	AJNALA	S-NPP	74.59599	31.78611	12:42:00	D	2.80
12	AMRITSAR	AJNALA	S-NPP	74.56328	31.80518	12:42:00	D	7.20
13	AMRITSAR	AJNALA	S-NPP	74.72873	31.80664	14:18:00	D	5.10
14	AMRITSAR	AJNALA	S-NPP	74.89985	31.83445	14:18:00	D	7.50
15	AMRITSAR	AJNALA	S-NPP	74.90498	31.83474	14:18:00	D	7.50
16	AMRITSAR	AJNALA	S-NPP	74.64526	31.85523	14:18:00	D	3.30
17	AMRITSAR	AMRITSAR I	S-NPP	75.04869	31.78892	12:42:00	D	5.50
18	AMRITSAR	AMRITSAR II	S-NPP	74.58953	31.49887	12:42:00	D	2.80
19	AMRITSAR	AMRITSAR II	S-NPP	74.73749	31.57422	14:18:00	D	9.70
20	AMRITSAR	AMRITSAR II	S-NPP	74.63110	31.60362	14:18:00	D	3.10
21	BARNALA	BARNALA	S-NPP	75.54836	30.31239	12:42:00	D	7.20
22	BARNALA	BARNALA	S-NPP	75.50247	30.41921	14:18:00	D	3.10
23	BARNALA	BARNALA	S-NPP	75.33435	30.47119	14:18:00	D	4.60
24	BARNALA	BARNALA	S-NPP	75.66444	30.51463	14:18:00	D	4.50
25	BARNALA	BARNALA	S-NPP	75.52715	30.53148	14:18:00	D	2.60
26	BARNALA	BARNALA	S-NPP	75.47906	30.56933	12:42:00	D	9.30
27	BARNALA	BARNALA	S-NPP	75.48392	30.57059	12:42:00	D	9.30
28	BARNALA	BARNALA	S-NPP	75.46565	30.58902	14:18:00	D	6.20
29	BARNALA	BARNALA	S-NPP	75.47099	30.58932	14:18:00	D	9.00

30	BARNALA	TAPPA	AQUA-1	75.47427	30.20499	13:11:00	D	31.53
31	BARNALA	TAPPA	AQUA-1	75.42584	30.25110	13:11:00	D	29.84
32	BARNALA	TAPPA	AQUA-1	75.60899	30.32926	13:11:00	D	19.02
33	BARNALA	TAPPA	S-NPP	75.45505	30.22548	12:42:00	D	6.80
34	BARNALA	TAPPA	S-NPP	75.36571	30.26572	12:42:00	D	4.00
35	BARNALA	TAPPA	S-NPP	75.55051	30.31075	12:42:00	D	5.60
36	BARNALA	TAPPA	S-NPP	75.45383	30.31201	14:18:00	D	5.40
37	BARNALA	TAPPA	S-NPP	75.56798	30.32159	12:42:00	D	4.30
38	BARNALA	TAPPA	TERRA-1	75.32251	30.38316	11:37:00	D	59.95
39	BATHINDA	BATHINDA	AQUA-1	74.97804	30.34573	13:11:00	D	50.48
40	BATHINDA	BATHINDA	S-NPP	74.72539	30.14972	14:18:00	D	3.60
41	BATHINDA	BATHINDA	S-NPP	75.14060	30.24481	14:18:00	D	2.20
42	BATHINDA	BATHINDA	S-NPP	75.18069	30.25323	14:18:00	D	2.50
43	BATHINDA	BATHINDA	S-NPP	75.17905	30.27069	12:42:00	D	2.60
44	BATHINDA	BATHINDA	S-NPP	75.18416	30.27202	12:42:00	D	4.20
45	BATHINDA	BATHINDA	S-NPP	74.99463	30.32838	14:18:00	D	4.90
46	BATHINDA	BATHINDA	S-NPP	75.14661	30.33274	12:42:00	D	5.90
47	BATHINDA	BATHINDA	S-NPP	75.14787	30.33394	12:42:00	D	7.00
48	BATHINDA	BATHINDA	S-NPP	75.15173	30.33406	12:42:00	D	8.20
49	BATHINDA	BATHINDA	S-NPP	74.99420	30.33433	14:18:00	D	3.40
50	BATHINDA	BATHINDA	S-NPP	74.74814	30.34883	14:18:00	D	2.80
51	BATHINDA	BATHINDA	S-NPP	74.72855	30.35348	14:18:00	D	1.80
52	BATHINDA	BATHINDA	S-NPP	75.04420	30.35811	12:42:00	D	4.90
53	BATHINDA	BATHINDA	S-NPP	75.04938	30.35947	12:42:00	D	4.90
54	BATHINDA	RAMPURA PHUL	AQUA-1	75.22019	30.25739	13:11:00	D	18.02
55	BATHINDA	RAMPURA PHUL	AQUA-1	75.32251	30.37417	13:11:00	D	19.08
56	BATHINDA	RAMPURA PHUL	S-NPP	75.23663	30.21538	12:42:00	D	4.40
57	BATHINDA	RAMPURA PHUL	S-NPP	75.36349	30.26167	12:42:00	D	7.40
58	BATHINDA	RAMPURA PHUL	S-NPP	75.36072	30.26444	12:42:00	D	4.00
59	BATHINDA	RAMPURA PHUL	S-NPP	75.17705	30.27657	12:42:00	D	3.80
60	BATHINDA	RAMPURA PHUL	S-NPP	75.18215	30.27790	12:42:00	D	4.40

61	BATHINDA	RAMPURA PHUL	S-NPP	75.26142	30.30494	12:42:00	D	7.80
62	BATHINDA	RAMPURA PHUL	S-NPP	75.27257	30.32058	12:42:00	D	6.60
63	BATHINDA	RAMPURA PHUL	S-NPP	75.04282	30.44275	12:42:00	D	5.00
64	BATHINDA	RAMPURA PHUL	S-NPP	75.10303	30.45766	14:18:00	D	5.20
65	BATHINDA	RAMPURA PHUL	S-NPP	75.10809	30.45796	14:18:00	D	5.20
66	BATHINDA	RAMPURA PHUL	S-NPP	75.19379	30.47512	14:18:00	D	7.10
67	BATHINDA	RAMPURA PHUL	S-NPP	75.08574	30.48671	14:18:00	D	3.30
68	BATHINDA	RAMPURA PHUL	S-NPP	75.06667	30.48756	12:42:00	D	2.40
69	BATHINDA	RAMPURA PHUL	S-NPP	75.17379	30.51546	12:42:00	D	6.50
70	BATHINDA	RAMPURA PHUL	S-NPP	75.17884	30.51677	12:42:00	D	6.50
71	BATHINDA	RAMPURA PHUL	S-NPP	75.14143	30.54533	12:42:00	D	2.60
72	BATHINDA	TALWANDI SABO	AQUA-1	75.16647	30.02608	13:11:00	D	18.28
73	BATHINDA	TALWANDI SABO	AQUA-1	75.14004	30.03132	13:11:00	D	28.37
74	BATHINDA	TALWANDI SABO	S-NPP	75.20857	29.97726	14:18:00	D	11.00
75	BATHINDA	TALWANDI SABO	S-NPP	75.21277	30.08837	14:18:00	D	2.80
76	BATHINDA	TALWANDI SABO	S-NPP	75.21336	30.08999	14:18:00	D	6.90
77	BATHINDA	TALWANDI SABO	S-NPP	75.17696	30.09215	14:18:00	D	5.20
78	BATHINDA	TALWANDI SABO	S-NPP	75.17750	30.09399	14:18:00	D	11.50
79	BATHINDA	TALWANDI SABO	S-NPP	75.21232	30.09438	14:18:00	D	4.80
80	BATHINDA	TALWANDI SABO	S-NPP	75.17652	30.09815	14:18:00	D	5.20
81	BATHINDA	TALWANDI SABO	S-NPP	75.17565	30.11016	14:18:00	D	2.80
82	FARIDKOT	FARIDKOT	AQUA-1	74.67792	30.75147	13:11:00	D	41.07
83	FARIDKOT	FARIDKOT	S-NPP	74.70158	30.57965	12:42:00	D	5.30
84	FARIDKOT	FARIDKOT	S-NPP	74.81008	30.60197	12:42:00	D	3.40
85	FARIDKOT	FARIDKOT	S-NPP	74.94711	30.66963	14:18:00	D	9.10
86	FARIDKOT	FARIDKOT	S-NPP	74.91912	30.68244	12:42:00	D	4.50
87	FARIDKOT	FARIDKOT	S-NPP	74.92081	30.68326	12:42:00	D	4.00
88	FARIDKOT	FARIDKOT	S-NPP	74.57367	30.76635	12:42:00	D	2.70
89	FARIDKOT	FARIDKOT	S-NPP	74.66066	30.76823	14:18:00	D	6.00
90	FARIDKOT	FARIDKOT	S-NPP	74.57157	30.77235	12:42:00	D	2.70
91	FARIDKOT	FARIDKOT	S-NPP	74.66022	30.77409	14:18:00	D	6.00

92	FARIDKOT	FARIDKOT	S-NPP	74.66984	30.77470	14:18:00	D	5.20
93	FARIDKOT	FARIDKOT	S-NPP	74.76618	30.78667	14:18:00	D	5.70
94	FARIDKOT	FARIDKOT	S-NPP	74.77105	30.78698	14:18:00	D	5.70
95	FARIDKOT	JAITO	S-NPP	74.96883	30.50341	14:18:00	D	5.70
96	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.45544	30.57334	12:42:00	D	3.70
97	FATEHGARH SAHIB	FATEHGARH SAHIB	S-NPP	76.27176	30.57426	14:18:00	D	3.90
98	FIROZPUR	ABOHAR	AQUA-1	74.27377	30.09570	13:11:00	D	26.28
99	FIROZPUR	ABOHAR	AQUA-1	74.34744	30.12175	13:11:00	D	43.96
100	FIROZPUR	ABOHAR	AQUA-1	74.31583	30.18303	13:11:00	D	39.79
101	FIROZPUR	ABOHAR	S-NPP	74.42440	30.00784	14:18:00	D	10.30
102	FIROZPUR	ABOHAR	S-NPP	74.42395	30.01358	14:18:00	D	10.30
103	FIROZPUR	ABOHAR	S-NPP	74.42848	30.01388	14:18:00	D	24.10
104	FIROZPUR	ABOHAR	S-NPP	74.25594	30.12855	12:42:00	D	3.10
105	FIROZPUR	ABOHAR	S-NPP	74.29643	30.13255	14:18:00	D	5.30
106	FIROZPUR	ABOHAR	S-NPP	74.33176	30.14073	14:18:00	D	8.20
107	FIROZPUR	ABOHAR	S-NPP	74.33626	30.14104	14:18:00	D	10.10
108	FIROZPUR	ABOHAR	S-NPP	74.33041	30.14230	14:18:00	D	3.70
109	FIROZPUR	ABOHAR	S-NPP	74.33492	30.14258	14:18:00	D	3.70
110	FIROZPUR	ABOHAR	S-NPP	74.37102	30.14484	14:18:00	D	1.70
111	FIROZPUR	ABOHAR	S-NPP	74.35699	30.14972	14:18:00	D	3.30
112	FIROZPUR	ABOHAR	S-NPP	74.16712	30.17181	14:18:00	D	2.30
113	FIROZPUR	FAZILKA	S-NPP	74.11319	30.18526	14:18:00	D	2.20
114	FIROZPUR	FAZILKA	S-NPP	74.00703	30.26122	12:42:00	D	2.50
115	FIROZPUR	FAZILKA	S-NPP	74.02670	30.27842	14:18:00	D	12.70
116	FIROZPUR	FAZILKA	S-NPP	74.23577	30.30958	14:18:00	D	9.00
117	FIROZPUR	FAZILKA	S-NPP	74.11564	30.31284	14:18:00	D	6.60
118	FIROZPUR	FAZILKA	S-NPP	74.28850	30.32459	14:18:00	D	3.40
119	FIROZPUR	FAZILKA	S-NPP	74.28805	30.33030	14:18:00	D	3.40
120	FIROZPUR	FAZILKA	S-NPP	74.04115	30.34060	12:42:00	D	5.80
121	FIROZPUR	FAZILKA	S-NPP	74.03613	30.34415	12:42:00	D	6.80
122	FIROZPUR	FAZILKA	S-NPP	74.04205	30.34574	12:42:00	D	8.40

123	FIROZPUR	FAZILKA	S-NPP	74.03896	30.34681	12:42:00	D	4.50
124	FIROZPUR	FAZILKA	S-NPP	74.12532	30.35700	12:42:00	D	4.90
125	FIROZPUR	FAZILKA	S-NPP	73.89516	30.36349	14:18:00	D	3.90
126	FIROZPUR	FAZILKA	S-NPP	74.00274	30.36507	14:18:00	D	17.10
127	FIROZPUR	FAZILKA	S-NPP	74.16602	30.36820	12:42:00	D	7.80
128	FIROZPUR	FAZILKA	S-NPP	74.16729	30.37261	12:42:00	D	13.10
129	FIROZPUR	FAZILKA	S-NPP	74.13844	30.37416	12:42:00	D	5.10
130	FIROZPUR	FAZILKA	S-NPP	74.16383	30.37437	12:42:00	D	7.80
131	FIROZPUR	FAZILKA	S-NPP	73.95351	30.38434	14:18:00	D	4.20
132	FIROZPUR	FAZILKA	S-NPP	73.92731	30.38818	14:18:00	D	4.80
133	FIROZPUR	FAZILKA	S-NPP	74.12495	30.40184	12:42:00	D	2.90
134	FIROZPUR	FAZILKA	S-NPP	74.06506	30.40325	14:18:00	D	2.00
135	FIROZPUR	FAZILKA	S-NPP	74.12533	30.41123	12:42:00	D	8.30
136	FIROZPUR	FAZILKA	S-NPP	74.04643	30.41691	12:42:00	D	20.30
137	FIROZPUR	FAZILKA	TERRA-1	73.96273	30.42178	11:37:00	D	17.36
138	FIROZPUR	FAZILKA	S-NPP	74.01102	30.42220	14:18:00	D	6.70
139	FIROZPUR	FAZILKA	S-NPP	74.01537	30.42250	14:18:00	D	9.20
140	FIROZPUR	FAZILKA	S-NPP	74.14214	30.43127	14:18:00	D	3.30
141	FIROZPUR	FAZILKA	S-NPP	74.03616	30.43528	14:18:00	D	2.40
142	FIROZPUR	FAZILKA	S-NPP	74.03580	30.43802	14:18:00	D	2.80
143	FIROZPUR	FAZILKA	S-NPP	74.14564	30.44291	14:18:00	D	3.40
144	FIROZPUR	FAZILKA	S-NPP	74.15006	30.44322	14:18:00	D	3.40
145	FIROZPUR	FAZILKA	S-NPP	74.05697	30.44809	14:18:00	D	8.00
146	FIROZPUR	FAZILKA	S-NPP	74.26931	30.45033	12:42:00	D	6.60
147	FIROZPUR	FAZILKA	S-NPP	74.05659	30.45070	14:18:00	D	7.30
148	FIROZPUR	FAZILKA	S-NPP	74.05605	30.45937	14:18:00	D	3.50
149	FIROZPUR	FAZILKA	S-NPP	74.05566	30.46198	14:18:00	D	7.90
150	FIROZPUR	FAZILKA	S-NPP	74.05560	30.46501	14:18:00	D	3.50
151	FIROZPUR	FAZILKA	S-NPP	73.98087	30.46840	14:18:00	D	2.70
152	FIROZPUR	FAZILKA	S-NPP	73.93587	30.48796	14:18:00	D	2.80
153	FIROZPUR	FAZILKA	TERRA-1	73.98046	30.49245	11:37:00	D	11.09

154	FIROZPUR	FAZILKA	S-NPP	74.15452	30.49691	14:18:00	D	18.00
155	FIROZPUR	FAZILKA	S-NPP	74.03492	30.50031	14:18:00	D	9.00
156	FIROZPUR	FAZILKA	S-NPP	74.15406	30.50259	14:18:00	D	6.30
157	FIROZPUR	FAZILKA	S-NPP	73.99265	30.50540	12:42:00	D	8.00
158	FIROZPUR	FAZILKA	S-NPP	74.04317	30.50654	14:18:00	D	1.70
159	FIROZPUR	FAZILKA	S-NPP	74.06846	30.51962	14:18:00	D	1.60
160	FIROZPUR	FIROZPUR	AQUA-1	74.34198	30.80387	13:11:00	D	27.99
161	FIROZPUR	FIROZPUR	S-NPP	74.63304	30.83618	14:18:00	D	3.60
162	FIROZPUR	JALALABAD	AQUA-1	74.32663	30.49245	13:11:00	D	31.51
163	FIROZPUR	JALALABAD	AQUA-1	74.34880	30.56132	13:11:00	D	26.71
164	FIROZPUR	JALALABAD	AQUA-1	74.38047	30.63533	13:11:00	D	46.13
165	FIROZPUR	JALALABAD	S-NPP	74.30589	30.45969	14:18:00	D	4.40
166	FIROZPUR	JALALABAD	S-NPP	74.30596	30.46075	14:18:00	D	4.10
167	FIROZPUR	JALALABAD	S-NPP	74.23314	30.46615	14:18:00	D	3.30
168	FIROZPUR	JALALABAD	S-NPP	74.30696	30.46722	12:42:00	D	3.20
169	FIROZPUR	JALALABAD	S-NPP	74.23305	30.46767	14:18:00	D	3.30
170	FIROZPUR	JALALABAD	S-NPP	74.30957	30.47249	14:18:00	D	8.50
171	FIROZPUR	JALALABAD	S-NPP	74.30909	30.47718	14:18:00	D	12.70
172	FIROZPUR	JALALABAD	S-NPP	74.30913	30.47822	14:18:00	D	7.20
173	FIROZPUR	JALALABAD	S-NPP	74.28341	30.48096	12:42:00	D	9.10
174	FIROZPUR	JALALABAD	S-NPP	74.31318	30.48323	14:18:00	D	11.70
175	FIROZPUR	JALALABAD	S-NPP	74.31319	30.48423	14:18:00	D	9.00
176	FIROZPUR	JALALABAD	S-NPP	74.32542	30.50230	14:18:00	D	4.10
177	FIROZPUR	JALALABAD	S-NPP	74.34351	30.50380	12:42:00	D	6.40
178	FIROZPUR	JALALABAD	S-NPP	74.34772	30.50950	14:18:00	D	7.80
179	FIROZPUR	JALALABAD	TERRA-1	74.34198	30.51641	11:37:00	D	17.89
180	FIROZPUR	JALALABAD	S-NPP	74.21545	30.51810	14:18:00	D	2.70
181	FIROZPUR	JALALABAD	S-NPP	74.33771	30.52040	14:18:00	D	8.00
182	FIROZPUR	JALALABAD	S-NPP	74.34225	30.52070	14:18:00	D	8.00
183	FIROZPUR	JALALABAD	S-NPP	74.36730	30.52350	12:42:00	D	2.60
184	FIROZPUR	JALALABAD	S-NPP	74.30953	30.53008	14:18:00	D	2.60

185	FIROZPUR	JALALABAD	S-NPP	74.35915	30.53913	14:18:00	D	5.10
186	FIROZPUR	JALALABAD	S-NPP	74.11101	30.53961	14:18:00	D	3.40
187	FIROZPUR	JALALABAD	S-NPP	74.33998	30.54940	14:18:00	D	9.00
188	FIROZPUR	JALALABAD	S-NPP	74.33953	30.55515	14:18:00	D	9.00
189	FIROZPUR	JALALABAD	S-NPP	74.10524	30.55630	14:18:00	D	8.80
190	FIROZPUR	JALALABAD	S-NPP	74.36236	30.55668	14:18:00	D	7.30
191	FIROZPUR	JALALABAD	S-NPP	74.36691	30.55699	14:18:00	D	7.30
192	FIROZPUR	JALALABAD	S-NPP	74.10374	30.55897	14:18:00	D	11.10
193	FIROZPUR	JALALABAD	S-NPP	74.30675	30.56374	12:42:00	D	2.20
194	FIROZPUR	JALALABAD	S-NPP	74.18617	30.58708	14:18:00	D	4.60
195	FIROZPUR	JALALABAD	S-NPP	74.19064	30.58736	14:18:00	D	5.50
196	FIROZPUR	JALALABAD	S-NPP	74.18571	30.59277	14:18:00	D	4.60
197	FIROZPUR	JALALABAD	S-NPP	74.19018	30.59306	14:18:00	D	5.50
198	FIROZPUR	JALALABAD	S-NPP	74.18079	30.59818	14:18:00	D	4.00
199	FIROZPUR	JALALABAD	S-NPP	74.18786	30.62153	14:18:00	D	5.50
200	FIROZPUR	JALALABAD	S-NPP	74.40625	30.63002	14:18:00	D	3.60
201	FIROZPUR	JALALABAD	S-NPP	74.41088	30.63032	14:18:00	D	3.60
202	FIROZPUR	JALALABAD	S-NPP	74.16326	30.63573	12:42:00	D	4.20
203	FIROZPUR	JALALABAD	S-NPP	74.27238	30.63862	14:18:00	D	7.30
204	FIROZPUR	JALALABAD	S-NPP	74.27692	30.63892	14:18:00	D	10.30
205	FIROZPUR	JALALABAD	S-NPP	74.40073	30.64126	14:18:00	D	3.40
206	FIROZPUR	JALALABAD	S-NPP	74.33150	30.64252	14:18:00	D	2.60
207	FIROZPUR	JALALABAD	S-NPP	74.38647	30.64613	14:18:00	D	11.30
208	FIROZPUR	JALALABAD	S-NPP	74.39108	30.64643	14:18:00	D	11.30
209	FIROZPUR	JALALABAD	S-NPP	74.19003	30.65032	14:18:00	D	11.80
210	FIROZPUR	JALALABAD	S-NPP	74.23222	30.68764	14:18:00	D	5.50
211	FIROZPUR	JALALABAD	S-NPP	74.23210	30.68887	14:18:00	D	6.40
212	FIROZPUR	JALALABAD	S-NPP	74.27237	30.69716	14:18:00	D	7.20
213	FIROZPUR	JALALABAD	S-NPP	74.35958	30.75474	14:18:00	D	14.40
214	FIROZPUR	JALALABAD	S-NPP	74.32567	30.77563	14:18:00	D	1.70
215	FIROZPUR	ZIRA	AQUA-1	75.12640	30.86974	13:11:00	D	41.95

216	FIROZPUR	ZIRA	S-NPP	75.12577	30.87777	12:42:00	D	3.70
217	FIROZPUR	ZIRA	S-NPP	75.15280	30.87840	12:42:00	D	7.80
218	FIROZPUR	ZIRA	S-NPP	75.13078	30.87906	12:42:00	D	5.60
219	FIROZPUR	ZIRA	S-NPP	75.12425	30.88036	12:42:00	D	3.90
220	FIROZPUR	ZIRA	S-NPP	75.15121	30.88113	12:42:00	D	8.00
221	FIROZPUR	ZIRA	S-NPP	75.19567	30.88125	14:18:00	D	4.30
222	FIROZPUR	ZIRA	S-NPP	75.12925	30.88168	12:42:00	D	3.90
223	FIROZPUR	ZIRA	S-NPP	75.10815	30.89516	12:42:00	D	5.60
224	FIROZPUR	ZIRA	S-NPP	75.19837	30.91785	14:18:00	D	22.90
225	FIROZPUR	ZIRA	S-NPP	75.20272	30.92000	12:42:00	D	4.80
226	FIROZPUR	ZIRA	S-NPP	75.32959	30.92553	14:18:00	D	3.30
227	FIROZPUR	ZIRA	S-NPP	75.34394	30.96922	14:18:00	D	5.20
228	FIROZPUR	ZIRA	S-NPP	75.34803	30.96949	14:18:00	D	5.90
229	FIROZPUR	ZIRA	S-NPP	75.22391	31.01366	12:42:00	D	2.80
230	FIROZPUR	ZIRA	S-NPP	74.89966	31.05520	14:18:00	D	3.30
231	GURDASPUR	BATALA	S-NPP	75.10812	31.84621	14:18:00	D	2.60
232	GURDASPUR	BATALA	S-NPP	75.06416	31.89065	12:42:00	D	4.50
233	GURDASPUR	BATALA	S-NPP	75.06897	31.89191	12:42:00	D	5.60
234	GURDASPUR	BATALA	S-NPP	75.17994	31.90239	12:42:00	D	2.90
235	GURDASPUR	DERA BABA NANAK	S-NPP	75.09119	31.98045	14:18:00	D	4.10
236	GURDASPUR	DERA BABA NANAK	S-NPP	75.09258	32.01763	14:18:00	D	5.60
237	HOSHIARPUR	DASUYA	S-NPP	75.62212	31.76987	14:18:00	D	5.00
238	KAPURTHALA	KAPURTHALA	S-NPP	75.29586	31.25889	12:42:00	D	3.90
239	KAPURTHALA	KAPURTHALA	S-NPP	75.28262	31.37710	14:18:00	D	6.50
240	KAPURTHALA	KAPURTHALA	S-NPP	75.28394	31.37710	14:18:00	D	8.10
241	KAPURTHALA	SULTANPUR LODHI	S-NPP	75.27354	31.25095	12:42:00	D	2.80
242	LUDHIANA	JAGRAON	AQUA-1	75.46575	30.73799	13:11:00	D	19.41
243	LUDHIANA	JAGRAON	AQUA-1	75.48621	30.94011	13:11:00	D	24.18
244	LUDHIANA	JAGRAON	S-NPP	75.41647	30.62845	12:42:00	D	10.20
245	LUDHIANA	JAGRAON	S-NPP	75.41690	30.63176	12:42:00	D	10.90
246	LUDHIANA	JAGRAON	S-NPP	75.48346	30.72558	14:18:00	D	5.10

247	LUDHIANA	JAGRAON	S-NPP	75.49377	30.75627	14:18:00	D	5.50
248	LUDHIANA	JAGRAON	S-NPP	75.49762	30.75724	14:18:00	D	7.70
249	LUDHIANA	JAGRAON	S-NPP	75.45437	30.75863	12:42:00	D	30.10
250	LUDHIANA	JAGRAON	TERRA-1	75.53737	30.76045	11:37:00	D	18.02
251	LUDHIANA	JAGRAON	S-NPP	75.61607	30.80617	14:18:00	D	4.70
252	LUDHIANA	JAGRAON	S-NPP	75.45314	30.80824	12:42:00	D	2.50
253	LUDHIANA	JAGRAON	S-NPP	75.37863	30.83006	12:42:00	D	2.40
254	LUDHIANA	JAGRAON	S-NPP	75.44878	30.88583	12:42:00	D	10.10
255	LUDHIANA	JAGRAON	S-NPP	75.63563	30.89713	12:42:00	D	2.40
256	LUDHIANA	JAGRAON	S-NPP	75.43619	30.94982	12:42:00	D	2.90
257	LUDHIANA	JAGRAON	S-NPP	75.43668	30.95118	12:42:00	D	3.10
258	LUDHIANA	LUDHIANA EAST	AQUA-1	75.85455	30.68858	13:11:00	D	36.42
259	LUDHIANA	LUDHIANA EAST	S-NPP	75.85658	30.69690	12:42:00	D	3.20
260	LUDHIANA	LUDHIANA EAST	S-NPP	75.85928	30.70369	12:42:00	D	3.20
261	LUDHIANA	LUDHIANA EAST	S-NPP	75.83864	30.73513	12:42:00	D	4.80
262	LUDHIANA	LUDHIANA EAST	S-NPP	75.83955	30.73519	12:42:00	D	6.40
263	LUDHIANA	LUDHIANA EAST	S-NPP	75.75871	30.75129	14:18:00	D	2.20
264	LUDHIANA	LUDHIANA EAST	S-NPP	75.80250	30.75628	12:42:00	D	3.70
265	LUDHIANA	LUDHIANA EAST	S-NPP	75.82054	30.79146	12:42:00	D	4.50
266	LUDHIANA	LUDHIANA EAST	S-NPP	76.07775	30.85649	12:42:00	D	2.00
267	LUDHIANA	LUDHIANA EAST	S-NPP	76.13122	30.89073	14:18:00	D	2.30
268	LUDHIANA	LUDHIANA EAST	S-NPP	76.13621	30.91018	14:18:00	D	4.50
269	LUDHIANA	LUDHIANA EAST	S-NPP	76.13376	30.91216	14:18:00	D	2.90
270	LUDHIANA	LUDHIANA WEST	S-NPP	75.80059	30.76191	12:42:00	D	3.70
271	LUDHIANA	LUDHIANA WEST	S-NPP	75.76868	30.77057	14:18:00	D	3.60
272	LUDHIANA	LUDHIANA WEST	S-NPP	75.72331	30.78527	12:42:00	D	2.50
273	LUDHIANA	LUDHIANA WEST	S-NPP	75.65394	30.81040	12:42:00	D	3.10
274	LUDHIANA	LUDHIANA WEST	S-NPP	75.72852	30.81103	12:42:00	D	2.60
275	LUDHIANA	LUDHIANA WEST	S-NPP	75.72959	30.81150	12:42:00	D	2.50
276	LUDHIANA	LUDHIANA WEST	S-NPP	75.63107	30.84770	12:42:00	D	7.50
277	LUDHIANA	LUDHIANA WEST	S-NPP	75.75015	30.84908	14:18:00	D	4.70

278	LUDHIANA	LUDHIANA WEST	S-NPP	75.61974	30.85097	12:42:00	D	3.30
279	LUDHIANA	LUDHIANA WEST	S-NPP	75.64319	30.85697	12:42:00	D	3.20
280	LUDHIANA	LUDHIANA WEST	S-NPP	75.66961	30.88247	14:18:00	D	8.10
281	LUDHIANA	LUDHIANA WEST	S-NPP	75.67214	30.88400	14:18:00	D	6.10
282	LUDHIANA	LUDHIANA WEST	S-NPP	75.66920	30.88868	14:18:00	D	8.10
283	LUDHIANA	LUDHIANA WEST	S-NPP	75.75151	31.00053	12:42:00	D	2.80
284	LUDHIANA	PAYAL	S-NPP	75.90125	30.60661	14:18:00	D	4.70
285	LUDHIANA	PAYAL	S-NPP	75.93297	30.66144	12:42:00	D	2.10
286	LUDHIANA	RAIKOT	AQUA-1	75.65162	30.62720	13:11:00	D	42.92
287	LUDHIANA	RAIKOT	AQUA-1	75.66867	30.65415	13:11:00	D	16.65
288	LUDHIANA	RAIKOT	AQUA-1	75.63457	30.70655	13:11:00	D	40.62
289	LUDHIANA	RAIKOT	S-NPP	75.66494	30.61879	14:18:00	D	6.10
290	LUDHIANA	RAIKOT	S-NPP	75.67044	30.61909	14:18:00	D	6.10
291	LUDHIANA	RAIKOT	S-NPP	75.61727	30.62361	12:42:00	D	6.20
292	LUDHIANA	RAIKOT	S-NPP	75.57114	30.63158	14:18:00	D	12.80
293	LUDHIANA	RAIKOT	S-NPP	75.57088	30.63204	14:18:00	D	7.90
294	LUDHIANA	RAIKOT	S-NPP	75.65803	30.64024	12:42:00	D	6.20
295	LUDHIANA	RAIKOT	S-NPP	75.65608	30.64593	12:42:00	D	2.00
296	LUDHIANA	RAIKOT	S-NPP	75.47993	30.64820	12:42:00	D	3.40
297	LUDHIANA	RAIKOT	TERRA-1	75.57830	30.66613	11:37:00	D	20.31
298	LUDHIANA	RAIKOT	S-NPP	75.56699	30.69324	14:18:00	D	9.80
299	LUDHIANA	RAIKOT	S-NPP	75.80548	30.69359	14:18:00	D	6.90
300	LUDHIANA	RAIKOT	TERRA-1	75.76417	30.70805	11:37:00	D	27.55
301	LUDHIANA	RAIKOT	S-NPP	75.61559	30.70825	12:42:00	D	1.60
302	LUDHIANA	RAIKOT	S-NPP	75.82863	30.72039	12:42:00	D	2.30
303	LUDHIANA	RAIKOT	S-NPP	75.65504	30.80206	14:18:00	D	3.20
304	MANSA	BUDHLADA	S-NPP	75.58523	29.74844	14:18:00	D	7.20
305	MANSA	BUDHLADA	S-NPP	75.59052	29.74875	14:18:00	D	7.20
306	MANSA	BUDHLADA	S-NPP	75.61575	29.76049	12:42:00	D	5.10
307	MANSA	BUDHLADA	S-NPP	75.59962	29.76490	12:42:00	D	2.80
308	MANSA	BUDHLADA	S-NPP	75.57169	29.79067	14:18:00	D	3.20

309	MANSA	BUDHLADA	S-NPP	75.45022	29.79544	14:18:00	D	4.30
310	MANSA	BUDHLADA	S-NPP	75.44724	29.79624	14:18:00	D	4.90
311	MANSA	BUDHLADA	S-NPP	75.44482	29.82862	12:42:00	D	2.40
312	MANSA	MANSA	S-NPP	75.32793	29.95260	12:42:00	D	5.90
313	MANSA	MANSA	S-NPP	75.33771	30.03822	12:42:00	D	4.40
314	MANSA	MANSA	S-NPP	75.33653	30.04006	12:42:00	D	5.30
315	MANSA	MANSA	S-NPP	75.29691	30.05721	14:18:00	D	10.40
316	MANSA	SARDULGARH	S-NPP	75.27656	29.56321	14:18:00	D	10.40
317	MANSA	SARDULGARH	S-NPP	75.30182	29.56482	14:18:00	D	4.00
318	MANSA	SARDULGARH	S-NPP	75.29587	29.57652	14:18:00	D	7.40
319	MANSA	SARDULGARH	S-NPP	75.30601	29.57717	14:18:00	D	8.90
320	MANSA	SARDULGARH	S-NPP	75.29258	29.57844	14:18:00	D	7.40
321	MANSA	SARDULGARH	S-NPP	75.30273	29.57904	14:18:00	D	7.30
322	MANSA	SARDULGARH	S-NPP	75.17552	29.66162	14:18:00	D	9.00
323	MANSA	SARDULGARH	S-NPP	75.20918	29.68183	14:18:00	D	9.80
324	MANSA	SARDULGARH	S-NPP	75.20717	29.68375	14:18:00	D	6.70
325	MANSA	SARDULGARH	S-NPP	75.21216	29.68404	14:18:00	D	6.70
326	MANSA	SARDULGARH	S-NPP	75.21790	29.70046	14:18:00	D	2.10
327	MANSA	SARDULGARH	S-NPP	75.37186	29.72976	14:18:00	D	12.30
328	MANSA	SARDULGARH	S-NPP	75.36631	29.73551	14:18:00	D	12.30
329	MOGA	BAGHA PURANA	S-NPP	75.15436	30.60942	14:18:00	D	3.60
330	MOGA	BAGHA PURANA	S-NPP	75.15429	30.61337	14:18:00	D	3.10
331	MOGA	BAGHA PURANA	S-NPP	75.16312	30.64796	12:42:00	D	5.80
332	MOGA	BAGHA PURANA	S-NPP	75.16409	30.65085	12:42:00	D	4.60
333	MOGA	MOGA	AQUA-1	75.29897	30.82423	13:11:00	D	51.58
334	MOGA	MOGA	S-NPP	75.26389	30.70887	12:42:00	D	2.90
335	MOGA	MOGA	S-NPP	75.27520	30.73777	14:18:00	D	10.70
336	MOGA	MOGA	S-NPP	75.27637	30.73845	14:18:00	D	9.50
337	MOGA	MOGA	S-NPP	75.36704	30.80460	14:18:00	D	4.70
338	MOGA	MOGA	S-NPP	75.38830	30.80582	14:18:00	D	4.40
339	MOGA	MOGA	S-NPP	75.32993	30.81728	12:42:00	D	3.50

340	MOGA	NIHAL SINGH WALA	TERRA-1	75.19802	30.65415	11:37:00	D	39.76
341	MOGA	NIHAL SINGH WALA	S-NPP	75.32269	30.65758	12:42:00	D	2.10
342	MOGA	NIHAL SINGH WALA	S-NPP	75.32604	30.68587	14:18:00	D	5.30
343	MOGA	NIHAL SINGH WALA	S-NPP	75.31426	30.70315	12:42:00	D	2.20
344	MUKTSAR	GIDDARBAHA	AQUA-1	74.56707	30.15708	13:11:00	D	36.72
345	MUKTSAR	GIDDARBAHA	AQUA-1	74.62369	30.31399	13:11:00	D	28.76
346	MUKTSAR	GIDDARBAHA	TERRA-1	74.62846	30.20499	11:37:00	D	43.41
347	MUKTSAR	GIDDARBAHA	S-NPP	74.62471	30.21307	14:18:00	D	6.10
348	MUKTSAR	GIDDARBAHA	S-NPP	74.61443	30.22410	14:18:00	D	17.10
349	MUKTSAR	GIDDARBAHA	S-NPP	74.68121	30.38633	12:42:00	D	5.00
350	MUKTSAR	GIDDARBAHA	S-NPP	74.81438	30.39282	14:18:00	D	5.50
351	MUKTSAR	GIDDARBAHA	S-NPP	74.81252	30.39434	14:18:00	D	4.90
352	MUKTSAR	GIDDARBAHA	S-NPP	74.70753	30.39826	14:18:00	D	7.80
353	MUKTSAR	GIDDARBAHA	S-NPP	74.71709	30.39883	14:18:00	D	9.30
354	MUKTSAR	GIDDARBAHA	S-NPP	74.70593	30.39911	14:18:00	D	5.90
355	MUKTSAR	GIDDARBAHA	S-NPP	74.71548	30.39974	14:18:00	D	9.40
356	MUKTSAR	GIDDARBAHA	S-NPP	74.68756	30.40880	14:18:00	D	2.10
357	MUKTSAR	MALAUT	AQUA-1	74.60630	30.08447	13:11:00	D	37.63
358	MUKTSAR	MALAUT	AQUA-1	74.39450	30.35531	13:11:00	D	23.60
359	MUKTSAR	MALAUT	S-NPP	74.48724	29.96569	14:18:00	D	3.60
360	MUKTSAR	MALAUT	S-NPP	74.67799	29.96599	14:18:00	D	3.70
361	MUKTSAR	MALAUT	S-NPP	74.67670	29.96628	14:18:00	D	3.30
362	MUKTSAR	MALAUT	S-NPP	74.59108	29.97130	12:42:00	D	3.20
363	MUKTSAR	MALAUT	S-NPP	74.69162	29.97268	14:18:00	D	2.60
364	MUKTSAR	MALAUT	S-NPP	74.69032	29.97307	14:18:00	D	3.30
365	MUKTSAR	MALAUT	S-NPP	74.52701	29.97343	14:18:00	D	5.20
366	MUKTSAR	MALAUT	S-NPP	74.52340	29.97378	14:18:00	D	6.00
367	MUKTSAR	MALAUT	S-NPP	74.62050	29.97994	14:18:00	D	2.30
368	MUKTSAR	MALAUT	S-NPP	74.45804	29.98694	14:18:00	D	6.40
369	MUKTSAR	MALAUT	S-NPP	74.56375	29.99731	12:42:00	D	4.00
370	MUKTSAR	MALAUT	S-NPP	74.61962	30.01222	12:42:00	D	5.70

371	MUKTSAR	MALAUT	S-NPP	74.51924	30.02575	14:18:00	D	5.70
372	MUKTSAR	MALAUT	S-NPP	74.42258	30.03080	14:18:00	D	5.70
373	MUKTSAR	MALAUT	S-NPP	74.42710	30.03111	14:18:00	D	7.10
374	MUKTSAR	MALAUT	S-NPP	74.39954	30.08770	14:18:00	D	2.20
375	MUKTSAR	MALAUT	S-NPP	74.46106	30.10736	12:42:00	D	3.40
376	MUKTSAR	MALAUT	S-NPP	74.44355	30.10792	14:18:00	D	5.20
377	MUKTSAR	MALAUT	S-NPP	74.57184	30.12214	14:18:00	D	3.20
378	MUKTSAR	MALAUT	S-NPP	74.37744	30.14117	12:42:00	D	3.30
379	MUKTSAR	MALAUT	S-NPP	74.47690	30.15069	14:18:00	D	2.00
380	MUKTSAR	MALAUT	S-NPP	74.49020	30.15739	14:18:00	D	6.50
381	MUKTSAR	MALAUT	S-NPP	74.49368	30.15825	14:18:00	D	6.10
382	MUKTSAR	MALAUT	S-NPP	74.48431	30.17439	14:18:00	D	7.30
383	MUKTSAR	MALAUT	S-NPP	74.48312	30.17499	14:18:00	D	7.60
384	MUKTSAR	MALAUT	S-NPP	74.45744	30.19618	12:42:00	D	9.10
385	MUKTSAR	MALAUT	S-NPP	74.41423	30.23144	12:42:00	D	3.40
386	MUKTSAR	MALAUT	S-NPP	74.41316	30.23491	12:42:00	D	3.30
387	MUKTSAR	MALAUT	S-NPP	74.38539	30.25025	14:18:00	D	2.10
388	MUKTSAR	MALAUT	S-NPP	74.37051	30.30375	12:42:00	D	4.20
389	MUKTSAR	MALAUT	S-NPP	74.37618	30.30527	12:42:00	D	4.20
390	MUKTSAR	MALAUT	S-NPP	74.33714	30.33938	14:18:00	D	13.40
391	MUKTSAR	MUKTSAR	AQUA-1	74.38120	30.54934	13:11:00	D	45.84
392	MUKTSAR	MUKTSAR	AQUA-1	74.51114	30.55653	13:11:00	D	39.47
393	MUKTSAR	MUKTSAR	AQUA-1	74.52615	30.63618	13:11:00	D	40.37
394	MUKTSAR	MUKTSAR	S-NPP	74.49410	30.39060	14:18:00	D	3.00
395	MUKTSAR	MUKTSAR	TERRA-1	74.43747	30.41011	11:37:00	D	25.91
396	MUKTSAR	MUKTSAR	S-NPP	74.30452	30.41931	14:18:00	D	3.30
397	MUKTSAR	MUKTSAR	TERRA-1	74.36293	30.41973	11:37:00	D	23.43
398	MUKTSAR	MUKTSAR	S-NPP	74.32711	30.42080	14:18:00	D	7.60
399	MUKTSAR	MUKTSAR	S-NPP	74.66448	30.51730	12:42:00	D	2.40
400	MUKTSAR	MUKTSAR	S-NPP	74.57503	30.51810	14:18:00	D	15.50
401	MUKTSAR	MUKTSAR	S-NPP	74.57973	30.51839	14:18:00	D	18.60

402	MUKTSAR	MUKTSAR	S-NPP	74.48434	30.53569	14:18:00	D	7.40
403	MUKTSAR	MUKTSAR	S-NPP	74.39573	30.54154	14:18:00	D	2.90
404	MUKTSAR	MUKTSAR	S-NPP	74.42242	30.55489	14:18:00	D	7.70
405	MUKTSAR	MUKTSAR	S-NPP	74.42704	30.55519	14:18:00	D	12.20
406	MUKTSAR	MUKTSAR	S-NPP	74.59142	30.55686	12:42:00	D	7.20
407	MUKTSAR	MUKTSAR	S-NPP	74.41261	30.55914	12:42:00	D	9.10
408	MUKTSAR	MUKTSAR	S-NPP	74.58131	30.55945	14:18:00	D	2.80
409	MUKTSAR	MUKTSAR	S-NPP	74.40905	30.56122	12:42:00	D	11.50
410	MUKTSAR	MUKTSAR	S-NPP	74.41463	30.56270	12:42:00	D	11.50
411	MUKTSAR	MUKTSAR	S-NPP	74.40313	30.56520	14:18:00	D	22.20
412	MUKTSAR	MUKTSAR	S-NPP	74.41048	30.56522	12:42:00	D	9.10
413	MUKTSAR	MUKTSAR	S-NPP	74.40772	30.56550	14:18:00	D	27.30
414	MUKTSAR	MUKTSAR	S-NPP	74.59029	30.56589	14:18:00	D	6.90
415	MUKTSAR	MUKTSAR	S-NPP	74.40209	30.56602	14:18:00	D	18.40
416	MUKTSAR	MUKTSAR	S-NPP	74.40669	30.56629	14:18:00	D	18.40
417	MUKTSAR	MUKTSAR	S-NPP	74.41604	30.56672	12:42:00	D	9.10
418	MUKTSAR	MUKTSAR	S-NPP	74.39721	30.58218	14:18:00	D	4.70
419	MUKTSAR	MUKTSAR	S-NPP	74.39611	30.58302	14:18:00	D	4.00
420	MUKTSAR	MUKTSAR	S-NPP	74.51719	30.58460	14:18:00	D	3.40
421	MUKTSAR	MUKTSAR	S-NPP	74.42702	30.60233	14:18:00	D	13.80
422	MUKTSAR	MUKTSAR	S-NPP	74.43163	30.60262	14:18:00	D	13.80
423	MUKTSAR	MUKTSAR	S-NPP	74.59534	30.61273	14:18:00	D	3.70
424	MUKTSAR	MUKTSAR	S-NPP	74.43535	30.61447	14:18:00	D	14.00
425	MUKTSAR	MUKTSAR	S-NPP	74.57147	30.63046	12:42:00	D	5.30
426	MUKTSAR	MUKTSAR	S-NPP	74.56701	30.63395	12:42:00	D	8.70
427	MUKTSAR	MUKTSAR	S-NPP	74.59863	30.63758	12:42:00	D	1.60
428	NAWASHAHR	NAWASHAHR	S-NPP	76.15833	31.00299	14:18:00	D	4.40
429	NAWASHAHR	NAWASHAHR	S-NPP	76.16070	31.00440	14:18:00	D	4.70
430	PATIALA	NABHA	S-NPP	76.15803	30.41166	12:42:00	D	4.80
431	PATIALA	PATIALA	S-NPP	76.54613	30.27076	12:42:00	D	3.20
432	PATIALA	RAJPURA	S-NPP	76.73363	30.35804	01:24:00	N	0.80

433	RUPNAGAR	CHAMKOR SAHIB	TERRA-1	76.39171	30.92215	11:37:00	D	25.40
434	SANGRUR	DHURI	S-NPP	75.89347	30.42449	12:42:00	D	2.20
435	SANGRUR	DHURI	S-NPP	75.69476	30.45840	12:42:00	D	2.50
436	SANGRUR	DHURI	S-NPP	75.69341	30.45979	12:42:00	D	2.60
437	SANGRUR	MALERKOTLA	AQUA-1	75.69084	30.59875	13:11:00	D	36.54
438	SANGRUR	MALERKOTLA	AQUA-1	75.78122	30.64516	13:11:00	D	18.46
439	SANGRUR	MALERKOTLA	S-NPP	75.76993	30.50880	12:42:00	D	10.80
440	SANGRUR	MALERKOTLA	S-NPP	75.76801	30.51447	12:42:00	D	16.60
441	SANGRUR	MOONAK	AQUA-1	75.93640	29.91154	13:11:00	D	31.64
442	SANGRUR	SANGRUR	S-NPP	75.61710	30.18256	12:42:00	D	7.20
443	SANGRUR	SANGRUR	S-NPP	75.60562	30.18560	14:18:00	D	6.10
444	SANGRUR	SANGRUR	S-NPP	75.61098	30.18591	14:18:00	D	6.10
445	SANGRUR	SANGRUR	S-NPP	76.07035	30.24951	14:18:00	D	5.90
446	SANGRUR	SANGRUR	S-NPP	75.89918	30.25640	14:18:00	D	2.80
447	TARN TARAN	KHADOOR SAHIB	S-NPP	75.00695	31.23177	14:18:00	D	6.10
448	TARN TARAN	KHADOOR SAHIB	S-NPP	75.02229	31.23269	14:18:00	D	7.20
449	TARN TARAN	KHADOOR SAHIB	S-NPP	75.00887	31.23409	14:18:00	D	8.10
450	TARN TARAN	KHADOOR SAHIB	S-NPP	75.01910	31.23464	14:18:00	D	7.20
451	TARN TARAN	KHADOOR SAHIB	S-NPP	74.92439	31.27152	14:18:00	D	4.60
452	TARN TARAN	KHADOOR SAHIB	S-NPP	75.00542	31.28212	14:18:00	D	2.40
453	TARN TARAN	KHADOOR SAHIB	S-NPP	75.07359	31.30552	12:42:00	D	2.30
454	TARN TARAN	KHADOOR SAHIB	S-NPP	74.96711	31.31605	14:18:00	D	4.20
455	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03331	31.32597	14:18:00	D	7.80
456	TARN TARAN	KHADOOR SAHIB	S-NPP	74.83714	31.37075	14:18:00	D	6.10
457	TARN TARAN	KHADOOR SAHIB	S-NPP	74.84216	31.37104	14:18:00	D	8.20
458	TARN TARAN	KHADOOR SAHIB	S-NPP	75.03046	31.37361	12:42:00	D	2.50
459	TARN TARAN	KHADOOR SAHIB	S-NPP	75.11263	31.39832	14:18:00	D	3.60
460	TARN TARAN	KHADOOR SAHIB	S-NPP	74.78463	31.43086	14:18:00	D	3.40
461	TARN TARAN	KHADOOR SAHIB	S-NPP	74.78246	31.43319	14:18:00	D	2.10
462	TARN TARAN	KHADOOR SAHIB	S-NPP	74.75951	31.45984	12:42:00	D	4.00
463	TARN TARAN	KHADOOR SAHIB	S-NPP	74.85599	31.46161	14:18:00	D	4.60

464	TARN TARAN	KHADOOR SAHIB	S-NPP	74.84134	31.48181	14:18:00	D	2.10
465	TARN TARAN	KHADOOR SAHIB	S-NPP	74.98426	31.48384	14:18:00	D	10.00
466	TARN TARAN	KHADOOR SAHIB	S-NPP	74.98939	31.48412	14:18:00	D	11.10
467	TARN TARAN	PATTI	AQUA-1	74.69099	31.29994	13:11:00	D	55.78
468	TARN TARAN	PATTI	S-NPP	74.80859	31.13925	14:18:00	D	4.00
469	TARN TARAN	PATTI	S-NPP	74.54734	31.19754	14:18:00	D	7.00
470	TARN TARAN	PATTI	S-NPP	74.75053	31.22209	14:18:00	D	6.00
471	TARN TARAN	PATTI	S-NPP	74.75193	31.22595	14:18:00	D	7.80
472	TARN TARAN	PATTI	S-NPP	74.65828	31.22657	14:18:00	D	2.40
473	TARN TARAN	PATTI	S-NPP	74.57895	31.24554	14:18:00	D	5.10
474	TARN TARAN	PATTI	S-NPP	74.58378	31.24583	14:18:00	D	7.40
475	TARN TARAN	PATTI	S-NPP	74.54967	31.24968	14:18:00	D	7.00
476	TARN TARAN	PATTI	S-NPP	74.72656	31.30168	14:18:00	D	13.40
477	TARN TARAN	PATTI	S-NPP	74.68685	31.30519	14:18:00	D	9.10
478	TARN TARAN	PATTI	S-NPP	74.72575	31.31319	12:42:00	D	2.50
479	TARN TARAN	PATTI	S-NPP	74.66512	31.33344	14:18:00	D	2.20
480	TARN TARAN	PATTI	S-NPP	74.66544	31.33717	14:18:00	D	2.90

Details of residue burning events in Haryana on 21-Nov-2018

Event S. No.	District	Tehsil/Block	Satellite	Longitude	Latitude	Time (IST)	Day/Night	Fire Power (W/m²)
1	AMBALA	AMBALA	S-NPP	76.96350	30.25887	12:42:00	D	4.30
2	AMBALA	BARARA	S-NPP	77.07998	30.17197	14:18:00	D	4.40
3	BHIWANI	BHIWANI	S-NPP	76.15756	28.85111	12:42:00	D	2.90
4	FATEHABAD	FATEHABAD	AQUA-1	75.31398	29.49233	13:11:00	D	25.78
5	FATEHABAD	FATEHABAD	AQUA-1	75.34638	29.54024	13:11:00	D	26.19
6	FATEHABAD	FATEHABAD	S-NPP	75.34644	29.49965	14:18:00	D	3.00
7	FATEHABAD	FATEHABAD	S-NPP	75.34724	29.50107	14:18:00	D	3.00
8	FATEHABAD	FATEHABAD	S-NPP	75.49958	29.53449	14:18:00	D	13.50
9	FATEHABAD	FATEHABAD	S-NPP	75.41086	29.54131	14:18:00	D	7.70
10	FATEHABAD	FATEHABAD	S-NPP	75.55635	29.55836	12:42:00	D	1.80
11	FATEHABAD	FATEHABAD	S-NPP	75.31701	29.56578	14:18:00	D	7.70
12	FATEHABAD	FATEHABAD	S-NPP	75.61839	29.56613	14:18:00	D	3.90
13	FATEHABAD	FATEHABAD	S-NPP	75.35760	29.56835	14:18:00	D	4.80
14	FATEHABAD	FATEHABAD	S-NPP	75.50737	29.57162	14:18:00	D	5.30
15	FATEHABAD	FATEHABAD	S-NPP	75.59560	29.58766	12:42:00	D	2.90
16	FATEHABAD	FATEHABAD	S-NPP	75.34799	29.58771	14:18:00	D	2.50
17	FATEHABAD	FATEHABAD	S-NPP	75.49731	29.58771	12:42:00	D	6.40
18	FATEHABAD	FATEHABAD	S-NPP	75.57367	29.58833	12:42:00	D	3.50
19	FATEHABAD	FATEHABAD	S-NPP	75.69756	29.59275	12:42:00	D	4.50
20	FATEHABAD	FATEHABAD	S-NPP	75.49533	29.59359	12:42:00	D	6.40
21	FATEHABAD	FATEHABAD	S-NPP	75.69566	29.59459	12:42:00	D	4.30
22	FATEHABAD	FATEHABAD	S-NPP	75.31990	29.59621	14:18:00	D	4.50
23	FATEHABAD	FATEHABAD	S-NPP	75.32498	29.59654	14:18:00	D	4.50
24	FATEHABAD	FATEHABAD	S-NPP	75.72593	29.59675	14:18:00	D	4.00
25	FATEHABAD	FATEHABAD	S-NPP	75.32167	29.59828	14:18:00	D	15.10
26	FATEHABAD	FATEHABAD	S-NPP	75.32457	29.60257	14:18:00	D	9.20
27	FATEHABAD	FATEHABAD	S-NPP	75.33471	29.60324	14:18:00	D	5.20
28	FATEHABAD	FATEHABAD	S-NPP	75.69283	29.60730	14:18:00	D	8.70
29	FATEHABAD	FATEHABAD	S-NPP	75.69032	29.60750	14:18:00	D	6.60

30	FATEHABAD	FATEHABAD	S-NPP	75.31396	29.60793	14:18:00	D	8.60
31	FATEHABAD	FATEHABAD	S-NPP	75.31905	29.60826	14:18:00	D	9.20
32	FATEHABAD	FATEHABAD	S-NPP	75.31567	29.61003	14:18:00	D	14.90
33	FATEHABAD	FATEHABAD	S-NPP	75.36711	29.61188	12:42:00	D	3.90
34	FATEHABAD	FATEHABAD	S-NPP	75.76552	29.61213	14:18:00	D	2.50
35	FATEHABAD	FATEHABAD	S-NPP	75.36382	29.61229	12:42:00	D	4.30
36	FATEHABAD	FATEHABAD	S-NPP	75.69240	29.61345	14:18:00	D	8.70
37	FATEHABAD	FATEHABAD	S-NPP	75.68990	29.61366	14:18:00	D	6.10
38	FATEHABAD	FATEHABAD	S-NPP	75.33561	29.61728	14:18:00	D	2.70
39	FATEHABAD	RATIA	AQUA-1	75.60387	29.59264	13:11:00	D	14.92
40	FATEHABAD	RATIA	AQUA-1	75.52330	29.60724	13:11:00	D	24.57
41	FATEHABAD	RATIA	AQUA-1	75.50156	29.67573	13:11:00	D	17.88
42	FATEHABAD	RATIA	AQUA-1	75.39242	29.68397	13:11:00	D	40.93
43	FATEHABAD	RATIA	AQUA-1	75.41459	29.72739	13:11:00	D	38.86
44	FATEHABAD	RATIA	AQUA-1	75.53865	29.74760	13:11:00	D	29.94
45	FATEHABAD	RATIA	S-NPP	75.54269	29.62339	14:18:00	D	3.00
46	FATEHABAD	RATIA	S-NPP	75.54498	29.62549	12:42:00	D	3.90
47	FATEHABAD	RATIA	S-NPP	75.59309	29.62605	14:18:00	D	3.50
48	FATEHABAD	RATIA	S-NPP	75.59538	29.62643	14:18:00	D	4.40
49	FATEHABAD	RATIA	S-NPP	75.54227	29.62949	14:18:00	D	3.00
50	FATEHABAD	RATIA	S-NPP	75.61081	29.63347	14:18:00	D	5.40
51	FATEHABAD	RATIA	S-NPP	75.58006	29.63448	12:42:00	D	3.90
52	FATEHABAD	RATIA	S-NPP	75.67637	29.65280	12:42:00	D	3.40
53	FATEHABAD	RATIA	S-NPP	75.35960	29.68655	14:18:00	D	3.50
54	FATEHABAD	RATIA	S-NPP	75.61041	29.69583	12:42:00	D	2.90
55	FATEHABAD	RATIA	S-NPP	75.41192	29.70093	14:18:00	D	8.40
56	FATEHABAD	RATIA	S-NPP	75.41014	29.70160	14:18:00	D	8.20
57	FATEHABAD	RATIA	S-NPP	75.50449	29.71904	14:18:00	D	7.40
58	FATEHABAD	RATIA	S-NPP	75.50278	29.71913	14:18:00	D	9.30
59	FATEHABAD	RATIA	S-NPP	75.46175	29.72232	12:42:00	D	4.70
60	FATEHABAD	RATIA	S-NPP	75.66985	29.74277	12:42:00	D	4.20
61	FATEHABAD	RATIA	S-NPP	75.49577	29.74320	14:18:00	D	3.60

62	FATEHABAD	RATIA	S-NPP	75.64243	29.76098	12:42:00	D	6.60
63	FATEHABAD	RATIA	S-NPP	75.64050	29.76680	12:42:00	D	6.60
64	FATEHABAD	TOHANA	S-NPP	75.76942	29.76204	12:42:00	D	6.50
65	HISAR	HANSI	S-NPP	76.01864	29.10969	14:18:00	D	3.10
66	HISAR	HISAR	S-NPP	75.85228	29.13762	14:18:00	D	3.20
67	HISAR	HISAR	S-NPP	75.85464	29.18124	14:18:00	D	9.40
68	HISAR	HISAR	S-NPP	75.78237	29.50280	14:18:00	D	4.50
69	HISAR	HISAR	S-NPP	75.78356	29.50771	14:18:00	D	6.90
70	HISAR	NARNAUND	S-NPP	76.14958	29.20881	14:18:00	D	3.30
71	JIND	JIND	AQUA-1	76.30474	29.34111	13:11:00	D	30.83
72	JIND	JIND	S-NPP	76.43616	29.28271	12:42:00	D	5.50
73	JIND	JIND	S-NPP	76.37737	29.42062	14:18:00	D	4.00
74	JIND	JULANA	S-NPP	76.36655	29.20037	01:24:00	N	0.30
75	JIND	NARWANA	AQUA-1	75.94663	29.69145	13:11:00	D	20.55
76	JIND	NARWANA	S-NPP	76.13643	29.53032	14:18:00	D	11.20
77	JIND	NARWANA	S-NPP	76.13815	29.53313	14:18:00	D	15.40
78	JIND	NARWANA	S-NPP	76.14262	29.55235	14:18:00	D	4.00
79	JIND	NARWANA	S-NPP	76.20883	29.57376	12:42:00	D	3.40
80	JIND	NARWANA	S-NPP	76.00298	29.65557	14:18:00	D	5.60
81	JIND	NARWANA	S-NPP	76.03624	29.66368	14:18:00	D	6.50
82	JIND	NARWANA	S-NPP	76.08624	29.67906	14:18:00	D	6.50
83	JIND	NARWANA	S-NPP	76.01773	29.68784	14:18:00	D	1.40
84	KAITHAL	KAITHAL	S-NPP	76.30035	29.67658	12:42:00	D	17.00
85	KARNAL	GHARAUNDA	AQUA-1	77.03288	29.51029	13:11:00	D	34.45
86	KARNAL	INDRI	S-NPP	77.13209	29.81614	14:18:00	D	8.30
87	KARNAL	INDRI	S-NPP	77.13870	29.81645	14:18:00	D	8.30
88	KARNAL	INDRI	S-NPP	77.13218	29.81966	14:18:00	D	10.80
89	KARNAL	INDRI	S-NPP	77.13879	29.82001	14:18:00	D	14.30
90	PANIPAT	PANIPAT	S-NPP	76.85444	29.47405	01:24:00	N	1.80
91	SIRSA	DABWALI	S-NPP	74.77233	29.95509	14:18:00	D	4.70
92	SIRSA	ELLENABAD	AQUA-1	74.85015	29.46837	13:11:00	D	25.77
93	SIRSA	ELLENABAD	S-NPP	74.83453	29.45192	14:18:00	D	3.50

94	SIRSA	ELLENABAD	S-NPP	74.81993	29.45223	14:18:00	D	6.00
95	SIRSA	ELLENABAD	S-NPP	74.83409	29.45321	14:18:00	D	3.80
96	SIRSA	ELLENABAD	S-NPP	74.87664	29.45613	14:18:00	D	4.20
97	SIRSA	ELLENABAD	S-NPP	74.81989	29.45688	14:18:00	D	11.40
98	SIRSA	ELLENABAD	S-NPP	74.87669	29.46043	14:18:00	D	3.60
99	SIRSA	ELLENABAD	S-NPP	74.89569	29.46162	14:18:00	D	3.40
100	SIRSA	ELLENABAD	S-NPP	74.89517	29.46331	14:18:00	D	3.50
101	SIRSA	ELLENABAD	S-NPP	74.81429	29.46827	14:18:00	D	4.80
102	SIRSA	ELLENABAD	S-NPP	74.81395	29.46944	14:18:00	D	4.10
103	SIRSA	ELLENABAD	S-NPP	74.77623	29.47171	14:18:00	D	5.80
104	SIRSA	ELLENABAD	S-NPP	74.83362	29.48318	01:24:00	N	1.00
105	SIRSA	ELLENABAD	S-NPP	74.63943	29.49194	14:18:00	D	9.10
106	SIRSA	ELLENABAD	S-NPP	74.62978	29.49710	14:18:00	D	9.50
107	SIRSA	ELLENABAD	S-NPP	74.62933	29.50289	14:18:00	D	9.50
108	SIRSA	RANIA	AQUA-1	74.84162	29.50730	13:11:00	D	46.81
109	SIRSA	RANIA	AQUA-1	74.67621	29.55820	13:11:00	D	75.57
110	SIRSA	RANIA	S-NPP	74.87414	29.48254	12:42:00	D	6.20
111	SIRSA	RANIA	S-NPP	74.87056	29.48364	12:42:00	D	4.10
112	SIRSA	RANIA	S-NPP	74.84122	29.48763	14:18:00	D	4.20
113	SIRSA	RANIA	S-NPP	74.84077	29.49348	14:18:00	D	4.20
114	SIRSA	RANIA	S-NPP	74.84550	29.49379	14:18:00	D	9.60
115	SIRSA	RANIA	S-NPP	74.84504	29.49965	14:18:00	D	12.40
116	SIRSA	RANIA	S-NPP	74.73145	29.50391	14:18:00	D	3.40
117	SIRSA	RANIA	S-NPP	74.84929	29.50581	14:18:00	D	12.40
118	SIRSA	RANIA	S-NPP	74.86825	29.50705	14:18:00	D	5.30
119	SIRSA	RANIA	S-NPP	74.87299	29.50736	14:18:00	D	10.00
120	SIRSA	RANIA	S-NPP	74.75545	29.51083	12:42:00	D	5.40
121	SIRSA	RANIA	S-NPP	74.87679	29.51940	14:18:00	D	4.90
122	SIRSA	RANIA	S-NPP	74.79601	29.51993	14:18:00	D	6.30
123	SIRSA	RANIA	S-NPP	74.76273	29.52357	14:18:00	D	4.10
124	SIRSA	RANIA	S-NPP	74.65880	29.53983	14:18:00	D	4.00
125	SIRSA	RANIA	S-NPP	74.65987	29.54011	14:18:00	D	5.50

126	SIRSA	RANIA	S-NPP	74.60783	29.54209	14:18:00	D	7.70
127	SIRSA	RANIA	S-NPP	74.60423	29.54240	14:18:00	D	6.50
128	SIRSA	RANIA	S-NPP	74.83324	29.54503	14:18:00	D	2.90
129	SIRSA	RANIA	S-NPP	74.71358	29.56686	14:18:00	D	6.10
130	SIRSA	RANIA	S-NPP	74.71250	29.56693	14:18:00	D	5.40
131	SIRSA	RANIA	S-NPP	74.64320	29.57399	14:18:00	D	9.60
132	SIRSA	RANIA	S-NPP	74.61515	29.57797	14:18:00	D	5.10
133	SIRSA	RANIA	S-NPP	74.61974	29.57827	14:18:00	D	5.10
134	SIRSA	RANIA	S-NPP	74.61929	29.58406	14:18:00	D	5.10
135	SIRSA	RANIA	S-NPP	74.59307	29.59763	12:42:00	D	4.90
136	SIRSA	RANIA	S-NPP	74.58582	29.59926	14:18:00	D	4.70
137	SIRSA	RANIA	S-NPP	74.59041	29.59956	14:18:00	D	4.70
138	SIRSA	RANIA	S-NPP	74.59518	29.60140	12:42:00	D	7.20
139	SIRSA	SIRSA	AQUA-1	74.95417	29.44891	13:11:00	D	44.10
140	SIRSA	SIRSA	AQUA-1	75.13663	29.56419	13:11:00	D	34.22
141	SIRSA	SIRSA	AQUA-1	75.00021	29.59713	13:11:00	D	20.23
142	SIRSA	SIRSA	AQUA-1	75.02579	29.60162	13:11:00	D	25.09
143	SIRSA	SIRSA	S-NPP	74.92254	29.41791	14:18:00	D	3.10
144	SIRSA	SIRSA	S-NPP	74.90693	29.43460	14:18:00	D	19.80
145	SIRSA	SIRSA	S-NPP	74.94212	29.44945	12:42:00	D	5.00
146	SIRSA	SIRSA	S-NPP	74.93867	29.46429	14:18:00	D	1.90
147	SIRSA	SIRSA	S-NPP	74.93047	29.46621	12:42:00	D	4.70
148	SIRSA	SIRSA	S-NPP	74.90951	29.46838	14:18:00	D	5.60
149	SIRSA	SIRSA	S-NPP	74.90900	29.47016	14:18:00	D	3.70
150	SIRSA	SIRSA	S-NPP	74.95026	29.50052	14:18:00	D	10.30
151	SIRSA	SIRSA	S-NPP	74.95506	29.50083	14:18:00	D	10.30
152	SIRSA	SIRSA	S-NPP	75.20454	29.51653	14:18:00	D	3.70
153	SIRSA	SIRSA	S-NPP	75.16391	29.52599	14:18:00	D	4.20
154	SIRSA	SIRSA	S-NPP	75.10745	29.55231	14:18:00	D	13.10
155	SIRSA	SIRSA	S-NPP	75.15179	29.55519	14:18:00	D	5.40
156	SIRSA	SIRSA	S-NPP	74.96175	29.55878	14:18:00	D	5.90
157	SIRSA	SIRSA	S-NPP	74.96658	29.55907	14:18:00	D	7.70

158	SIRSA	SIRSA	S-NPP	74.96496	29.56075	14:18:00	D	8.70
159	SIRSA	SIRSA	S-NPP	75.18108	29.56308	14:18:00	D	7.40
160	SIRSA	SIRSA	S-NPP	75.10627	29.61391	01:24:00	N	1.50
161	SIRSA	SIRSA	S-NPP	75.10114	29.61424	01:24:00	N	1.80

Details of residue burning events in Uttar Pradesh on 21-Nov-2018

Event S. No.	District	Tehsil/Block	Satellite	Longitude	Latitude	Time (IST)	Day/Night	Fire Power (W/m²)
1	AURAIYA	AURAIYA	S-NPP	79.57597	26.59850	12:36:00	D	2.40
2	AURAIYA	BIDHUNA	S-NPP	79.35538	26.71244	12:36:00	D	2.00
3	AZAMGARH	PHULPUR	S-NPP	82.87318	25.91529	12:36:00	D	2.00
4	BADAUN	BADAUN	S-NPP	79.19172	28.02437	12:36:00	D	1.90
5	BALLIA	BALLIA	S-NPP	83.97808	25.62136	12:36:00	D	2.70
6	BALLIA	RASRA	S-NPP	83.85733	25.83443	12:36:00	D	1.90
7	BALRAMPUR	UTRAULA	S-NPP	82.38671	27.12842	12:36:00	D	2.80
8	BASTI	BHANPUR	AQUA-1	82.72846	27.06688	13:11:00	D	5.44
9	BIJNOR	AFZALGARH	S-NPP	78.63136	29.41335	12:42:00	D	1.40
10	BIJNOR	AFZALGARH	S-NPP	78.71455	29.47809	12:42:00	D	1.90
11	DEORIA	DEORIA	S-NPP	83.88635	26.56885	12:36:00	D	4.10
12	DEORIA	DEORIA	S-NPP	83.76752	26.57111	12:36:00	D	3.50
13	DEORIA	DEORIA	S-NPP	83.76591	26.57238	12:36:00	D	3.70
14	DEORIA	DEORIA	S-NPP	83.73276	26.59072	12:36:00	D	1.30
15	ETAWAH	ETAWAH	S-NPP	79.13441	26.89779	12:36:00	D	1.30
16	ETAWAH	ETAWAH	S-NPP	79.10915	26.90834	12:36:00	D	3.00
17	ETAWAH	ETAWAH	AQUA-1	79.07750	26.86176	13:11:00	D	14.30
18	ETAWAH	JASWANTNAGAR	S-NPP	78.79667	26.94012	12:36:00	D	3.50
19	ETAWAH	JASWANTNAGAR	S-NPP	78.79871	26.94209	12:36:00	D	3.50
20	FATEHPUR	FATEHPUR	S-NPP	80.80248	25.96438	12:36:00	D	8.00
21	FATEHPUR	FATEHPUR	S-NPP	80.80309	25.96590	12:36:00	D	11.20
22	FATEHPUR	FATEHPUR	AQUA-1	80.85523	25.96569	13:11:00	D	20.66
23	GAZIPUR	GAZIPUR	S-NPP	83.54008	25.86016	12:36:00	D	2.70
24	GAZIPUR	GAZIPUR	S-NPP	83.53972	25.86134	12:36:00	D	2.10
25	GAZIPUR	MUHAMMADBAD	S-NPP	83.90078	25.66620	12:36:00	D	9.40
26	GAZIPUR	MUHAMMADBAD	S-NPP	83.87027	25.69368	12:36:00	D	4.60
27	GORAKHPUR	GORAKHPUR	S-NPP	83.51064	26.79514	12:36:00	D	4.20

28	GORAKHPUR	GORAKHPUR	S-NPP	83.48550	26.83204	12:36:00	D	4.10
29	GORAKHPUR	GORAKHPUR	S-NPP	83.46525	26.93790	12:36:00	D	2.50
30	HARDOI	SANDILA	AQUA-1	80.42806	27.08634	13:11:00	D	18.08
31	KANPUR	BILHAUR	S-NPP	80.02631	26.73062	12:36:00	D	3.40
32	KAUSHAMBI	MANJHANPUR	S-NPP	81.23374	25.44599	12:36:00	D	1.70
33	KAUSHAMBI	MANJHANPUR	S-NPP	81.27193	25.47869	12:36:00	D	4.30
34	KHERI	LAKHIMPUR	S-NPP	80.70597	28.09733	12:36:00	D	5.40
35	KHERI	NIGHASAN	S-NPP	80.86997	28.29881	12:36:00	D	4.60
36	KHERI	NIGHASAN	AQUA-1	80.77423	28.22870	13:11:00	D	17.07
37	KHERI	PALIA KALAN	S-NPP	80.52794	28.34858	12:36:00	D	3.40
38	KUSHINAGAR	HATA	S-NPP	83.69274	26.70897	12:36:00	D	2.10
39	KUSHINAGAR	HATA	S-NPP	83.79510	26.71632	12:36:00	D	2.10
40	KUSHINAGAR	HATA	S-NPP	83.65620	26.79424	12:36:00	D	3.60
41	KUSHINAGAR	HATA	S-NPP	83.68032	26.86494	12:36:00	D	3.90
42	KUSHINAGAR	HATA	S-NPP	83.62746	26.89811	12:36:00	D	3.00
43	KUSHINAGAR	HATA	S-NPP	83.60259	26.90157	12:36:00	D	3.20
44	KUSHINAGAR	HATA	S-NPP	83.62940	26.90676	12:36:00	D	1.70
45	KUSHINAGAR	HATA	S-NPP	83.61127	26.91566	12:36:00	D	1.40
46	KUSHINAGAR	HATA	S-NPP	83.59019	26.91989	12:36:00	D	5.20
47	KUSHINAGAR	HATA	S-NPP	83.57198	26.92881	12:36:00	D	3.30
48	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.48673	26.91244	12:36:00	D	3.10
49	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.54685	26.91569	12:36:00	D	1.90
50	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.60751	26.93149	12:36:00	D	1.50
51	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.49755	26.93534	12:36:00	D	1.80
52	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.52669	26.94921	12:36:00	D	3.40
53	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.52731	26.95014	12:36:00	D	2.30
54	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.60278	26.95127	12:36:00	D	2.70
55	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.56584	26.95773	12:36:00	D	3.90
56	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.55666	26.95906	12:36:00	D	1.90
57	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.55720	26.96018	12:36:00	D	3.30
58	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.56315	27.00281	12:36:00	D	3.80

59	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.48205	27.00372	12:36:00	D	1.50
60	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.44024	27.00814	12:36:00	D	4.80
61	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.70689	27.01416	12:36:00	D	3.40
62	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.45107	27.03107	12:36:00	D	4.20
63	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.65492	27.03293	12:36:00	D	3.20
64	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.46083	27.04127	12:36:00	D	3.50
65	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.55467	27.05502	12:36:00	D	3.00
66	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.59212	27.06629	12:36:00	D	2.30
67	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.57543	27.06914	12:36:00	D	1.40
68	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.59789	27.07564	12:36:00	D	1.20
69	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.62313	27.08263	12:36:00	D	3.50
70	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.60652	27.08552	12:36:00	D	3.80
71	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.61939	27.09840	12:36:00	D	7.70
72	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.51989	27.09971	12:36:00	D	2.40
73	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.61845	27.10234	12:36:00	D	6.30
74	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.51894	27.10367	12:36:00	D	2.40
75	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.62518	27.12425	12:36:00	D	2.40
76	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.52676	27.13834	12:36:00	D	1.00
77	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.53928	27.15315	12:36:00	D	2.60
78	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.52199	27.15813	12:36:00	D	3.50
79	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.55988	27.21228	12:36:00	D	7.80
80	MAHARAJGANJ	MAHARAJGANJ	S-NPP	83.58371	27.21278	12:36:00	D	3.50
81	MAHARAJGANJ	NAUTANWA	S-NPP	83.40089	27.34070	12:36:00	D	1.70
82	MAHARAJGANJ	NAUTANWA	S-NPP	83.44598	27.38783	12:36:00	D	2.10
83	MAHARAJGANJ	NICHLAUL	S-NPP	83.64169	27.26921	12:36:00	D	3.70
84	MAHARAJGANJ	NICHLAUL	S-NPP	83.64359	27.28598	12:36:00	D	4.00
85	MAHARAJGANJ	PHARENDA	S-NPP	83.31281	27.28192	12:36:00	D	4.70
86	MAINPURI	BHOGAON	S-NPP	79.19267	27.04848	12:36:00	D	1.30
87	MAINPURI	BHOGAON	S-NPP	79.15318	27.13235	12:36:00	D	2.00
88	MAU	MAU	S-NPP	83.64828	25.99946	12:36:00	D	2.10
89	MUZAFARNAGAR	SHAMLI	S-NPP	77.33681	29.53296	12:42:00	D	1.90

90	RAIBEARELI	SALON	S-NPP	81.44418	26.12699	12:36:00	D	3.10
91	RAIBEARELI	TILOI	S-NPP	81.37668	26.46505	12:36:00	D	3.40
92	SANTKABIRNAGAR	KHALILABAD	S-NPP	83.01267	26.82031	12:36:00	D	2.70
93	SHAHJAHANPUR	PUWANYA	AQUA-1	80.10782	28.32512	13:11:00	D	12.86
94	SIDDHARTHANAGAR	BANSI	AQUA-1	82.81373	27.13275	13:11:00	D	8.81
95	SIDDHARTHANAGAR	DOMARIYAGANJ	AQUA-1	82.73187	27.13275	13:11:00	D	6.92
96	SIDDHARTHANAGAR	ITWA	S-NPP	82.57758	27.31525	12:36:00	D	2.40
97	SIDDHARTHANAGAR	ITWA	S-NPP	82.55827	27.32006	12:36:00	D	4.50
98	SIDDHARTHANAGAR	ITWA	S-NPP	82.55291	27.32335	12:36:00	D	3.50
99	SIDDHARTHANAGAR	NAUGARH	S-NPP	83.24393	27.32722	12:36:00	D	2.20
100	SIDDHARTHANAGAR	NAUGARH	AQUA-1	83.14114	27.38129	13:11:00	D	8.74
101	SITAPUR	BISWAN	S-NPP	81.17347	27.62028	12:36:00	D	3.40
102	SULTANPUR	GAURIGANJ	AQUA-1	81.56377	26.30031	13:11:00	D	10.04
103	SULTANPUR	KADIRPUR	S-NPP	82.40263	26.25339	12:36:00	D	2.20
104	SULTANPUR	KADIRPUR	S-NPP	82.40157	26.25768	12:36:00	D	6.00
105	SULTANPUR	LAMBHUA	S-NPP	82.17763	26.10746	12:36:00	D	6.00
106	SULTANPUR	LAMBHUA	S-NPP	82.17654	26.11183	12:36:00	D	5.90
107	SULTANPUR	LAMBHUA	AQUA-1	82.10775	26.13263	13:11:00	D	7.35

The study used images received from following Satellites at IARI Satellite Ground Station

S. No.	Satellite Name	Sensor	Resolution (meter)	Day / Night Passes
1.	Suomi NPP	VIIRS	375 / 1000	Both
2.	Terra	MODIS	1000	Both
3.	Aqua	MODIS	1000	Both
4.	NOAA – 18	AVHRR	1000	Night
5.	NOAA – 19	AVHRR	1000	Night
6.	Metop - 1	AVHRR	1000	Night
7.	Metop - 2	AVHRR	1000	Night

Study Team

ICAR – HQ	Dr K. Alagusundaram	DDG (Agril. Engg.)	ddgengg@icar.org.in
	Dr S. Bhaskar	ADG (NRM)	adgagroandaf@gmail.com
ICAR - IARI	Dr V.K. Sehgal	Professor & Nodal Scientist	iaricreams@gmail.com yk.sehgal@icar.gov.in
	Dr Rajkumar Dhakar	Scientist	rajdhakar.iari@gmail.com
	Shri Rakeshwar Verma	Chief Technical Officer	rakeshwar.verma@icar.gov.in
	Mr Aakash Chhabra	SRF (NICRA)	aakash.chhabra7489@gmail.com
ICAR - ATARI	Dr Rajbir Singh	Director ATARI (Zone-1)	rajbirsingh.zpd@gmail.com
	Dr U.S. Gautam	Director ATARI (Zone-IV)	zpdicarkanpur@gmail.com
ICAR - IASRI	Dr RajenderParsad	Principal Scientist	rajender.parsad@icar.gov.in

GIS Maps of fire events can be visualized online on ICAR KRISHI & CREAMS Geoportal

websites:<http://geoportal.icar.gov.in:8080/geoexplorer/composer/>

<http://creams.iari.res.in:8080/geoexplorer/composer/>
