

UK Nuclear Physics

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

Size of the UK community

- There are 68 academic/faculty staff @ 11 institutions carrying out nuclear physics research
 - Number has been growing with recent new appointments
 - All (except 3 at STFC Daresbury) are University funded
- There are 60 Research and Professional staff supporting the academic staff
- There are 90 Research students working with the academic staff
- Approximately 48 funded by STFC

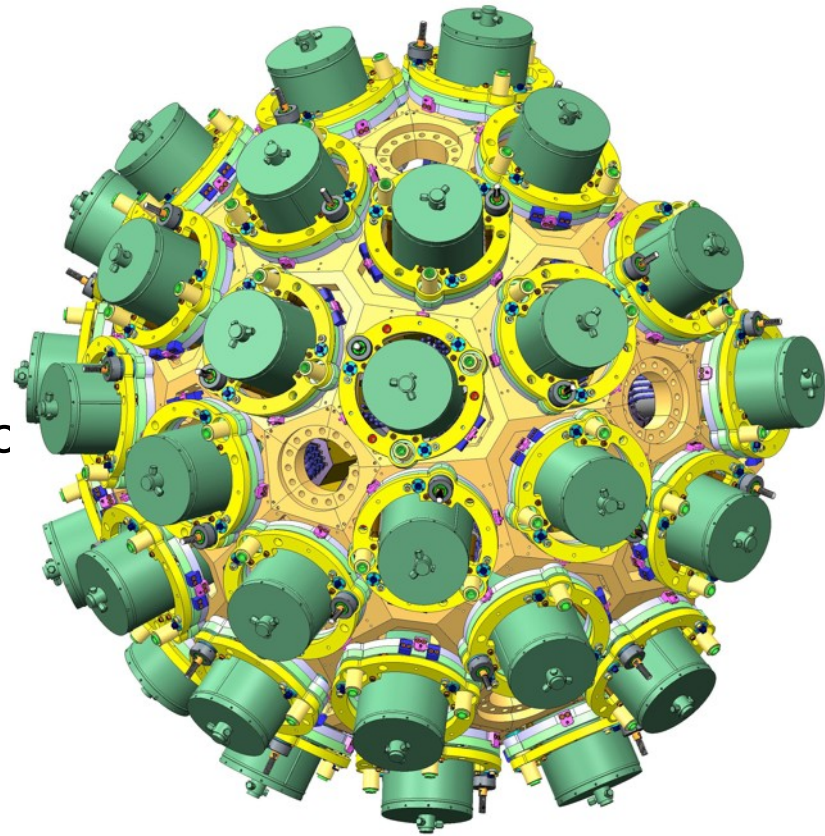
Roadmap for existing projects and future opportunities

	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	
Hadronic Physics	ALICE upgrade (LHC)								
	JLAB upgrade								
				Jlab 2					
				EIC R+D					
							2030	
							Electron Ion Collider		
	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	
Nuclear Structure & Astrophysics	ISOL/SRS								
	NuSTAR at FAIR								
	AGATA exploitation		AGATA upgrade						
						STAR			
			ACPA@ELI						
			DRACULA FRIB						
						Instrumentation@JYFL			
							2030	
							Future ISOL/EURISOL NuSTAR UG		
	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	
Nuclear Theory			Neutrino-nucleus						
			Fission						
		ongoing		future		exploitation		horizon	
				PRD		exploitation at other facilities inc GSI			

Future projects and opportunities

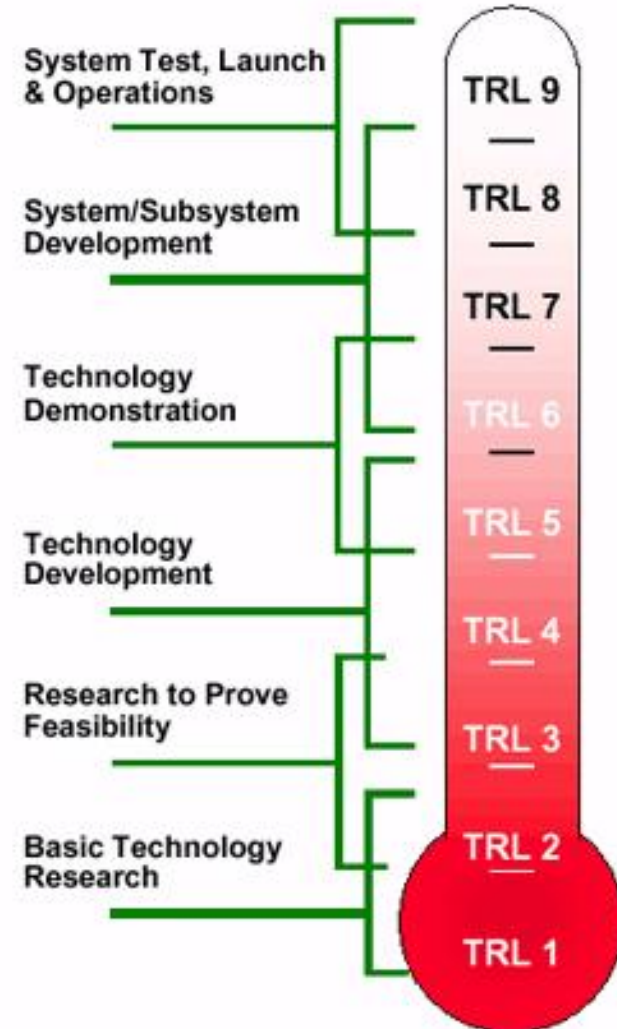
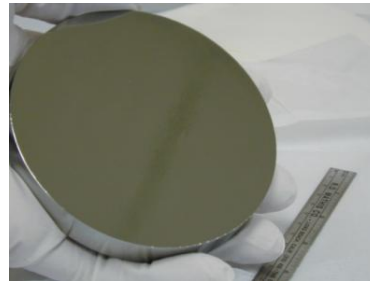
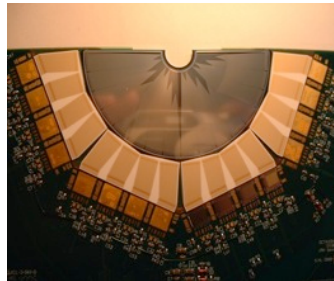
Near-term

- Advance charged-particle array (ACPA@ELI)
 - Silicon based granular array with a focus on **ELI-NP** Gamma-beam applications
- AGATA upgrade
 - Beyond 1π
 - Additional gamma detectors and optimisation of signal decomposition
 - Focus on **SPES** and **FAIR** (HISPEC)



Detectors and instrumentation

- Silicon detector systems, rad hard, pixelated and high speed readout
- Room temperature high Z semiconductors
- Cryogenic detectors
- Mechanical design, carbon fiber fab etc



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Next community meeting 6 – 7th Jan 2020

