

UK Nuclear Physics

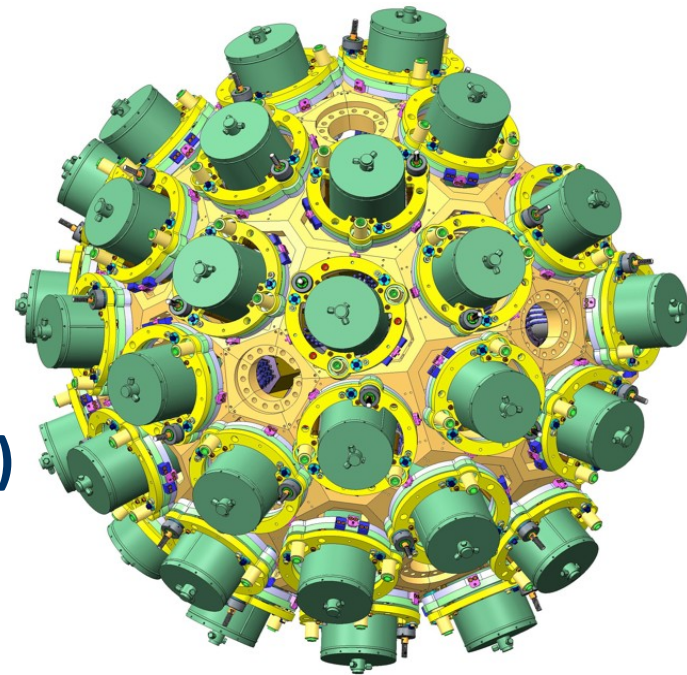
- **Science Areas are:**
 - Nuclear Structure and Nuclear Astrophysics
 - Hadronic Physics
 - Nuclear Theory
- **Industrial Nuclear Data**
- **Public Engagement & Outreach**
- **Applications and Innovation**

Andy Boston ajboston@liverpool.ac.uk

<https://stfc.ukri.org/research/nuclear-physics/>
<https://www.technologysi.stfc.ac.uk/Pages/STFC-Nuclear-Physics-Group.aspx>
<https://stfc.ukri.org/files/uk-nuclear-physics-roadmap/>

News update 1

- **ALICE upgrade and UK ISOL project completion**
- **New project funding: AGATA upgrade -> £4.2M 4 year award**
 - Germanium technology
 - Beyond 1pi
 - Additional gamma detectors and optimisation of signal decomposition
 - Focus on **SPES** and **FAIR** (HISPEC)
- **Consolidated Grant round 2020 (~£15M)**
 - Reviews in progress
 - Awards 2021 - 2024



News update 2

- Strategic advice to council on
 - The PRD scheme
 - Balance of Programmes
- UKRI-STFC Infrastructure Prioritisation Process
- STFC Preliminary proposals
 - Electron-Ion Collider (EIC)
 - Boulby Future: Preliminary Activities toward a Major International Multidisciplinary Science Facility in NE England
 - A Pathway to Detecting Life outside our Solar System: Developing the capability for direct imaging and characterisation of exoplanet atmospheres
 - AGATA – A new generation of electronics

News update 3

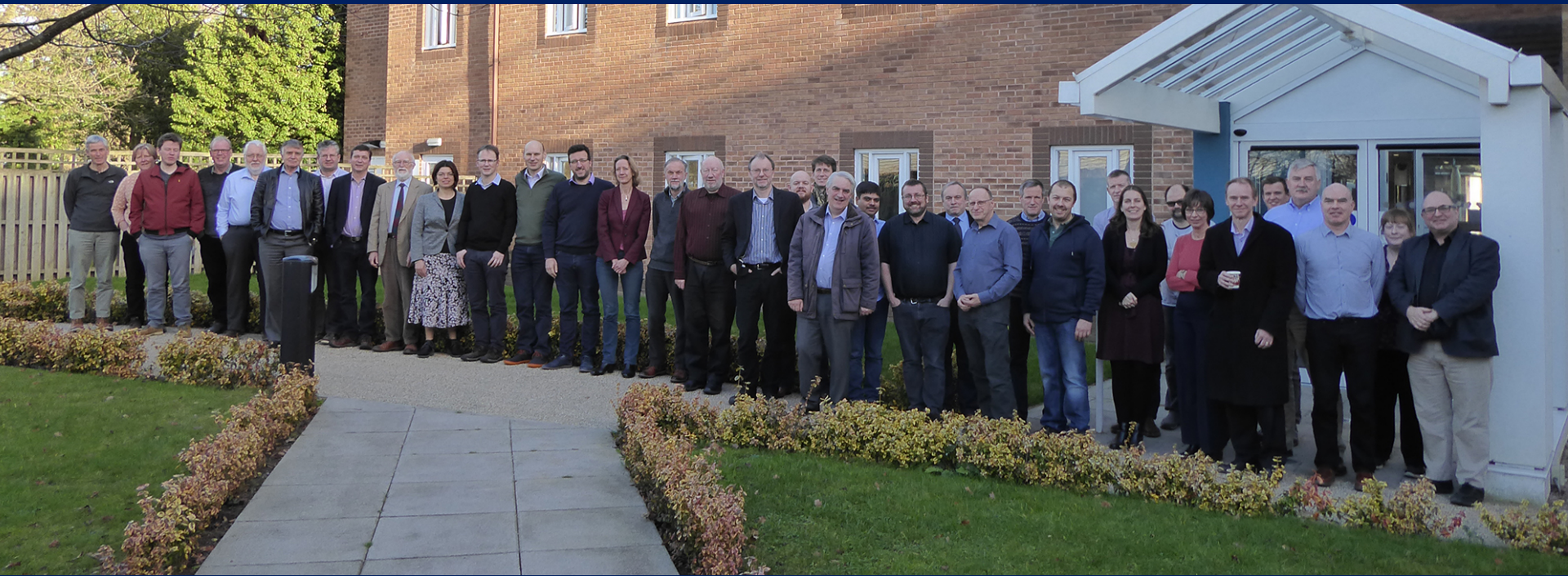
- UKRI-STFC Infrastructure Prioritisation Process
- STFC Full Proposals
 - The Square Kilometre Array (SKA)
 - National Stress Engineering Centre (N-SEC)
 - National Thin Film Deposition and Characterisation Centre
 - Hyper-Kamiokande (Hyper-K)
- STFC Proposals with Future Potential
 - Einstein Telescope (ET)
 - Atom Interferometer Observatory and Network (AION)
(preliminary stage 3 proposal)
 - International Linear Collider (ILC)

Roadmap for existing projects and future opportunities

		2019/20	2020/21	2021/22	2022/2023	2023/24	2024/25	2025/26	2026/27	
Hadronic Physics		ALICE upgrade (LHC)		ALICE exploitation						
					Jlab 2					
				EIC R+D			EIC			
								2032	
								Electron Ion Collider		
								NG ALICE		
		2019/20	2020/21	2021/22	2022/2023	2023/24	2024/25	2025/26	2026/27	
Nuclear Structure & Astrophysics		ISOL/SRS								
		NuSTAR at FAIR							FAIR SFRS	
		AGATA					AGATA 4pi &		exploitation	
				STAR						
			ACPA@ELI				Exploitation at ELI			
			DRACULA FRIB							
					Instrumentation@JYFL					
								2032	
								Future ISOL/EURISOL		
							NuSTAR UG			
		2019/20	2020/21	2021/22	2022/2023	2023/24	2024/25	2025/26	2026/27	
Nuclear Theory			Neutrino-nucleus							
			Fission							
			ongoing		future		exploitation		horizon	
					PRD		exploitation at other facilities inc GSI			

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Thanks to:
EPSRC Nuclear community (Bill Nuttall)
NAILS update (Karl Whittle)



Next community meeting 11 – 12th Jan 2021