



RS Oscar

Suit-sat

Oscar Samburov



ISS009E10922





## Pictures

SSTV camera –colour high res using ??format

GPS receiver – graphic display location height & speed

On board pressure/temp/voltage/current display (either overlaid or using a “testcard”)

## Audio

Uplink voice with questions from children and downlink questions with answers also with standard greeting & information messages

Maybe on board microphone?



## Attitude Control

- +Coaxially stored gravity boom
- +Magnetic rod and extra mass in each leg

## RF equipment

- +2 metre FM TX -TMD700 perhaps commanded on by using CTCSS tone on 70cms uplink for ?10mins

## Antennas

- Cut down Corona whip for 70cms
- New whip for 2 metres





## Power supplies

- +On board batteries
- +Additional solar cells on legs and/or backpack

## Control system - a single PCB

DTMF mode control using 70cms uplink

Mode A – voice messages cont or on demand

Mode B – SSTV pictures cont or on demand

Mode C – both on 75/25% basis

Voice message uploading





# Suit Sat Temperature Sensor Project

- Place as many heat sensors in various points in the suit, eg feet, legs, hands, etc as possible
- Link to suitable Packet Radio TNC for simple TLM download on 2m or 70 cms packet.
- Ensure TLM equations are available to the public.





# Objectives of Temp Sensor Project

- Monitor temp of sensors as they heat up as suit reaches burn up.
- Possibility of web site (for schools etc) showing temps/sensor positions to observe
- Schools/hams can decode tlm themselves.
- Astronauts might be interested! Schools/hams could keep them informed of changes.
- Competition to estimate time of burn up of suit!







ISS009E10922





# Benefits of adding ARISS antennas to the Columbus module

Will for the first time permit viable 1.3GHz and 2.4GHz ARISS operations.

Will permit parallel operations on new bands.

Wideband or video operations become possible.

Additional emergency links for the astronauts.

