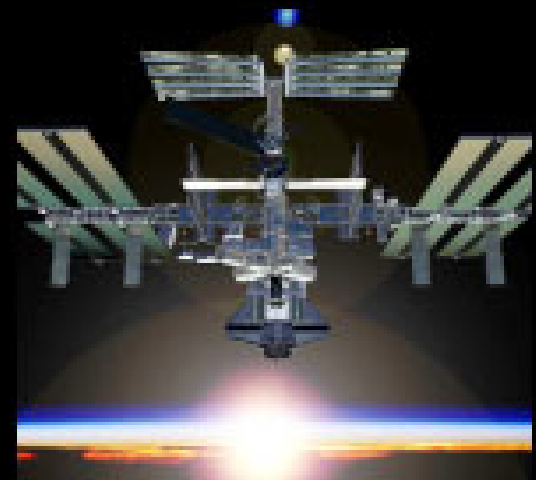
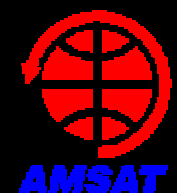


ATV on the ISS

A proposal by Graham Shirville G3VZV
& supported by AMSAT-UK



ATV on the ISS

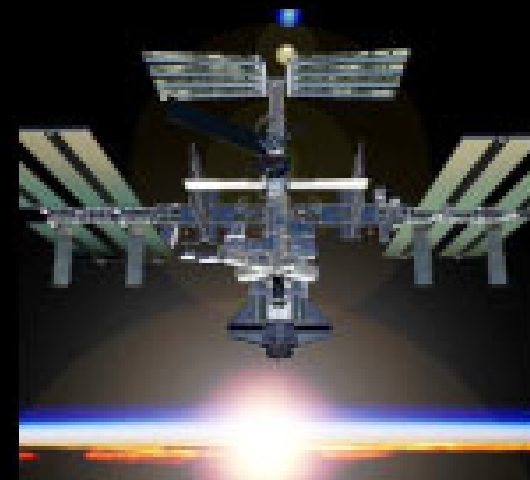
Intention to provide:

Ground based amateurs with pictures from the ISS

A system that uses fairly simple ground equipment

A system suitable for use in demonstrations

A system that cannot sensibly be duplicated on the Internet



ATV on the ISS

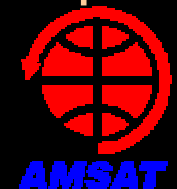
Background

Mir and SAREX missions have demonstrated SSTV from space

Many other “amateur” satellites transmit still pictures

Fast scan ATV has been around since the late 1940s

A picture is worth a thousand words



ATV on the ISS

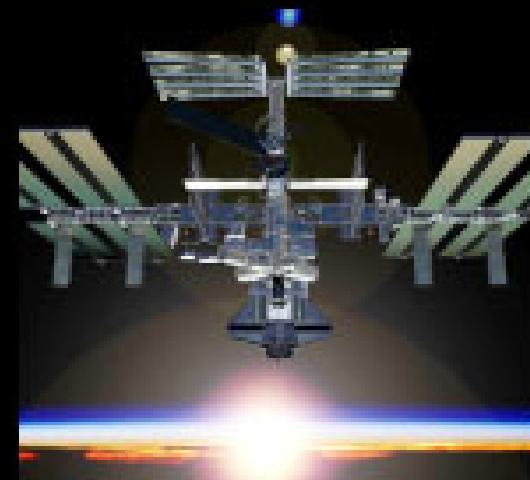
Proposal

One or more color cameras located externally on the station space frame - maybe they are already planned?

Some should be steerable (pan/tilt/zoom)

The could steered/commanded by an amateur station on the ground (for a fixed time period)

When not commanded the system could “beacon” pictures and uploaded captions



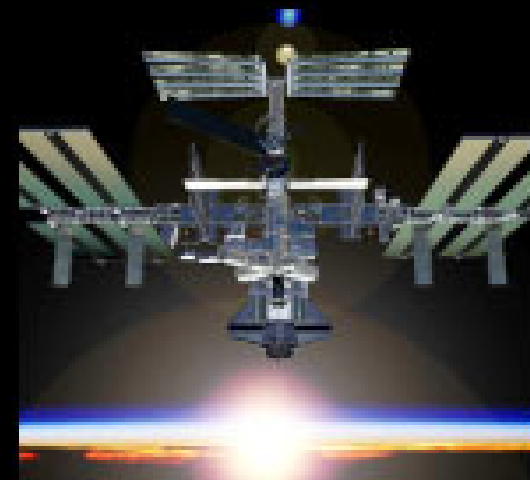
ATV on the ISS

Proposal

When in darkness the cameras could show light pollution on earth

APRS telemetry could be transmitted

When manned the cameras would be under control of the astronauts



ATV on the ISS

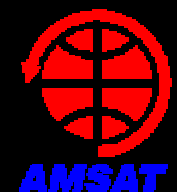
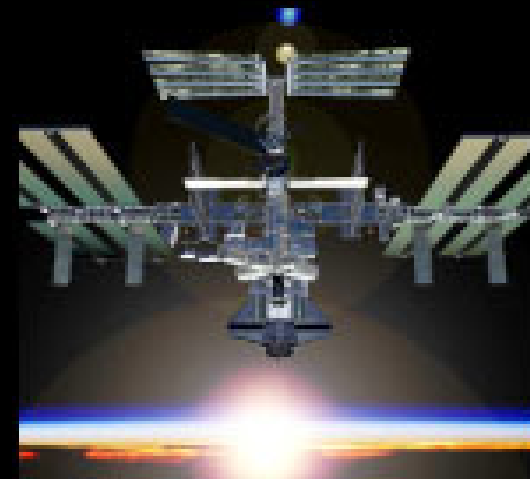
Bands/equipment

Command receiver/decoder - either DTMF tones or simple 1200Bd packet just below 438MHz to avoid the Pave Paws radars

Telemetry transmitter on same frequency simplex to “relay” information regarding control status

Video transmission could be initially SSTV on 28 or 144MHz or, later, analogue FSTV on 2.3GHz

Digital ATV is just developing and should be considered



ATV on the ISS

Summary

Amateurs would be “thrilled” to see what is happening on the ISS or the view of the earth below

They would be even more excited by being able to command part of the ISS

It could not be replicated on the Internet!

The technology exists

