

'Hybrid rocket tech in future'

Future Indian space missions, such as a distant human flight, and returnable and reusable launch vehicles, will draw heavily from aircraft technologies, Indian Space Research Organisation (ISRO) Chairman K.Sivan has said.

'A healthy marriage'

Calling it a healthy marriage of complex rocket science and artful aircraft technologies, he said the space agency was looking at the prospect of winged space planes that mix rocket science with plane technology, perhaps after a decade.

Such a hybrid scene has already opened in a small way with the May 2016 test flight of bringing back a small experimental winged space vehicle. Dr. Sivan, who is also Secretary, Department of Space, was delivering the annual Air Chief Marshal L.M. Katre Memorial Lecture organised by the Air Force Association, Karnataka. While American launch agency SpaceX has retrieved the first stage of its rocket, Dr. Sivan said ISRO would like to go beyond this and attempt getting back the second stage also, in the true national spirit of thrift. Such a concept would need space planes. For this, ISRO would tap the expertise of aeronautical engineers and the Indian Air Force.

'Dream proposal'

Dr. Sivan later said the agency is routinely updating a 2004 proposal for an aspirational human spaceflight programme (HSP). He, however, played it down to say that right now "[an HSP] is still our dream proposal which, I think, has to happen. India should not be left behind."

About technologies for a potential manned mission, he said a first draft of the HSP may be ready in a few weeks time. "We keep on making such new proposals, this [the HSP] is there every time in our plans. Right now, we are refining our document of 2004 and will sharpen it further," he said.

He clarified that an HSP is not even before the Space Commission, it is not approved and is distant, that any thoughts and technologies about it were still evolving, and ISRO would talk to supporting agencies only when it took a specific form.

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