

WP AION-100

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1. AI-100 site feasibility study (AI-100-1)

- Interface with MAGIS
- Requirements for the site including tower vs shaft study
- Recommendation for shaft or tower solution
- Preliminary list of possible sites in the UK and elsewhere
- Preliminary assessments of the sites – including principal requirements
- Shortlist of sites (may not be needed if the long list is not long!)
- Detailed assessment and surveys of the shortlisted sites
- Recommendation for the AI-100 site
- Proposal for an international collaboration (if site outside of the UK)

2. Interferometer design (AI-100-2)

- Science goal driven requirements for AI-100
- Interface with MAGIS, AI-10 and R&D activities
- Definition of all elements and their interfaces
- Conceptual design
 - AI-100 segmentation decision
 - Vacuum tube & external elements (pumps, shielding, magnets etc)
 - Elements inside of the vacuum tube (atoms, mirrors, coriolis compensation etc)
 - Lasers
- Final design
- Production readiness : Project sign off and issue of the final model and production drawings (TDR published in arxiv.)

3. Support structure design (AI-100-3)

- Requirements for the support structure together with (AI-100-1 and AI-100-2)
- Interface with MAGIS and AI-10
- Interface with the site (shaft or tower) and with the AI-100 interferometer
- Conceptual design
- Final design
- Production readiness : project sign off and issue of the final model and production drawings

4. AI worldwide network (AI-100-4)

- Requirements for the network
- Interface with MAGIS and other Large Scale AI worldwide
- Interface with WP Science and AI-100-2
- Conceptual design
- Final design
- Production readiness: Project sign off and issue of the design of the AI worldwide network

COSTING

	Y1	Y2	Y3	Total (FTE)
(Oversight and organisation)	0.7	0.7	0.55	1.95
Task 1 (Site feasibility)	2.65	0.3	0.2	3.15
Task 2 (Interferometer design)	0.55	3.00	2.2	5.75
Task 3 (Support Structure design)	0.55	1.0	0.4	2.55
Task 4 (Networking)	0.4	0.8	1.3	2.5
Total (Staff/FTE)	3.75	6.5	5.65	15.9 FTE - £1593k
Travel	156k	90k	82k	328k
Working Allowance	60k	60k	60k	180k
Grand Total				£1949.2k