

## PAC Days

Boldface = days designated High Impact

Parentheses = days not counting toward High Impact total

## PAC "High Impact" Selection

Row Color

Yellow = High Impact

Green = backup expt

Exp#	Exp Name	Hall	Run Group/Days	PAC Days	PAC Grade	Comments
<b>TOPIC 1: SPECTROSCOPY</b>						
E12-06-102	<b>GlueX</b> : Mapping the Spectrum of Light Quark Mesons and Gluonic Excitations with Linearly Polarized Photons	D		(120) approved ★90	A	GlueX - assumed half commissioning/half physics ★plus (30) commissioning days
E12-16-007	A Search for the LHCb Charmed "Pentaquark" using Photoproduction of J/Psi at Threshold in Hall C at Jefferson Lab	C		11	A	
<b>TOPIC 2: FORM FACTORS</b>						
E12-06-101	Measurement of the Charged <b>Pion Form Factor</b> to High Q <sup>2</sup>	C		52	A	Requires fully commissioned SHMS
E12-07-109	<b>GEp/GMp</b> : Large Acceptance Proton Form Factor Ratio Meas's at 13 and 15 (GeV/c) <sup>2</sup> Using Recoil Polarization Method	A		45	A-	Requires SBS and high power cryo target
E12-11-106	High Precision Measurement of the <b>Proton Charge Radius</b>	B		15	A	Non-CLAS12 experiment, Prad
<b>TOPIC 3: PDFs</b>						
E12-06-113	<b>BONuS</b> : The Structure of the Free Neutron at Large x-Bjorken	B	F/40	(40) approved ★21 ↓	A	Requires BONuS Radial TPC upgrade ★42 days <b>High Impact</b> for the experiment
E12-10-103	<b>MARATHON</b> : Measurement of the F <sub>2n</sub> /F <sub>2p</sub> , d/u Ratios and A=3 EMC Effect in DIS off the Tritium and Helium Mirror Nuclei	A	Tritium target group/61	↑ ★21 (42) approved	A	<b>that runs first; experiments are equally important &amp; both are essential</b>
E12-06-110	<b>A1n HallC-3He</b> : Meas of Neutron Spin Asymmetry A <sub>1n</sub> in the Valence Quark Region Using an 11 GeV Beam and a Polarized 3He Target in Hall C	C		36	A	Requires high luminosity 3He
<b>TOPIC 4T: TMDs</b>						
C12-11-111	<b>TMD CLAS-HDICE</b> : SIDIS on Transverse polarized target	B	G/110	110 concurrent	A	Requires transversely polarized HDICE with electron beam
C12-12-009	<b>Dihadron CLAS-HDICE</b> : Measurement of transversity with dihadron production in SIDIS with transversely polarized target	B	G/110	(110) concurrent	A	Requires transversely polarized HDICE with electron beam C1 Proposal
E12-06-112	<b>TMD CLAS-H(Unpol)</b> : Probing the Proton's Quark Dynamics in Semi-Inclusive Pion Production at 12 GeV	B	A/139	(60) approved ★10	A	Hall B commissioning + 10 days ★plus (50) commissioning days
<b>TOPIC 4G: GPDs</b>						
E12-06-114	<b>DVCS HallA-H(UU,LU)</b> : Measurements of Electron-Helicity Dependent Cross Sections of DVCS with CEBAF at 12 GeV	A	Early: DVCS & GMp/62	(100) approved ★70	A	Hall A commissioning
C12-12-010	<b>DVCS CLAS-HDICE</b> : DVCS at 11 GeV with transversely polarized target using the CLAS12 Detector	B	G/110	(110) concurrent	A	Requires transversely polarized HDICE with electron beam C1 Proposal

E12-11-003	DVCS CLAS-D(UU,LU): DVCS on the Neutron with CLAS12 at 11 GeV	B	B/90	(90) approved	A	Requires D target; central neutron detector ready in 2016 ★Backup GPD-E meas if HDIce delayed
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TOPIC 5: NUCLEAR

E12-13-005	Bubble Chamber: Measurement of $^{16}O^{(\pm)}$ $^{12}C$ with a bubblechamber and a bremsstrahlung beam	INJ		14	A-	Our guess: 2017
E12-11-101	PREx-II: Precision Parity-Violating Measurement of the Neutron Skin of Lead	A		35	A	Requires septum, Pb target, 1% Moller polarimetry
E12-06-105	SRC-hiX: Inclusive Scattering from Nuclei at $\sqrt{s} > 1$ in the quasielastic and deeply inelastic regimes	C		32	A-	
E12-11-112	SRC-Tritium: Precision measurement of the isospin dependence in the 2N and 3N short range correlation region	A	Tritium target group/61	19	A-	
E12-17-003	Determining the Unknown Lambda-n Interaction by Investigating the Lambda- $\bar{n}$ Resonance	A		12	A-	

TOPIC 6: FUNDAMENTAL SYMMETRIES

E12-11-006	HPS: Status of the Heavy Photon Search Experiment at Jefferson Laboratory (Update on PR12_11_006)	B	H/180	(155) approved ★39	A	Non-CLAS12 experiment, HPS ★25 pre-CLAS engr + 14 physics @ 4.4 GeV
E12-10-009	APEX: Search for new Vector Boson A1 Decaying to $e^+e^-$	A		34	A	

<<<SUMMARY of "HIGH IMPACT" DAYS>>>

by Topic	1	2	3	4GT	5	6	total post - commissioning
	101	112	78	190	112	73	666
Days Comp	20	15		50		15	
	81	97	78	140	112	58	566
by Hall	A	B	C	D	INJ		
	236	195	131	90	14		666