



भारतीय ताराभौतिकी संस्थान  
**INDIAN INSTITUTE OF ASTROPHYSICS**

विज्ञान व प्रौद्योगिकी विभाग, भारत सरकार के अधीन स्वायत्त निकाय

(An Autonomous Body under Department of Science and Technology, Government of India)

II ब्लॉक Block, कोरमंगला Koramangala, बेंगलूरु Bengaluru - 560 034

No.IIA/AO/VBO/FOREST/2020-21/1787

Dtd 30-12-2020

To  
The Principal Chief Conservator of Forest (Head of Department)  
Panagal Maligai, Saidapet  
Chennai- 600015

Sir,

Sub: Proposal of renewal of lease for diversion of 40 h.a of forest land for Vainu Bappu Observatory in Kavalur, Indian Institute of Astrophysics in Jawadhi hills in Thirupathur forest division in Vellore District. Proposal No FP/TN/Others/37766/2018

This is in reference to your letter No. C.No.TS3/38628/2018 dtd 24/12/2020 & No.F.No.4-TNC067/2020-CHN/263 dtd 24/12/2020 and as per decision taken in the 44<sup>th</sup> REC meeting held on 18/12/2020, the requested compliance report is given below:

1. Demarcation used area done through DGPS:

Regarding the demarcation of used area, a GPS survey has been done at physical marker locations and KML file is attached. The used areas in isolated spots have been attached including all built up areas, landscape areas and roads to produce a single closed loop. This has resulted in increase of occupied area from 7.55 acres to 8.95 acres. However there is no change in built up area and roads.

2. The justification for requirement of 100 acres area for the Vainu Bappu Observatory, Kavalur-Alangayam is given below:

The optical telescopes are used for studying the celestial bodies using the night sky. The darkness level should be extreme, this requires the telescopes to be separated by 200 to 300 meters. We now operate five main telescopes for scientific observations 2.34 meter, 1.3 meter, 1 meter, 30 inch, 16 inch telescopes and two telescopes of 14 inch and 6 inch for outreach.

The optical telescopes also need to be protected from dust. Isolation from near village neighborhood and road traffic for that 10 acres of area are used and the rest of 90 acres of forest area provides the isolation for good observing condition. The telescope should be housed in cool regions with thermal stability for avoiding atmospheric turbulence for good results. The unused forest area provides this cover and becomes very essential. The justification report submitted for renewal is also attached.

Kindly consider to renew the requested lease at the earliest.

Yours sincerely,



(Shripathi.K)

Administrative Officer

Mob No.9422970681

**Shripathi K.**

**Administrative Officer**  
**Indian Institute of Astrophysics**  
 Dept. of Science & Technology, Govt. of India  
 Koramangala, 2nd Block  
 Bengaluru - 560 034

Encl:

- 1) Demarcated area using GPS Survey and GPS Coordinates
- 2) Justification report.

Addl Copy to:

- 1) District Forest Officer,  
 London Mission Road, Achamangalam,  
 Tirupattur Division,  
 Tirupattur 635 601  
 Phone : 04179-220106
- 2) Additional principal chief conservator of forests,  
 vellore circle,  
 pillaiyar koil street, rangapuram,  
 vellore 632 009.  
 Phone : 0416-2255857
- 3) Conservator Of Forests,  
 Vellore Working Plan,  
 No.84, 7th Cross Street,  
 Sathuvachary Post,  
 Vellore 632 009  
 Phone : 0416-2222006
- 4) Forest Ranger, Alangayam Range,  
 Thirupathur Forest Division,  
 Alangayam- Thirupathur main road  
 Opp to Alangayam Bus stop,  
 Thirupathur- 635701  
 Ph: 9787689316

# Untitled Map

Write a description for your map.

## Legend

vbo\_1



Google Earth

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Image © 2020 CNES / Airbus



300 m

**GPS Points showing used area of VBO Kavalur**

<b>Post No</b>	<b>Longitude</b>	<b>Latitude</b>
1	78.820000	12.57963889
2	78.8200661	12.57968471
3	78.82011111	12.57961111
4	78.82000613	12.57956672
5	78.82012329	12.57938056
6	78.82024257	12.57941366
7	78.82027778	12.57937222
8	78.8202509	12.57932386
9	78.820175	12.57936111
10	78.82013188	12.57936988
11	78.82020278	12.57925921
12	78.82025616	12.57921739
13	78.82035833	12.57915
14	78.82046182	12.57911087
15	78.82136604	12.57886749
16	78.82135984	12.57894445
17	78.82132126	12.57895082
18	78.82132614	12.57901768
19	78.82139233	12.57902445
20	78.82139162	12.57896586
21	78.82136837	12.57895082
22	78.82137167	12.57886833
23	78.82191127	12.57874118
24	78.82192048	12.57878641
25	78.82179836	12.57880967
26	78.82180382	12.57887262
27	78.8219419	12.57885413
28	78.82192665	12.57873792
29	78.82212192	12.57869518
30	78.82214328	12.57888427
31	78.82253494	12.57888004
32	78.82260987	12.57901494
33	78.82267168	12.57901657
34	78.82266834	12.57892201
35	78.82267188	12.57888638
36	78.82274518	12.57887473
37	78.8229196	12.57883102
38	78.82291271	12.57896104
39	78.82305945	12.57894776
40	78.82307778	12.57869722
41	78.82294031	12.57870846
42	78.82293289	12.57875462
43	78.82283698	12.57875423
44	78.82277967	12.57870232
45	78.8227527	12.57861641
46	78.82294372	12.57858688
47	78.82311562	12.57851737
48	78.82331032	12.57838969

<b>Post No</b>	<b>Longitude</b>	<b>Latitude</b>
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51	78.82364619	12.57791715
52	78.82371658	12.57787781
53	78.82445054	12.57811862
54	78.82441667	12.57822222
55	78.82424219	12.57818047
56	78.82399445	12.57880841
57	78.82433343	12.57893544
58	78.82451726	12.57854175
59	78.82464911	12.57859209
60	78.82468552	12.57850815
61	78.82455097	12.57846429
62	78.82463276	12.57826559
63	78.82446242	12.5782109
64	78.82448897	12.5781363
65	78.82505546	12.57830773
66	78.82487143	12.57871053
67	78.82479833	12.57872761
68	78.82480415	12.57873909
69	78.82487326	12.5787406
70	78.82512198	12.57881769
71	78.82518224	12.57865443
72	78.82529195	12.57867267
73	78.82529557	12.57885871
74	78.82553069	12.57884662
75	78.82551798	12.57866915
76	78.8254469	12.57866863
77	78.82540843	12.57862342
78	78.82540516	12.57845331
79	78.82534169	12.57837642
80	78.82465059	12.57817245
81	78.82475759	12.57781028
82	78.82479931	12.57767982
83	78.82480364	12.57787229
84	78.82511246	12.57786695
85	78.82511585	12.57764027
86	78.82519634	12.57763051
87	78.82519444	12.5775
88	78.8251413	12.57743421
89	78.82506997	12.57744106
90	78.82505556	12.5775
91	78.82486111	12.57746515
92	78.82477809	12.57762367
93	78.82472378	12.57782562
94	78.82460025	12.57814893
95	78.82410913	12.57797916
96	78.82425787	12.57766947
97	78.82451556	12.5777881

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99	78.82426944	12.57761155
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102	78.82406238	12.57761688
103	78.82392196	12.57789751
104	78.82365588	12.57781629
105	78.82364683	12.57753718
106	78.82356662	12.57729491
107	78.82386111	12.57705556
108	78.824	12.57705556
109	78.82401335	12.57690233
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111	78.8237591	12.57709895
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113	78.82348113	12.57711412
114	78.82333605	12.57694207
115	78.82323889	12.57685278
116	78.82317339	12.57680422
117	78.82310556	12.57676389
118	78.82293027	12.57673075
119	78.82190629	12.57658117
120	78.82190545	12.57629173
121	78.82203239	12.57623292
122	78.82186142	12.57596286
123	78.82160469	12.57602697
124	78.82181944	12.57632222
125	78.82188314	12.57629722
126	78.82189143	12.57657945
127	78.82178658	12.57656667
128	78.82165172	12.57650185
129	78.82153687	12.57641035
130	78.82138526	12.5762014
131	78.821625	12.57605833
132	78.82160191	12.57602869
133	78.8215626	12.57604847
134	78.82158854	12.57559343
135	78.82150035	12.57541957
136	78.82153231	12.57538031
137	78.82141061	12.57530408
138	78.82135342	12.57535794
139	78.8214838	12.57544411
140	78.82157313	12.57559403
141	78.82143658	12.57559026
142	78.82143391	12.57577297
143	78.82155861	12.57577672
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145	78.82135918	12.5761806
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<b>Post No</b>	<b>Longitude</b>	<b>Latitude</b>
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150	78.82092581	12.57500619
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154	78.82080001	12.57470135
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168	78.82076125	12.57555856
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172	78.82111021	12.57634672
173	78.82092377	12.57625856
174	78.82085212	12.5762834
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176	78.82092512	12.5765742
177	78.82120956	12.57641312
178	78.82128755	12.57647357
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180	78.82157854	12.57648947
181	78.8216706	12.57655408
182	78.8217397	12.57658014
183	78.82188712	12.5766027
184	78.82201415	12.57716519
185	78.82188305	12.5772607
186	78.82184006	12.57724205
187	78.82181372	12.57732148
188	78.82185097	12.57732866
189	78.82190639	12.57744617
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<b>Post No</b>	<b>Longitude</b>	<b>Latitude</b>
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225	78.82362106	12.57767905
226	78.82360305	12.5777905
227	78.8235674	12.57778713
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<b>Post No</b>	<b>Longitude</b>	<b>Latitude</b>
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248	78.82231787	12.57751289
249	78.82230331	12.57753813
250	78.82243907	12.5776626
251	78.82254639	12.57773899
252	78.82279727	12.57804169
253	78.82291277	12.57822654
254	78.82291667	12.57825
255	78.82280556	12.57841667
256	78.82272398	12.5784875
257	78.82272056	12.57857297
258	78.82263224	12.57856678
259	78.82261111	12.57836111
260	78.82238889	12.57836111
261	78.82238186	12.57841069
262	78.82234409	12.57841956
263	78.82230556	12.57825
264	78.82238143	12.57826201
265	78.82239662	12.57819117
266	78.82226357	12.57817999
267	78.82225	12.57825
268	78.82229811	12.57825064
269	78.82236441	12.57857566
270	78.82214749	12.57860297
271	78.82205333	12.57848782
272	78.8218989	12.57836821
273	78.82195874	12.57829522
274	78.82184621	12.57821086
275	78.82179536	12.57827634
276	78.8217556	12.57826331
277	78.82170314	12.57822011
278	78.82160373	12.57806806
279	78.82147395	12.57807497
280	78.82147262	12.57798578
281	78.8215637	12.57795749
282	78.821575	12.57793056
283	78.82144444	12.57788889
284	78.82146303	12.57819611
285	78.8216591	12.57818934
286	78.82160525	12.57826047
287	78.82153603	12.57825074
288	78.8213273	12.57820685
289	78.82136111	12.57811111
290	78.82120296	12.57807973
291	78.82117378	12.5781558
292	78.82099758	12.57811796
293	78.82102626	12.578032

<b>Post No</b>	<b>Longitude</b>	<b>Latitude</b>
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298	78.82114017	12.57818913
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317	78.82055833	12.57866667
318	78.82055991	12.5787213
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325	78.82017497	12.57923766
326	78.82005556	12.57941667
327	78.81986111	12.57936111
328	78.81984091	12.57940556
329	78.82002778	12.57947222
330	78.81995338	12.57957228
331	78.81957096	12.57927278
332	78.81955556	12.57933333
333	78.81958159	12.57934123
334	78.81961117	12.5793234
335	78.81994762	12.57957664
336	78.81993008	12.57961304



# भारतीय ताराभौतिकी संस्थान INDIAN INSTITUTE OF ASTROPHYSICS

विज्ञान व प्रौद्योगिकी विभाग, भारत सरकार के अधीन स्वायत्त निकाय

(An Autonomous Body under Department of Science and Technology, Government of India)

II ब्लॉक Block, कोरमंगला Koramangala, बेंगलूरु Bengaluru - 560 034

NO.AO/VBO/FOREST/4577

Date 25.03.2019

## Justification Report

Indian Institute of Astrophysics is dedicated to research in Astrophysics and Astronomy and it traces its origin to Nungabakkam Observatory setup in 1786. The Government of Tamil Nadu allotted 40 acres of land in 1965 to our institute in order to set up an Astronomical Observatory for research and training purposes in Kavalur, Javadhu hills. The site was chosen based on a site survey conducted throughout the southern part of the country for the installation of optical telescopes. The location of the observatory greatly help national and international astronomers to effectively access celestial bodies across the sky. The astronomical observatories are usually set up in forest lands since light and other pollution in cities render them unusable for research activities. Since the nature of the work is purely of academic interest, there is no hazard to flora and fauna of the place. For expansion activities which included setting up of the National Facility of 2.34 metre optical telescope, which is the largest of its kind until recent times, our institute acquired a land of 60 acres in 1976. The Prime Minister of India Shri. Rajiv Gandhi inaugurated 2.34 metre Telescope on 6<sup>th</sup> January,1986 and named the telescope and the observatory as Vainu Bappu Telescope and Vainu Bappu Observatory in honour of the founder Prof. M.K. Vainu Bappu. A number of scientific discoveries have been made from the observatory and around 400 research papers have been published in national and international journals and generated more than 30 Ph.D's. The observatory has created employment for local population and exposed them to scientific research through public outreach programs.

Telescopes of various sizes have been installed and operated in the observatory. We occupy a small part of the land (7.5%) which was deforested while the rest of the area is maintained as forest in order to provide conducive environment for astronomical research and to avoid any kind of disturbance to the observatory. The institute keeps planting additional trees from time to time to compensate for the area used for infrastructure. In addition to maintaining 92.5 % of the forest to promote original darkness in the area, the observatory also attracts and supports animals and birds of various species which move freely within the campus for their food and water. The cool temperature nature of the forest is maintained as it is required for the efficient functioning of the telescope and instruments. It is due these considerations an area of 100 acres was allotted to the institute. The scientific usage of the telescope facilities is during the darkness hours. The larger telescopes are placed 200 to 300 metres away from each other so that emergency use of lights does not affect the usage of the others. Under no circumstances the provisions of Forest Conservation Act 1980 has been violated.

  
Shripathi K  
Administrative Officer