



KSF Space Foundation

The Big Q



KSF.Space *Initiative*

About KSF Space

A U.K. registered not for profit organization number 10176163. KSF Space Foundation offers support in numerous areas, linking those who have experience in completing, or are in the process of completing, small satellite missions, with those of limited experience at a fraction of the usual costs. This enables institutions around the world to explore and utilize all that the market has to offer, without sacrificing a significant portion of their budget.

KSF Space encourages researchers to keep dreaming, keep planning, and keep building in the name of scientific research. Lending a hand to get those less fortunate is integral to not only their communities, but the scientific community as a whole, broadening the horizon of potential for many.

Mission Objectives

The initiative was founded to encourage world's universities and institutions to develop and construct technical approaches towards big data and the uses of future NanoSat (CubeSat) space research & industry, in line with the goal of climate change as an application case of Big-Q initiative, to provide rich data about climate change and weather patterns with accurate measurement that will enable us to improve climate models.

www.ksf.space

Lavenham Lodge Cottage, Old Bury Road, Lavenham CO10 9GN, UK
UK Registration # 10176163
Tel: 001-775-372-9161 (USA Office)



Space Collaboration

Technical approaches including (data mining algorithm, PCB & VLSI, embedded systems, 1U CubeSat & software application)

Scientific Research

Phase 1

- 1- Develop mathematic algorithm for Data Mining (*Computer Science & Mathematic disciplines*)
- 2- Build a simulation for sample earth observation big data model (as an application) (*Computer Science discipline*)
- 3- Build & Integrate algorithm into VLSI / PCB (Cube – On board Computer) (*Electronics Engineering discipline*)

Phase 2

- 1- Construct CubeSat (1U) including Buses (*aerospace & electronics engineering disciplines*)
- 2- Integrate CubeSat main components (Antenna systems, communication systems & Solar panels) (*telecommunication, electronics & aerospace disciplines*)
- 3- Build GS (Ground Segment) (*telecommunication, electronics & aerospace disciplines*)
- 4- Testing & Vibration (*aerospace engineering*)
- 5- Launch

Schedule

Phase 1: Starting Q4 2017 – Q3 2019

Phase 2: Starting Q3 2019 – Q3 2020

Targeted Altitude

Upon the delivery of phase 2, the BigQ-SAT should be launched to LEO with expected deployment at 650 KM Altitude, thanks to KSF Space's technical partners.



Funding Approach

The Big Q initiative will be addressing major funding agencies in Europe and worldwide. One of the funding agency is the European Commission “the Horizon 2020”. Europe has been active in the space sector for several decades and its activities encompass a wide spectrum, ranging from rocket launchers and space exploration to space-based applications that provide new services to society. EU space policy and research has been supported through framework programs. The current program, Horizon 2020, covers the period from 2014 to 2020. This support is critical to the ongoing development of the space sector, in particular:

- ✓ it helps to sustain a competitive space industry (including manufacturers, service providers and operators) and research community;
- ✓ it provides support to develop appropriate technologies and services, necessary for the development and exploitation of new systems;
- ✓ it encourages the research community, as well as the private sector, to intensify their efforts and investments in the space sector.

Space research is contributing to enhance EU industrial competitiveness. It plays also a vital role in tackling many kinds of societal challenges, for example - climate change by ensuring comprehensive monitoring of our planet using space-based Earth Observation systems.



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*Interested institution(s) can fill up the form below and send it back to info@ksf.space

Name of Institution / University:

School / Faculty:

Website:

Department / Lab:

Country:

Number of PhD / Post Graduate students will involved (Max.3):

Person in charge:

Email:

Signature:

*An annual subscription fee of \$ 900 USD membership for corporations/institutions must be paid to KSF Space.

Benefits of KSF Space membership:

- ✓ Discount on IEEE Aerospace Conferences
- ✓ Discount on MNSAT.org Conference (including registration & papers submission)
- ✓ Your organization/institute will be included in our official media and press release via KSF Space media and aerospace magazine partners in US & UK.
- ✓ Ability to participate in most KSF Space programs & activities.
- ✓ Certificate of Recognition by KSF Space Foundation
- ✓ Discount on technical consulting and launch services for your Micro/NanoSat projects
- ✓ Discount on NEP "NanoSat Engineering Professional" Certification
- ✓ Priority to include your organization/institute in future collaboration in space projects held by KSF Space and our partners.

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