

Columbus Project

Status August 2005

Presented by Gaston Bertels, ON4WF

Patch Antennas UHF and L/S-band

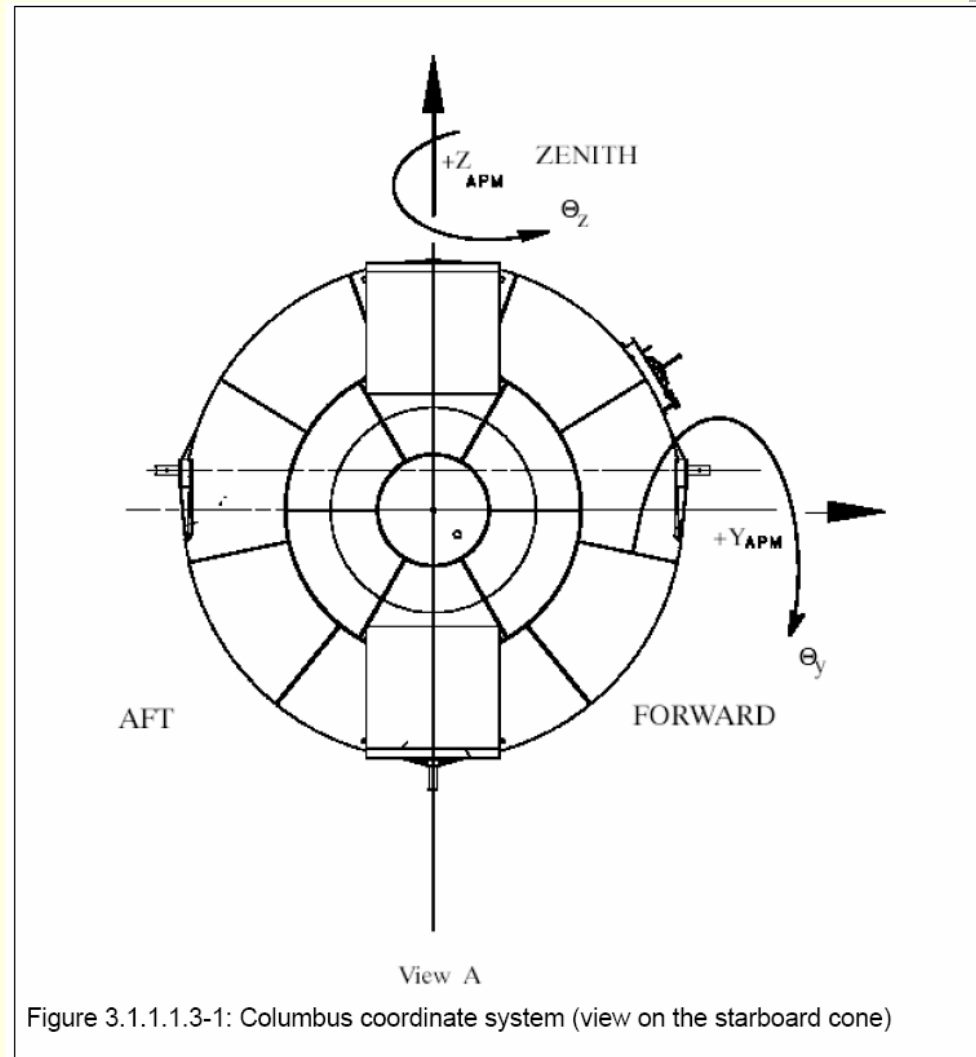
■ Meeting at ESTEC 19 July 2005

■ Participants

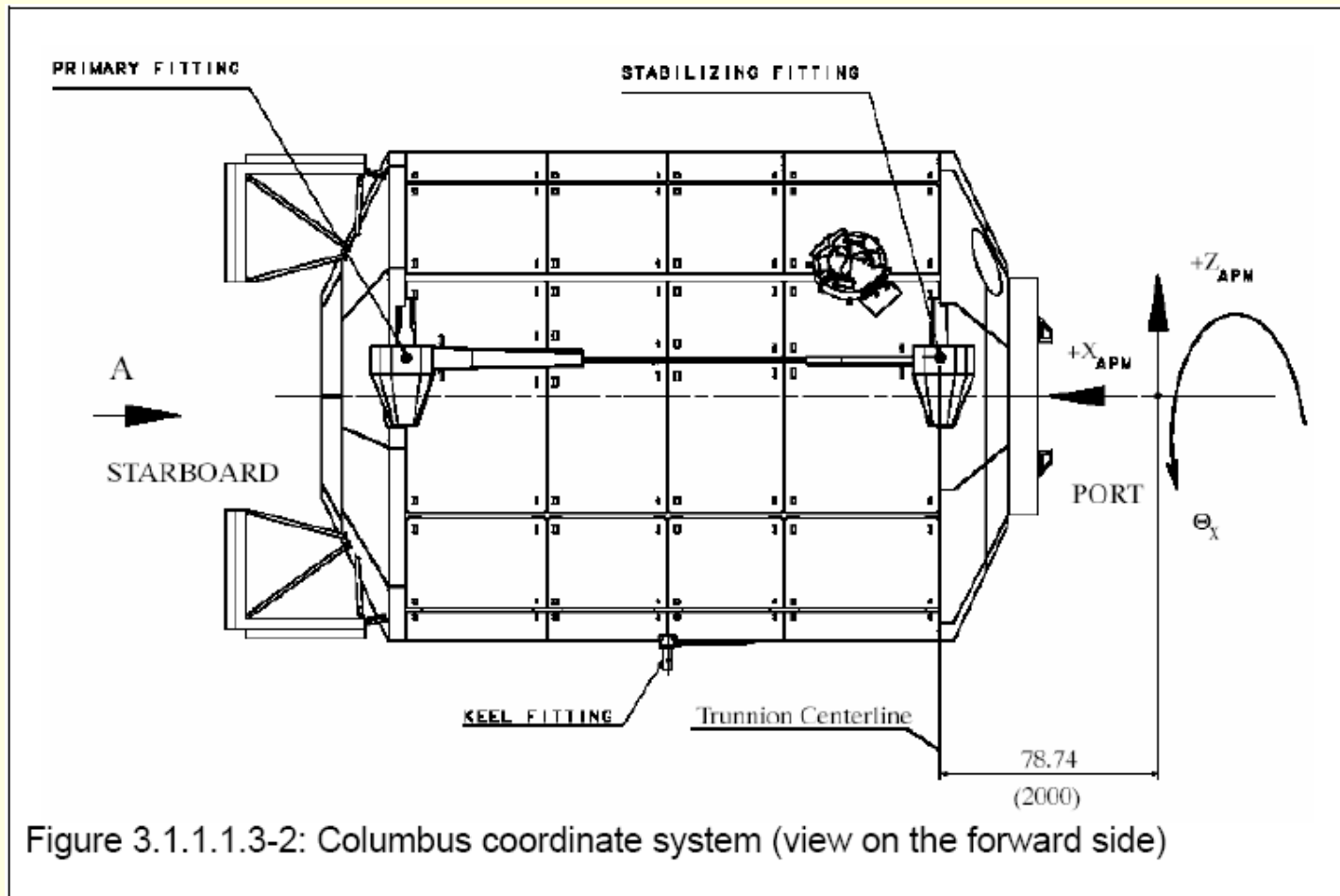
- | | |
|------------------------|--|
| ■ Pawel Kabacik | Wroclaw University of Technology |
| ■ Gaston Bertels | ARISS-Europe |
| ■ Siegfried Keiderling | EADS (European Aeronautic Defence and Space) |
| ■ Abele Quaregna | Alenia Spazio |
| ■ Alessio Festa | ESA/ESTEC |

- L/S Band antenna is under development as per contract with the Royal Belgian Amateur Radio Society. The UHF antenna is subject by the sole initiative of the University which at the moment will only procure the material. It will be developed if sufficient funding will be available but may not be in time for integration in Columbus. The GO/NO GO decision is to be taken between 15 and 20 August 2005.
- ICD (Interface Control Document) has been reviewed and updated.
- ESA will provide to ARISS-Europe (G. Bertels) general information on equipment accommodation inside Columbus included electrical interface data.

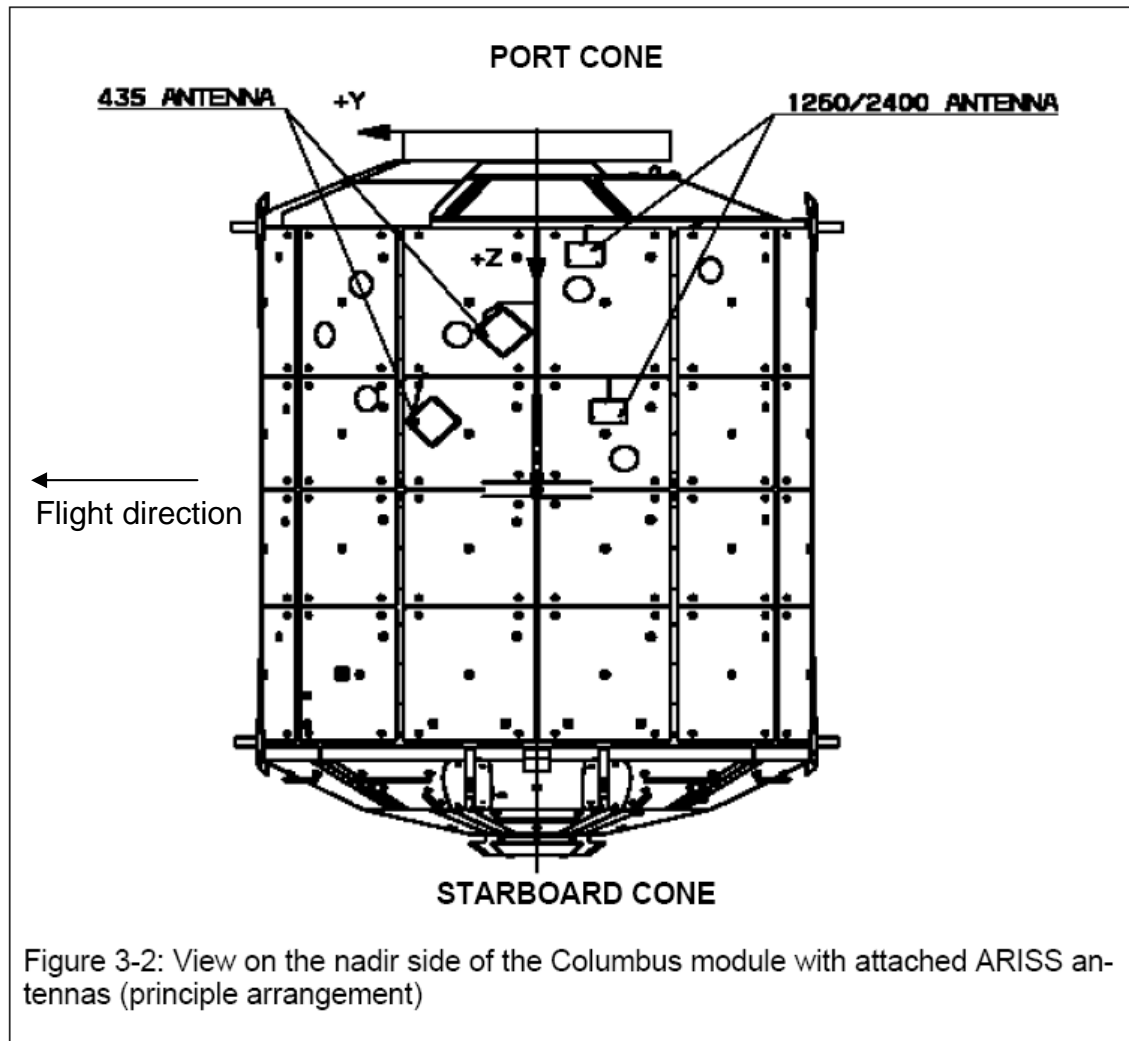
Columbus: Starboard cone



Columbus: Forward side



Columbus: Nadir side



Columbus: MDPS panels

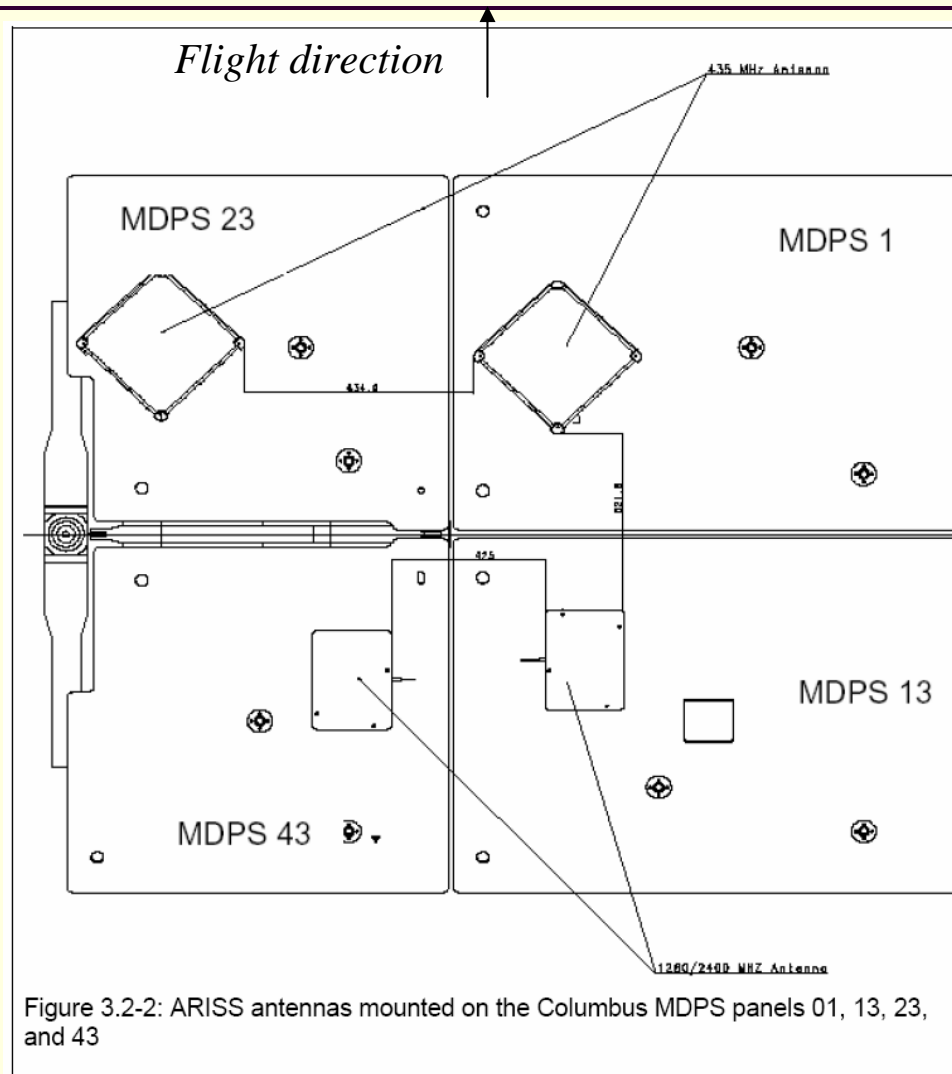


Figure 3.2-2: ARISS antennas mounted on the Columbus MDPS panels 01, 13, 23, and 43

Columbus: Harness routing

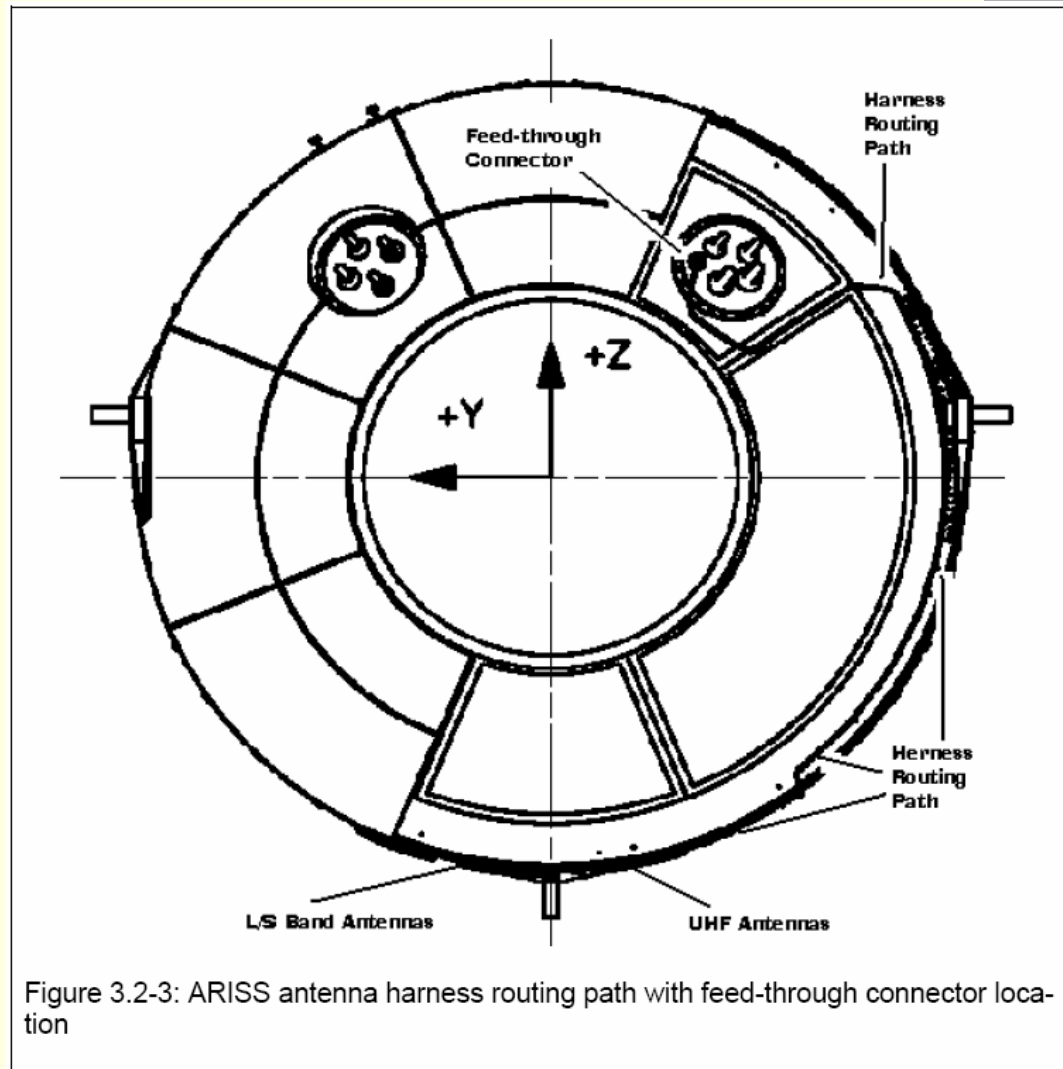


Figure 3.2-3: ARISS antenna harness routing path with feed-through connector location

Columbus: Feedthrough connector

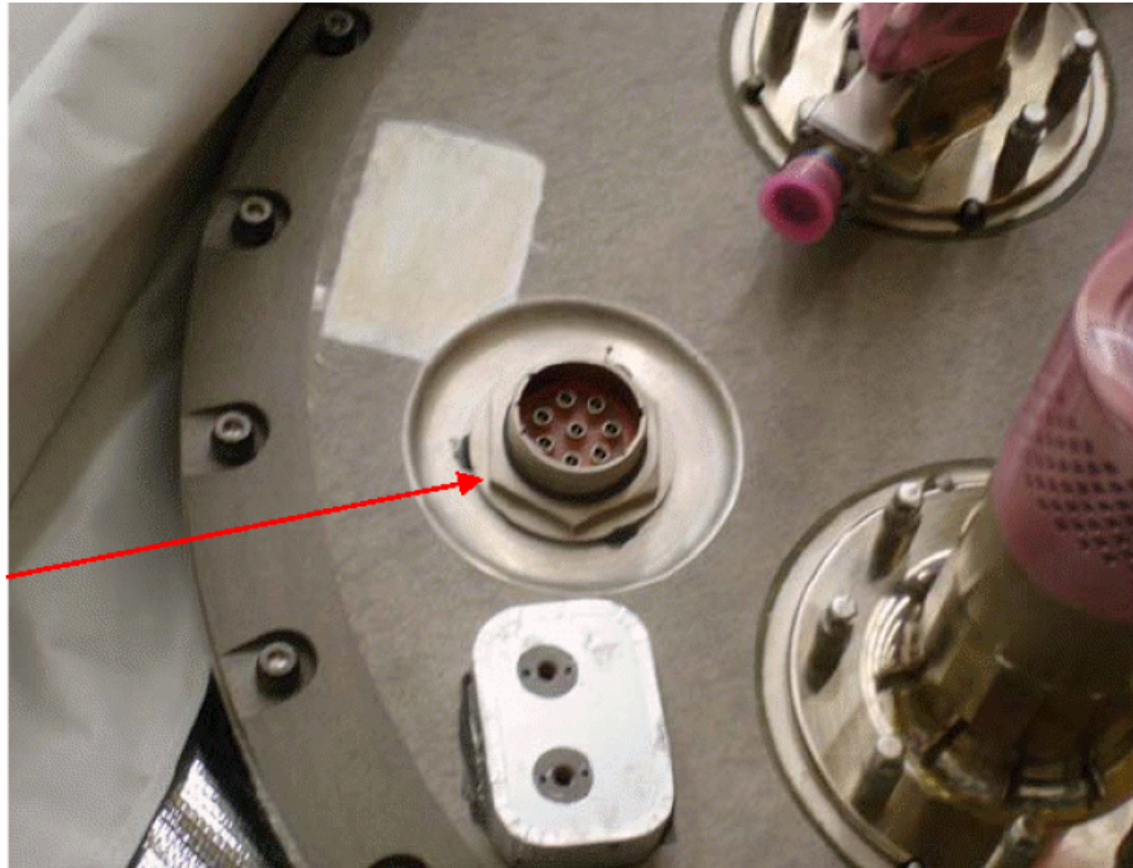


Figure 3.2-4: Feed-through connector on the Cabin Depress Assembly Plate

Columbus: UHF antenna

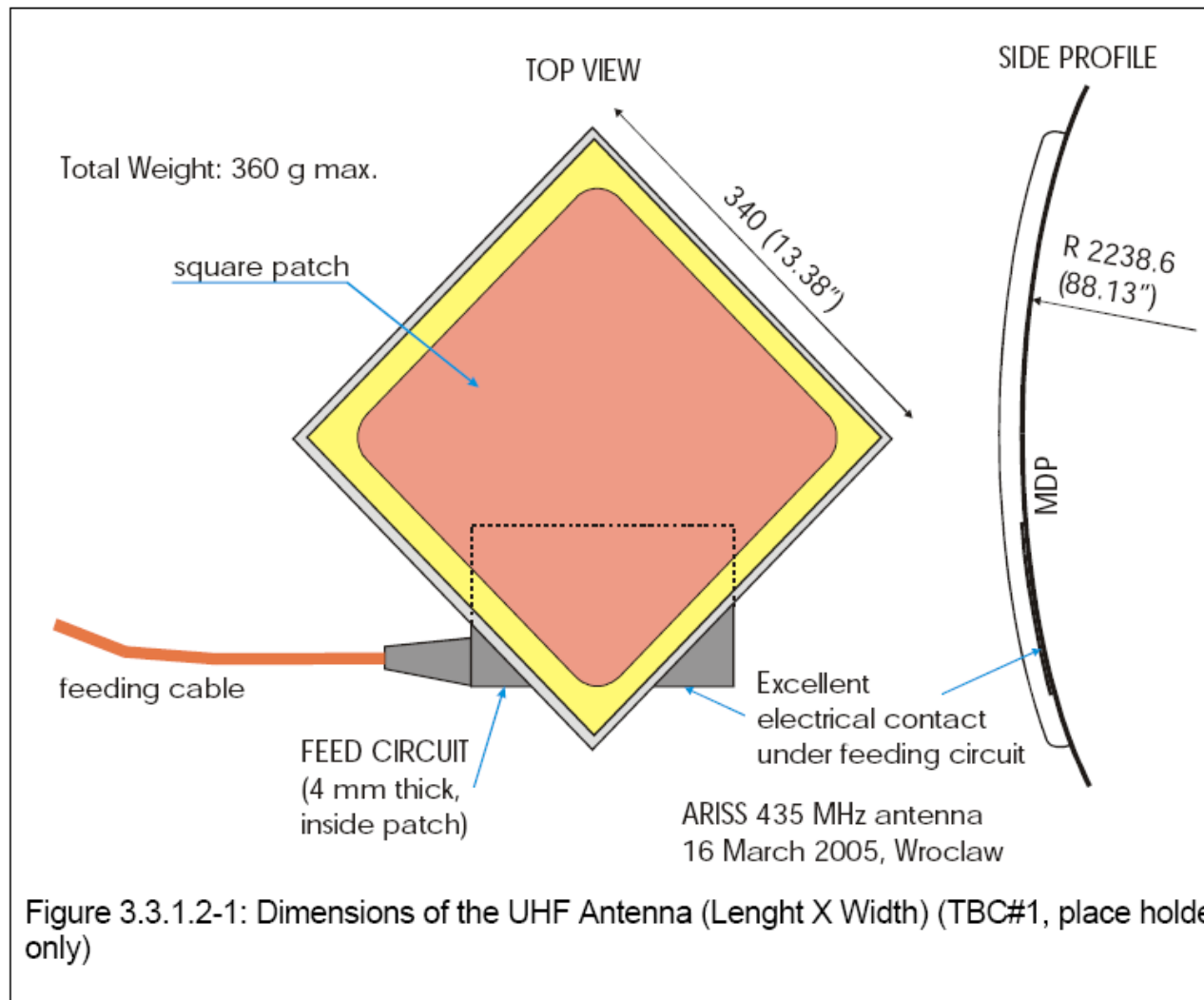


Figure 3.3.1.2-1: Dimensions of the UHF Antenna (Length X Width) (TBC#1, place holder only)

Antennas development schedule (provisional)

- ◆ ICD release 15-8-05
- ◆ Subset of requirements applicable to the antenna 30-9-05
- ◆ Design modification on Columbus side of the i/f 15-11-05
- ◆ Definition of harness routing 15-11-05
- ◆ Antenna delivery to Bremen after qual./acceptance 30-11-05
- ◆ H/w modification on the Columbus side of the i/f 13-1-06
- ◆ Manufacturing and installation of antenna h/w 13-1-06
- ◆ Antenna qual./acceptance data package delivery 13-1-06
- ◆ Antenna installation on MDPS panels 27-1-06
- ◆ MDPS panels reinstallation on Columbus 3-2-06
- ◆ Antenna connection to harness & testing 15-2-06
- ◆ Updating of system documentation 28-2-06

- Reception of antennas: ARISS team

Columbus Equipment

- Columbus Project Team
- Decision on type of equipment
- Work schedule
- Funding
- ...