

## Work Package Description NUSTAR Collaboration



Experiment	HISPEC/DESPEC
Workpackage/Deliverable	LYCCA charged particle detector (50-200 MeV/u) (HISPEC)
PSP-code cost-matrix	1.2.2.10
Responsible	Dirk Rudolph
Estimated cost 2011 (k€)	n/a

Milestones		
Approval of TDR (M3)	09.2008	
Funding established (ME1)	12.2010	
Tender completed (ME2)	12.2012	
Contract signed (M4)	*	
Planning completed (M7)	01.2010	
All material acquired (MX1)	12.2013	
Prototype tested (M8)	12.2010	
Acceptance test component completed (M9)	12.2015	
Approval for installation at FAIR experiment cave (M10)	03.2016	
Ready for beam (M11)	03.2016	
Ready for operation with radioactive beam (M12)	03.2016	

## Comments

LYCCA prototypes have been an integral part of the PRESPEC in-beam campaign (LYCCA-0, 2010-2011, about 40% of the NUSTAR system) and the PRESPEC-AGATA campaign (LYCCA-1, 2012 & 2014, about 60% of the NUSTAR system). Upon completion of the PRESPEC-AGATA campaign (4.2014), the LYCCA Chamber and some 4 modules move to Daresbury Laboratory, UK. Between 5.2014 and 3.2015 the major UK components (DSSSD FEE Cards and final ToF Stop detector) are going to be implemented, in line with the UK funding period for LYCCA construction. Upon the UK addition and associated tests, the system is going to be mounted at a beamline at the Cologne Tandem Accelerator. The complete final LYCCA system will be installed to perform in-beam and source acceptance tests to ensure readiness for FAIR by the end of 2015. Until ultimately requested by FAIR for installation at the HISPEC/DESPEC cave – or Super-FRS commissioning -- LYCCA shall remain at Cologne for continued maintenance and (physics) test operation.

<sup>\*</sup> A pre-FAIR in-kind contract exists for the Swedish contribution, 50% of 300kEUR, (Nov. 3<sup>rd</sup> 2009, signed by the FAIR-STI Chair at the time, Prof. A.C. Müller)