

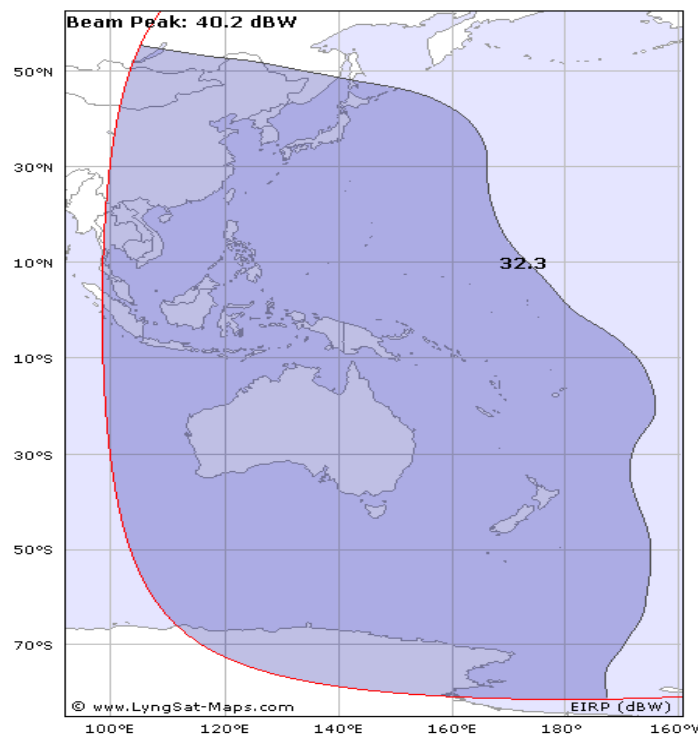
NASA TV in the Pacific

NASA TV was first viewed in New Zealand and around the Pacific Rim some three years ago. No one including my self really knew who put the feed onto Intelsat 701 but we were soon very thankful NASA had arrived. Given the fact that it was a very low signal using 9 MHz of bandwidth on a West Hemispheric beam dish sizes of 2.4m were required to watch it in New Zealand.

However (early 2006) during the TVNZ digital trials TVNZ added NASA TV to its platform along with DW TV and CCTV9 this allowed reception on 60cm dishes through out New Zealand. This addition to the TVNZ trial digital platform found an instant following as many enthusiasts were installing dishes to view the trials. We witnessed a lot of the construction of the “International Space Station “

I know that we added NASA TV to the Auckland Teleport trial NSS5 service in September of 2006 and broadcast it until January 2007. Orcus Media rebroadcast NASA TV from January 2007 until September 2008. However it wasn't until mid this year that the IS 701 hemi beam coverage was terminated. During that time E Cast New Zealand's premiere Web casting company provided NASA TV to the countries Universities and Schools and general public. With in the Auckland coverage area of Orcus's MMDS network many schools invested in equipment to receive NASA TV.

When the signal first appeared, NASA TV was contacted by the author for permission to rebroadcast the NASA TV signal from IS701 @180 degrees east as its coverage pattern on a west hemi beam could be seen right across the Pacific Rim as can be seen by the coverage footprint below.



NASA's response was to refer me to their rules and regulations as listed on their web site. At no time did they advise that this broadcast was not for public viewing or rebroadcast and that the transponder lease was made by Japanese concerns "MURA CAM TV" who rebroadcast it along with Australia TV to Japanese audiences.

The broadcast on IS701 was further reduced in power so that dish sizes larger than 3m were the only dishes capable of reception in New Zealand; Australia suffered the same fate although they had more signal as Australia is nearer the center of the beam than New Zealand.

During the two years NASA TV was available to New Zealand viewers it built up a cult following. Individuals both old and young marveled at the precision that the Space shuttle docked with the "International Space Station". The International Space Station is an International venture with participating countries listed below:

U.S. Role and Contributions

The United States has the responsibility for developing and ultimately operating major elements and systems aboard the station. The U.S. elements include three connecting modules, or nodes; a laboratory module; truss segments; four solar arrays; a habitation module; three mating adapters; a cupola; an unpressurized logistics carrier and a centrifuge module. The various systems being developed by the U.S. include thermal control; life support; guidance, navigation and control; data handling; power systems; communications and tracking; ground operations facilities and launch-site processing facilities.

International Contributions

The international partners, Canada, Japan, the European Space Agency, and Russia, will contribute the following key elements to the International Space Station:

- Canada is providing a 55-foot-long robotic arm to be used for assembly and maintenance tasks on the Space Station.
- The European Space Agency is building a pressurized laboratory to be launched on the Space Shuttle and logistics transport vehicles to be launched on the Ariane 5 launch vehicle.
- Japan is building a laboratory with an attached exposed exterior platform for experiments as well as logistics transport vehicles.
- Russia is providing two research modules; early living quarters called the Service Module with its own life support and habitation systems; a science power platform of solar arrays that can supply about 20 kilowatts of electrical power;

logistics transport vehicles; and Soyuz spacecraft for crew return and transfer.

In addition, Brazil and Italy are contributing some equipment to the station through agreements with the United States. Although there is no direct involvement listed from either Australia or New Zealand, having being witness to the comings and goings of every day life on board the ISS a lot of viewers feel that the ISS family is part of their family.

Some of the events witnessed have been history in the making. The younger generation can identify with Russian, American and the International residents of the ISS. After all we have shared "Thanks Giving", Easter, Christmas and other national holidays observed by these space Adventurers live on TV. Some of us have been fortunate to see what their countries look like from the ISS when some one has taken video of the ground below.

Although this petition started off as a New Zealand only venture it was soon realized that every country should be able to have access to NASA TV. The children who make paper planes and fire off water filled rockets and look up at the heavens at night and gaze at the moon are tomorrow's astronauts.

They are not only US they are from all over the world from all walks of life. They share what a good many grown men share" the wonder of space". During the time that Orcus Media broadcast NASA TV we had a satellite receiver that broke down .This receiver decided to quit during a space walk from the ISS. In Auckland where NASA TV was broadcast on our MMDs network we received over three hundred phone calls wanting to know why NASATV had gone off. After three hundred calls our telephone answering system called it a day also.

This prompted us to call many of these people who left contact numbers, and we asked them one question only: "What do you enjoy about NASA TV"

Although the answers were varied every one agreed that both grown ups and children alike looked upon NASA TV as more beneficial educationally than "The Discovery" and "National Geographic" channels.

I know for a fact that E Cast has conducted two teleconferences between New Zealand Schools and schools in the USA and Canada under the old NASA Connect Network .This shows not only the awareness but interest and enthusiasm in the work of NASA and space exploration.

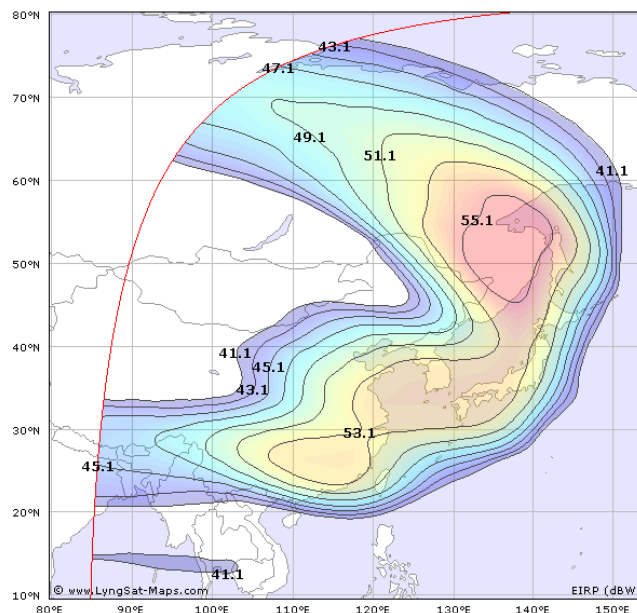
Whilst we applaud the Japanese interests for establishing a direct link to the NASA Public TV channel. We fail to understand what harm people viewing NASA TV here in the Pacific Rim was doing to the Japanese interests who initiated the feed free to Air on IS701. NASA TV is after all a public channel broadcast on several different satellites free to any one with suitable reception equipment in the USA, Canada

We also find the response from the Japanese interests to an individual living in New Zealand who enquired why the west hemi signal had decreased in signal strength to be arrogant, selfish and unnecessary. The gist of the response was that this was a” **private feed and we had no right to be viewing it, and that the feed was to be terminated with in a few months”**

This took place and NASA TV is available on the following service.

12455 H tp 17		NASA Public Channel	A S	DVB Power Vu	5426-1/2 31 - 3160	1-200 3120 E	NE Asia
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This service has now been established on a beam which covers only North East Asia



The current coverage of NASA TV outside the USA

This service is now on IS8 and occupies a Ku transponder with coverage to North East Asia .As it is Power Vu encrypted. One enquiry to JAXA (Japan Aerospace Exploration Agency) resulted in the response below.

JAXA - NASA TV feed on IS8 Ku

For Asian users.

Has anyone had any success in getting JAXA (Japan Aerospace Exploration Agency)

to authorize your Power VU box to watch the NASA TV service on Intelsat 8 Ku on

the North Asia Beam? If so can you drop me an email off line to jonc @ jsat. tv

so I can discuss with you.

To date knowing I am in South East Asia the JAXA (Japan Aerospace Exploration Agency) PR people are suggesting I use the USA DOM sats to watch it. Go figure this one out!

The US domsats have no beams of any use to any one living in south East Asia. Again no real interest of providing "NASA's Public Channel" which is assumed to be taken directly from US dom sat reception by Intelsat and uplinked from Intelsats Napa Teleport directly to IS8 and down linked on the North East Ku spot beam using the coverage foot print as above.

The NASA Public TV channel is open to the public in the USA so they can see what NASA has achieved and more importantly what they are trying to achieve. "The International Space Station" is an International effort as far as I am aware.

No body is going to spend money on providing a dedicated NASA feed to us or any one else out side of the US. So if people are holding out for NASA to reappear then space will be well and truly conquered by then.

However there may be a way to achieve NASA Coverage with out any one spending any money. VOA is paid for by the US Government. It used to be called WorldNet and its idea was to provide information from the US Information Service world wide via its Embassies and Consulates. Each Embassy or Consulate had a Public affairs Office and Officer whose job is to promote the Ideals and virtues of the USA.

World Net was an activity of the US Information Service, has evolved into VOA Voice of America. It operates Satellite services world wide to broadcasters and its embassies and consulates.

The service coverage for Asia and the Pacific is via Asia Sat 3s @105.5 Degrees east.

Its line up on transponder 11H 4040 /26,500 FEC ½ is as follows


VOA TV Asia

American Embassy TV Network

VOA TV Africa

VOA Persian

However they also have eighteen radio stations some with the same program on which is accompanied by the VOA video service. It is hoped that one of these duplicate radio channels could be made available to house NASA TV.

4040 H tp 11H	 VoA	A	DVB	26500-1/2	1-1	
	VOA TV Asia	A	F	1	7160	7120 E
	American Embassy TV Network	A	F	4	7460	7420 E
	VOA TV Africa	A	F	409	7760	7720 E
	VOA TV Persian	A S	F	415	7860	7820 Fa
	VoA News Now (AS 3)	A S	F	373		7122 E
	Voice of America (AS 5)	A	F	375		7130
	Voice of America (AS 6)	A	F	375		7132
	RFE/Radio Liberty (AS 8)	A	F	375		7132
	VoA Music Mix (AS 9)	A S	F	380		7220 E
	VoA News Now (AS 11)	A S	F	384		7222
	Voice of America (AS 12)	A	F	384		7222
	RFE/Radio Liberty (AS 13)	A	F	385		7230
	RFE/Radio Liberty (AS 14)	A	F	385		7230
	RFE/Radio Liberty (AS 15)	A	F	385		7232
	RFE/Radio Liberty (AS 16)	A	F	385		7232 C
	Voice of America (AS 21)	A	F	395		7330 Fa
	RFE/Radio Liberty (AS 22)	A	F	395		7330
	VoA Music Mix (AS 23)	A S	F	395		7332 E
	Voice of America (AS 24)	A	F	395		7332
	VoA Music Mix (AS 17)	A S	F	398		7320 E
VoA News Now (AS 19)	A S	F	398		7322	
Radio Farda	A	F	408		7422 Fa	

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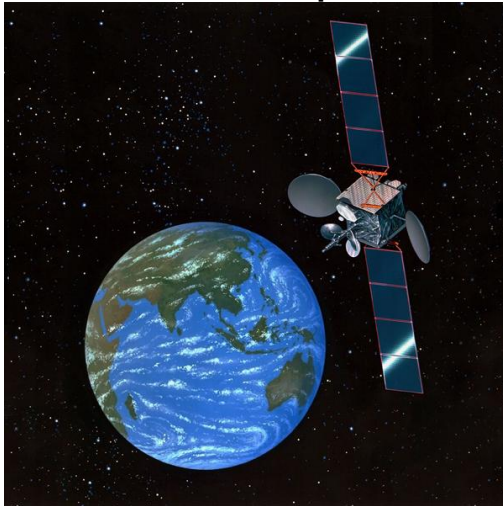
The idea is to try and convince both NASA and VOA to evaluate the feasibility of adding NASA TV Public Channel to the VOA network instead of one of the duplicate radio stations attached to the VOA video. This will cost VOA and NASA **NOTHING**. In the past NASA TV has been seen on Asia sat 3 so VOA has the capability of accessing this channel.

Mr. Richard Buckner Producer and Host of the FTA show has agreed to support this initiative. The FTA show is broadcast weekly on Access America and world wide via the internet. The FTA has over the last two years built up a respectable listening audience both in the US and world wide. Enthusiasts and broadcasters listen to the FTA show every week.

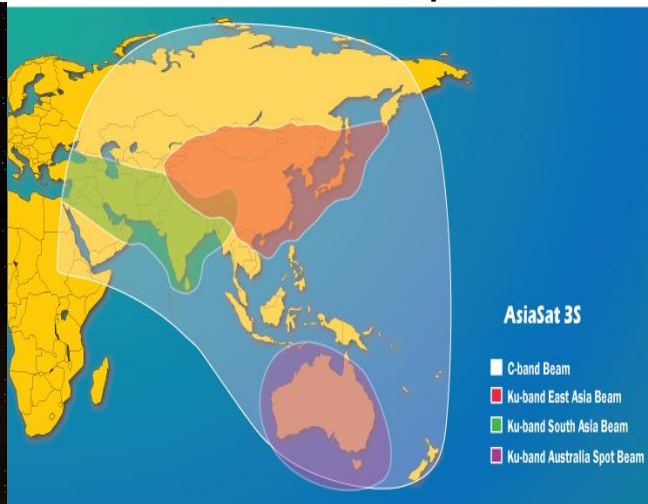
Mr. Buckner has agreed to contact both VOA and NASA Public affairs offices in view to not only promoting this initiative but having them take part in an interview on the FTA show with in the next fortnight. He will also have interviews with individuals across the board that used NASA TV for Educational purposes in New Zealand.

Asia Sat 3S located @ 105.5 Degrees East

In orbit position



C band Foot print



Asia sat 3 s @105.5 degrees east covers more than 50 countries and regions, reaching about two-thirds of the world's population. For operators in the Asia Pacific region Asia sat three and VOA's Full transponder operation and low FEC rate $\frac{1}{2}$ means that the satellite receive terminals can be smaller due to the approximate 4 .5 db threshold .