

‘MICRO-GRAVITY’ – Research Facilities

AEOLUS AERO TECH, Pvt. Ltd.

‘**Aeolus Aero Tech Pvt. Ltd.**’ (Aeolus) based in Bengaluru, Karnataka, India, provides a wide range of Products, Services and Technology Solutions in Alternative Energy, Automobile, Aeronautical, Space Tech, Defense and General Engineering OEMS. Aeolus offers a variety of equipments for laboratories to cater to R & D (educational & industry uses) and for academic institutions.

- ✓ Global Leader in Aerospace Products and Services
- ✓ Delivers affordable, high Technology Solutions
- ✓ Uncompromising Business Ethics & Delivery
- ✓ World class Technical Expertise & Collaboration
- ✓ Dedicated to Customer Satisfaction & Mission
- ✓ Assist with Manufacturing, Assembly and Testing
- ✓ Provide Life-time Engineering & Technical Support
- ✓ Champion Alternative, Green Energy Solutions

Aeolus Products & Services Domains

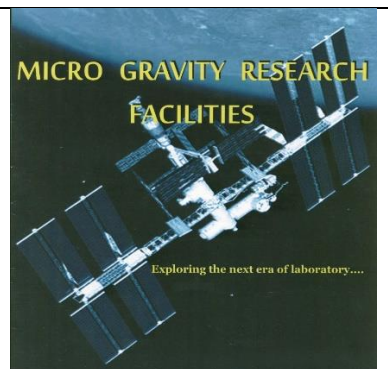
1. Educational Labs
2. Heat Pipes & Thermosyphons
3. Wind Tunnels
4. Space Science Products
5. Micro-Gravity Research
6. CubeSat: Design, Develop & Deploy
7. Wind Energy Technologies (500 W to 5 KW)

IDEAL PARTNERSHIP: ‘**Aeolus**’ collaborates with ‘**Space Tango**’ (STG), Kentucky, USA and ‘**Tango Labs**’ - a dedicated platform for micro-gravity research in the ‘**International Space Station**’ (ISS).

INCREDIBLE ACCESS:

Aeolus Aero Tech now offers unique and affordable access to the ‘Tango Labs’ for conducting Micro-Gravity Research Projects in the ISS.

Tango Labs is networked with earth via internet connection to enable clients receive data daily and send commands from earth.



UNIQUE OPPORTUNITY: The properties and behavior of materials, biological systems, etc. in space under micro-gravity, are of great interest. Major research is required to explore space - the new frontier. The potential for commercial application has immense value on earth. This offers huge opportunities for the educational, scientific, research and commercial sectors in India and many


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countries, to conduct experiments in Space under Micro-Gravity. If needed, Aeolus shall assist the clients in analyzing the data after the Research Project is returned to earth.


Common applications of Micro-Gravity

Fluid Physics Research	Biotech Research
Combustion Science Research	Medical Research
Material Sciences Research	Solar Energy Research


Micro-Gravity Research:

International Space Station	Effect of Micro-Gravity
	<ul style="list-style-type: none"> ▪ Better understanding of many fundamental questions ▪ Technology critical for commercialization of space ▪ Develop new materials unaffected by earth's gravity ▪ Develop solutions for problems existing on earth ▪ Optimize physical, chemical and biological processes ▪ Advance science, engineering & technology ▪ 'Info-Bio-Nano-Eco and Space Technologies' ▪ Basic research with practical applications ▪ Leading to major industrial and economic impact

Research in Fluid Physics:

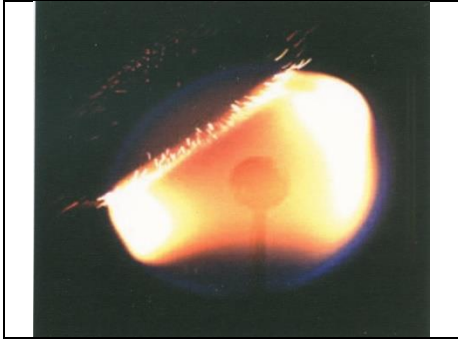
	<ul style="list-style-type: none"> ▪ Change in weight and effect of buoyancy forces ▪ Effectiveness of small capillary forces play a dominant role ▪ Shapes and stability of large controllable curved spaces ▪ Without thermal effects – natural & forced response ▪ Convection by temperature gradients – Marangoni flows ▪ Diffusion, usually combined with interfacial convection ▪ Unidirectional solidification in phase change process ▪ Electric & magnetic effects on shape, stability & convection ▪ Reactive processes such as cylindrical flames
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Research in Biotechnology:

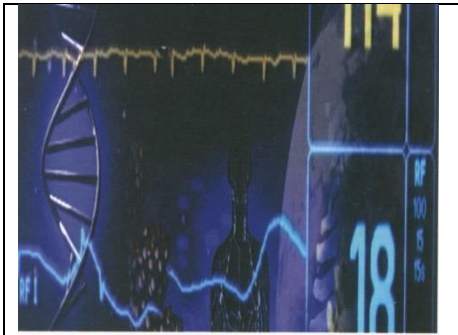
	<ul style="list-style-type: none"> ▪ Potential to play a major role in our lives ▪ Impacts health, agriculture, environment, etc. ▪ Functional changes in cells, plants, animals and humans without earth's gravity ▪ Study fundamental life processes at the cellular level, functioning, etc.
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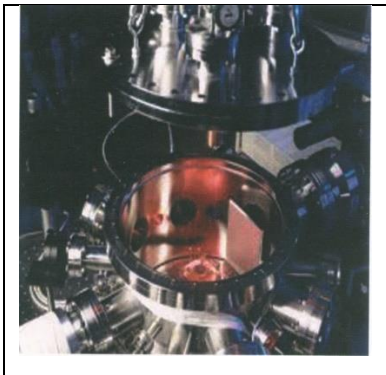
Research in Combustion Science:

	<ul style="list-style-type: none">▪ Understanding the process of ignition, propagation & extinction▪ Fire prevention, detection and fighting▪ Find solutions for pollutants, global warming, unwanted fires, incineration of waste▪ Better use of energy, reduce pollution and making high tech materials
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Research in Medical Sciences:

	<ul style="list-style-type: none">▪ Nerve Cell growth, repair, restoration, rehabilitation – Neuromuscular diseases▪ Using Organ grown under micro-gravity for repair and replacement▪ Molecular testing with great impact on current diagnostic methods in use▪ Better health practices, improved well-being and happier life on earth
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Research in Material Sciences:

	<ul style="list-style-type: none">▪ Effect on diffusion controlled growth, uniform particle distributions▪ Uniform solidification of micro-structures, effect on sedimentation▪ Better understanding of buoyancy, coarsening and sintering▪ Increased Dopant Homogeneity in semiconductors▪ Possibility of container less processing▪ Accurate measurement of viscosity, surface tension▪ Nucleation studies, crystal growth, reduced defect densities, etc.
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Micro-Gravity CUSTOMERS:

Colleges and schools
Energy Industry
Biotechnology Industry
Communication Industry

Governments
Scientists & Researchers
Pharmaceutical Industry
Healthcare industry

Bio-Tech Research in ISS



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Import Formalities: All sales are subject to Client obtaining required approvals and clearances by the respected authorities in their home country and release by the country of origin. Securing required approval / permit / import license / customs clearance, etc. and any related costs are the client's responsibility. Aeolus shall provide the standard shipping documents to facilitate these and offer customized solutions to suit our individual Client's exacting needs.

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