CASE STUDY: OSTE

32M
OFF-SHORE TETHERED EXPERIMENT

THE CHALLENGE

In 2004 the U.S. Navy came to TCOM for an R&D effort that required the design, modification, integration and test of an aerostat platform for the Off-Shore Tethered Experiment (OSTE) which included both surface and airborne payloads. The U.S. Navy tasked TCOM System and Design Engineers to design and implement aerostat system modifications to elevate sensitive instrumentation (which included antenna and transmission equipment) above the ocean to an environment that was free of electromagnetic transmissions and interference.

QUICK FACTS:

- The OSTE at-sea tests were very successful and accomplished the program goals for the Navy.
- The Navy tasked TCOM's systems and design engineers to come up with and implement a system to elevate sensitive antenna and transmission equipment above the ocean to an elevation that was free of electromagnetic interference
- The Navy used two of TCOM's standard 32M aerostats then designed and implemented modifications to these aerostats for testing in the Pacific Ocean

THE SOLUTION

Using two standard TCOM 32M aerostats as a baseline, TCOM evaluated the classified payloads, communications, mission, and environmental requirements and successfully designed and implemented unique modifications to the 32M aerostats.

THE RESULT

TCOM supported the system integration and test at our Manufacturing and Flight Test Facility (MFTF) in Elizabeth City, NC. Once the land based tests proved successful for the customer, TCOM provided planning, equipment, and logistics support for the series of OSTE tests in the Pacific Ocean.

The platform for one 32M aerostat was a special Surface Vessel (SV) with additional, open deck space sufficient to accommodate the second 32M aerostat. Once at sea and prior to the mission, the second 32M aerostat was transferred from the SV to a large sea buoy. TCOM provided the on-site engineering and flight personnel to support all OSTE activities including site preparation, set-up, integration, and test support.

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