Task 12.3.2

- What modifications would be required for certain existing modulator models to have compatibility with different klystron models?
- What would be required to support around 25% adjustment in klystron voltage and perveance?
- Some modulator components are fixed as a function of required voltage and current, these would need to be either adjustable or easily replaceable
- What would be the cost of the proposed changes?

Ongoing Activities

- Discussions with modulator manufacturer regarding the required changes

- Investigation in what modulator parameters which would potentially be deteriorated in order to support a larger range of klystrons

- Currently mainly focusing on the following models:

Name	Manufacturer	Freq. [MHz]	kV	A	Pmax	Pavg
CPI	VKX-8311A	11994.2	410	310	50 MW	5 kW
Thales	TH2100C	2998	304	335	45 MW	20 kW

XL-5+ High Efficiency version of XL-5, Parameters Still Partly Unknown

Parameter Uncertainty

- High Efficiency version of the XL-5
- Perveance will be lowered
- Efficiency target is to raise by 25% to 90-95% from 65-70%
- X-Box 2 uses the 50 MW XL-5 tube, what would the drive requirements be for 50 MW output if preveance is lowered?
- How does this effect the modulator requirements?