

PLANET AEROSPACE ®

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Annual Report for The Year 2021-2022

Dear Life members

It gives me great pleasure to invite you all to this 6th annual general body meeting and place before you the report on activities carried out by the Association during the FY 2021-22.

1. This financial year happened to be an eventful year for the Association with many activities successfully completed. As per the new policy of Govt of India, InSPACE and NSIL have been constituted and many industries / start ups are coming forward to start their business in space technology / applications. In this regard, Vice- President has written an introductory letter to Chairman, InSPACE about PA activities and we have formally registered with InSPACE. Also, DRDO is entering Space related activities in a big way with the formation of Defence Space Programme (DSP). As a result of this, PA is getting more demand in training as well as consultancy services in addition to requirements from Academic institutions.
2. Our Association has grown and 8 more experts have joined as Life Members during this year with total membership of 80 as on today. A special General Body meeting was held on 14th November 2021 to amend some Byelaws and clauses of Memorandum of Association mainly to address issues related to Election of Executive Committee. The amended byelaws were submitted to the Registrar of Co-op Societies and same were approved.
3. Members may kindly recall the discussions we had in the last AGBM meeting on the proposal to establish a Private Limited company in the name of Planet Aerospace to handle commercial aspects as well as get Tax advantages. However, this was further discussed and after addressing the pros and cons, Executive Committee decided to keep it in pending for the time being.
4. From October 2021, EC decided to review the status of all projects / tasks in progress to monitor the progress and any issues.
5. PA has participated in various webinars and conferences – (i) Space Industries Association (SIA) on Ground segment (ii) SIA conference on Start-ups Ecosystem and (iii) Awareness webinar on Artificial Satellites by Indian Space Industries Exhibitors, Ahmedabad which helped in promoting the presence and activities of Planet Aerospace.

6. EC met eight times during this year and reviewed – status of projects, implications of formation of Pvt Ltd company, status of Accounts and other issues.
7. During the year 2021-22, as the impact of Covid-19 has come down, many new projects and tasks have been taken up and were successfully completed. Some of them are in progress and overflow into FY2022-23

A brief account of all these activities is given below.

(M.Venkata Rao)
Secretary, Planet Aerospace

| Sl.No | Name of Company / Agency | Nature of work assignment | Status | Team members |
|--------------|---------------------------------------|--|---|--|
| 1. | Dhruva Space, Hyderabad | Design, Development and qualification of Solar array for Satellite applications | <ul style="list-style-type: none"> • Design is completed • Realisation and testing sub-contracted to L&T, BHEL and URSC/ISRO • Deliverable test coupons are made and one tested – two are under testing • One Dev model panel fabricated – wrinkles observed and under investigation • QM and FM panels to be fabricated • All materials and Solar cells procured | <ul style="list-style-type: none"> • Anil Agarwal • Ranganath Ekkundi • DL Shirolikar • SG Barve • K Venkatesh • B.K Muktha • RK Srinivasan |
| 2. | Dynami Technologies (Giveme 5) | Development of baseline content for a course on Nano-satellites for global children. | <ul style="list-style-type: none"> • First phase completed. By supplying Documents on Cubesat, and satellite sub-systems | <ul style="list-style-type: none"> • C.S Prasad • P.Natarajan • M Venkata Rao |
| 3. | Delta V Robotics | Knowledge support for developing software-based satellite simulator. Project is running and support is being provided by members of Planet | <ul style="list-style-type: none"> • After partial progress, project discontinued due to poor response from customer | <ul style="list-style-type: none"> • S Rangarajan • TK Sundara Murthy • V Mahadevan |

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| 4. | Nepal Telecom Agency / Aniara, Bengaluru | <ul style="list-style-type: none"> • A fresh EoI was floated by Nepal government in Oct 2021 for appointing a consultancy agency that will help in finalizing the requirements, design a space segment as well as ground segment, assist in regulatory matters etc. • With S3Tel from Dubai in the front, Planet Aerospace collaborated with Aniara communications and submitted the response for this RFP. | <ul style="list-style-type: none"> • An MoU was signed with M/s Aniara Communications for long term co-operation • Due to changing economic and political situation in Nepal, there is no further progress in this project. | RK Rajangam AA Bokil Param S.Sayeenathan S Rangarajan LS Satyamurthy |
| 5. | Janyutech Pvt. Ltd, Mumbai | Knowledge transfer programme to a Team identified for their future Satellite projects | <ul style="list-style-type: none"> • A comprehensive training course was conducted between 31st July – 18th August 2021 consisting of 35 presentations • Detailed Q&A and feedback mechanism was implemented to all their queries | RK Rajangam M Venkata Rao S Rangarajan N Nagarajan Param V Ramakrishna (SAC) V Sambasiva Rao RK Srinivasan N Viswanatha CA Prabhakar K Badrinarayana R Ekkundi Anil Agarwal |

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| | | | | MS Srinivasan K Parameswaran VK Agrawal G Nagendra Rao M Krishnaswamy P Natarajan CS Prasad A.A.Bokil C.S.Nagaraj OVR Reddy LS Satyamurthy HR Nagendra Manohar Sonnada DRM Samudraiah (SAC) M Sivaraman (ex-SAC) Seetha |
| 6. | Larsen and Toubro, Mumbai | Electro-optical system for strategic customer | <ul style="list-style-type: none"> • Baseline configuration finalised • Design and analysis in progress | <ul style="list-style-type: none"> • M Venkata Rao • D Subrahmanyam (SAC) • P Chakraborty (LEOS) |
| 7. | Larsen and Toubro, Coimbatore | Technology Readiness Level (TRL) assessment of three Start-up companies and submission of report | <ul style="list-style-type: none"> • Under this project, one start-up was assessed, and report submitted • Project discontinued due to lack of response from other start-ups to our client L & T | <ul style="list-style-type: none"> • CS Prasad • Narayana |

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| 8. | Manastu Space Mumbai | Development of Green propellants & propulsion system | <ul style="list-style-type: none"> • Project is in progress | <ul style="list-style-type: none"> • CS Prasad • Narayana • P Jayakumar |
| 9. | L&T ,Coimbatore | Training programme on Satellite Technology | <ul style="list-style-type: none"> • Training programme with 20 presentations was held between 4th April to 2nd May 2021 (only on Mondays) | <ul style="list-style-type: none"> • P Natarajan • M Dakshayani • N Nagarajan • TK Sundara Murthy • RK Rajangam • M Venkata Rao • MV Kannan • SG Barve • MS Srinivasan • Mahendra Naik • K Parameswaran • CS Prasad • K.A Kesavamurthy • Manohar Sonnada • M.Pitchaimani • SS Kumar • HR Nagendra • AA Bokil |
| 10. | Deloitte | Preparation of a compendium on Space Industries | <ul style="list-style-type: none"> • Discussions were held and few sample reports were submitted. • Further progress awaited | <ul style="list-style-type: none"> • LS Satyamurthy • MV Kannan • M Venkata Rao |
| 11. | L&T Coimbatore | Study report on Launch vehicle infrastructure and operations | <ul style="list-style-type: none"> • Report was prepared and submitted | <ul style="list-style-type: none"> • V Seshagiri Rao (ex-SDSC) |

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| 12. | Dhruva Space Hyderabad | Review of operations / Test results carried out on PDOT satellite | <ul style="list-style-type: none"> • Reviewed and suggested modifications / actions • P-DOT was launched by PSLV-C53 and successfully tested | <ul style="list-style-type: none"> • R Arunachalam • Manohar Sonnada |
| 13. | GalaxEye, IIT-Madras | <ul style="list-style-type: none"> • Start-up company to venture into Satellite business | <ul style="list-style-type: none"> • Support in their future plans / activities • Still at discussion stage | <ul style="list-style-type: none"> • RK Rajangam • AA Bokil |
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| 14. | Virginia Tech, Chennai | Delivery of a series of Video lectures on Nano satellite technologies by domain experts | <ul style="list-style-type: none"> • Project is in progress and few recordings completed • Project involves around 30 members of Planet Aerospace | <ul style="list-style-type: none"> • S Rangarajan • Param |
| 15. | Nitte Meenakshi Inst. Of Tech, Yelahanka | 3-day Seminar on Nanosatellite design, realisation & testing | <ul style="list-style-type: none"> • Seminar was successfully conducted during 4 – 6th May 2022 • An MoU was signed with NMIT for long term support for their future Space related activities | <ul style="list-style-type: none"> • M Venkata Rao • HN Bhagavan • DL Shirolikar • Dinesh Kumar • MS Srinivasan • Parimal Kumar • NK Philip • S Balaji |

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| | | | | <ul style="list-style-type: none"> • R Arunachalam • CA Prabhakar • M.Pitchaimani |
| 15. | Dhruva Space Hyderabad | Pre-bid Support for an RFP involving intelligent payloads | <ul style="list-style-type: none"> • Project was successfully completed | <ul style="list-style-type: none"> • Dr.Rangarajan • K. Jayaram • N.Nagarajan • S.Sayeenathan |
| 16. | Dhruva Space Hyderabad | Pre-bid Support for an RFP involving Electro - optical payloads | <ul style="list-style-type: none"> • Project is in progress | <ul style="list-style-type: none"> • M Venkata Rao |