

Deliverable	Deliver to	From	Date likely	Date needed
Testing Q4 2016				
Set up UK test (RCE-artDAQ)	UK-test	Oxford	10-Sep-2016	1-Nov-2016
Set up UK test develop fw/sw	UK-test	Oxford	1-Dec-2016	1-Dec-2016
Throughput testing	Any-test	FNAL/UK	15-Oct-2016	1-Dec-2016
EVB Software (artdaq) – Fermilab Vertical Slice Test	FNAL-test	FNAL	15-Oct-2016	1-Dec-2016
Test improvements in artDAQ features	Any-test	FNAL/UK	1-Nov-2016	31-Mar-2017
Test command line run control	CERN-test	FNAL/CERN	15-Nov-2016	15-Mar-2017
Develop monitoring plots (online mon) on test stands	Any-test	FNAL/UK	1-Dec-2016	31-Mar-2017
Prototype timing with one end-node	UK-test	Bri/Ox	15-Nov-2016	15-Dec-2016
Test at Oxford of timing into RCE with old RTM	UK-test	Bri/Ox	15-Nov-2016	1-Dec-2016
Program config interface between timing and DAQ	UK-test	Bri+Ox	15-Nov-2016	15-Dec-2016
Use emuWIB board to program config interface to DAQ	UK-test	Oxford	15-Nov-2016	15-Dec-2016
Test WIB software interface functions on emuWIB	UK-test	BU/Ox	1-Dec-2016	1-Dec-2016
Initial tests initialization emuWIB-RCE from artDAQ	UK-test	SLAC/BU	1-Nov-2016	1-Nov-2016
Develop (initial testing) data transfer link WIB-RCE	FNAL(or SLAC)	SLAC/BU	15-Oct-2016	15-Nov-2016
Test timing prototype with new RTM	UK-test	Bri/Ox/SLAC	1-Dec-2016	1-Dec-2016
Test timing prototype with SSP	UK-test	Ox+War+Arg	1-Dec-2016	1-Dec-2016
Small timing HW for WIB-RCE combo to FNAL (or SLAC/BU)	FNAL(or SLAC)	SLAC/BU	1-Oct-2016	1-Nov-2016
Check timing into WIB-RCE combo	FNAL(or SLAC)	SLAC/BU	1-Oct-2016	1-Nov-2016
Extensive tests of data pattern transfer WIB-RCE	FNAL-test	SLAC/BU	1-Dec-2016	1-Dec-2016
WIB emulation data to FELIX	NIKHEF	NIKHEF	1-Dec-2016	1-Feb-2017
Jan-2017				
Initial tests of online monitoring with HW	CERN-test	Team	10-Jan-2017	15-Mar-2017
Noise test diagnostic histo in online mon	CERN-test	Team	10-Jan-2017	15-Mar-2017
Initial assembly of components in racks	CERN-test	Team	10-Jan-2017	20-Jan-2017
Power and networking and other cabling to computing	CERN-test	Team	10-Jan-2017	20-Jan-2017
Software installation (if not preinstalled)	CERN-test	Team	10-Jan-2017	20-Jan-2017
Clone teststand software setup from UK-test or FNAL-test	CERN-test	Team	15-Jan-2017	25-Jan-2017
Run Control - JCOP+artDAQ test version	CERN-test		1-Jan-2017	1-Feb-2017
Feb-2017				
Initial tests initialization FEMB-WIB-RCE from artDAQ	CERN-test	Team	1-Feb-2017	1-Feb-2017
Setup of first SSPs at CERN	CERN-test	Team	15-Feb-2017	15-Feb-2017

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More extensive tests of data transfer WIB-RCE	CERN-test	Team	15-Feb-2017	15-Feb-2017
Test new SSP data format and BoardReader	CERN-test	Warwick	20-Feb-2017	1-Mar-2017
Test new RCE data format and BoardReader	CERN-test		1-Feb-2017	1-Mar-2017
Mar-2017				
Extensive tests of FEMB data transfer FEMB-WIB-RCE	CERN-test	Team	1-Mar-2017	1-Mar-2017
Sync tests (pulse FEMB, SSP) appear in data at same time?	CERN-test	Team	1-Mar-2017	1-Mar-2017
Sync tests (pulse multiple FEMB, multiple COBs)	CERN-test	Team	15-Mar-2017	15-Mar-2017
artDAQ integration tests - trigger inhibits	CERN-test		15-Mar-2017	15-Mar-2017
RCE Monitoring code and decompression	CERN-test		1-Mar-2017	1-Apr-2017
Run Control Monitoring Metrics	CERN-test	FNAL/Bern	1-Mar-2017	1-Apr-2017
Prototype trigger testing	CERN-test		1-Mar-2017	1-Jun-2017
Apr-2017				
Timing system for APA tests arrive at CERN	CERN-test	Team	1-Apr-2017	1-May-2017
Test newly-arrived timing parts before installing in APA test	CERN-test	Team	15-Apr-2017	1-May-2017
Establish gateway computers with network in barrack	CERN-test	Team	1-Apr-2017	1-Sep-2017
Full set of COBs, aTCA, RTMs for APA test arrive at CERN	CERN-test	Team	1-Apr-2017	1-Sep-2017
Full set of SSPs for APA test arrive at CERN	CERN-test	Team	1-Apr-2017	1-Sep-2017
Full set of WIBs, flanges, FEMBs for APA#1 test arrive at CERN	CERN-test	Team	1-Apr-2017	1-Sep-2017
Full set of computers for APA test arrive at CERN	CERN-test	Team	1-Apr-2017	1-Sep-2017
EVN Software (artdaq) – CERN Vertical Slice Test	CERN-test	FNAL	1-Apr-2017	1-Jun-2017
Updated SSP boardreader, test SSP & timing & triggering functionality	CERN-test	Warwick	1-Apr-2017	1-Jun-2017
validate DAQ cluster hardware	CERN-test		1-Apr-2017	1-Jun-2017
Prototype testing with BI DAQ	CERN-test		1-Apr-2017	1-Jun-2017
May-2017				
Install equipment for APA test at CERN [big task]	CERN-test	Team	1-May-2017	1-Jun-2017
Slow control user panels for APA test components	CERN-test	Team	1-May-2017	1-Jun-2017
Step-by-step commissioning of APA test area DAQ	CERN-test	Team	1-May-2017	1-Jun-2017
Safety inspections	CERN-test	Team	1-May-2017	1-Jun-2017
Hand over APA test area to operators	CERN-test	Team	1-May-2017	1-Jun-2017
Mock data challenge from DAQ to storage	CERN-test	Team	1-May-2017	1-May-2017
Simulation of trigger board FW	CERN-test		1-May-2017	1-Jun-2017

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FELIX board Reader	CERN-test		1-May-2017	1-Jul-2017
Jun-Sept 2017				
Continue to make and test enhancements to DAQ	CERN-test		1-Jun-2017	
Add beam counter and BPM hardware, commission trigger	CERN-test		1-Jun-2017	1-Jul-2017
Test partitioning functionality for DAQ	CERN-test		1-Jun-2017	1-Jul-2017
Run Control - JCOP+artDAQ real version - basic functionality	CERN-test		1-Jun-2017	1-Jul-2017
Final timing system arrives at CERN	CERN-test		1-Jun-2017	1-Sep-2017
Step-by-step commissioning as new APAs installed DAQ	CERN-test			1-Sep-2017
Safety inspections	CERN-test			1-Sep-2017
Hand over partitioned operation to operators	CERN-test		1-Jun-2017	1-Jul-2017
EVB Software (artdaq) – ProtoDUNE-SP DAQ System	CERN-test	FNAL		1-Sep-2017
Configuration Control - test functionality	CERN-test		1-Jun-2017	1-Sep-2017
New trigger board testing with BI	CERN-test		1-Jun-2017	1-Jul-2017
Sept-Dec 2017				
Configuration Control - full functionality	CERN-test		1-Sep-2017	1-Dec-2017
DQ monitoring framework complete - core plots available	CERN-test		1-Sep-2017	1-Sep-2017
Full monitoring of dataflow, HW	CERN-test		1-Sep-2017	1-Sep-2017
Test of all calibration modes	CERN-test		1-Nov-2017	1-Dec-2017
Run Control - JCOP+artDAQ real version - complete functionality	CERN-test	Team	1-Oct-2017	1-Dec-2017
Full data challenge - all APAs, full DAQ readout HW	CERN-test		1-Dec-2017	1-Dec-2017
Full trigger board FW and testing complete	CERN-test		1-Oct-2017	1-Dec-2017
2018 - commissioning				
Integrate development and APA testing DAQs	CERN-test		1-Jan-2018	1-Mar-2018
Virtual partitioning (per APA)	CERN-test		1-Jan-2018	1-Mar-2018
DQ monitoring framework complete - physics plots available	CERN-test		1-Jan-2018	1-Mar-2018
Cosmic testing	CERN-test		1-Feb-2018	1-May-2018
Beamline commissioning tests	CERN-test		1-Apr-2018	1-Apr-2018
Shift weeks (mock data running with cosmics)	CERN-test		1-May-2018	1-May-2018
Test of all Run Modes	CERN-test		1-May-2018	1-May-2018

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Hardware Q4 2016				
Procure Oxford aTCA crate + COB	UK-test	SLAC	delivered	1-Oct-16
Specimin SSP for fragment generator development	UK-test	Argonne	delivered	2-Sep
Some computers from 35t	UK-test	UK	delivered	2-Sep-16
10G network (redeployed at CERN later)	UK-test	UK	15-Nov-2016	1-Dec-16
Some computers from 35t and some new ones	FNAL-test	UK/FNAL	delivered	15-Sep
First COB+aTCA crate [to FNAL from 35t]	FNAL-test	SLAC	delivered	1-Oct-16
Some prototype timing electronics to test	UK-test	Bristol	15-Nov-2016	1-Dec-16
Modify old RTM firmware for new timing input	UK-test	SLAC or Bri/	delivered	1-Oct-16
emuWIB emulator board to UK (Eth interface firmware only)	UK-test	Boston	15-Nov-2016	1-Dec-16
First new RTM hardware	FNAL(or SLA	SLAC	delivered	11-Sep-16
First firmware for new RTM for WIB interface	FNAL(or SLA	SLAC	15-Nov-2016	1-Dec-16
WIB to FNAL (or SLAC/BU)	FNAL(or SLA	BNL	delivered	1-Oct-16
Prototype timing system with three end-nodes	UK-test	Bristol	15-Nov-2016	1-Dec-16
Second new RTM	UK-test	SLAC	1-Dec-2016	1-Dec-16
Upgrade SSP in UK for new timing	UK-test	Argonne	1-Dec-2016	1-Dec-16
Jan-2017				
Computers for testing arrive at CERN	CERN-test	UK	15-Dec-2016	1-Jan-17
Networking for testing arrive at CERN	CERN-test	UK	15-Dec-2016	1-Jan-17
Timing system for test setup arrives at CERN	CERN-test	Bristol	15-Dec-2016	1-Jan-17
aTCA crate for testing arrives at CERN	CERN-test	SLAC	15-Dec-2016	1-Jan-17
RCE/COB arrives at CERN	CERN-test	SLAC	15-Dec-2016	1-Jan-17
WIB arrives at CERN	CERN-test	BU	15-Dec-2016	1-Jan-17
CE for test stand arrives at CERN	CERN-test	BNL	15-Dec-2016	1-Jan-17
Some SSPs arrive at CERN	CERN-test	Argonne	15-Dec-2016	1-Jan-17
Calibration pulser to CERN	CERN-test	Argonne	15-Dec-2016	1-Jan-17
Feb-2017				
Rack installation			1-Feb-2017	
Control room installation			1-Feb-2017	
Mar-2017				
EHN1 available			1-Mar-2017	
APA 1 arrives CERN			1-Mar-2017	

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Apr-2017				
Full set of COBs, aTCA, RTMs for APA test arrive at CERN	CERN-test	Team	1-Apr-2017	
Full set of SSPs for APA test arrive at CERN	CERN-test	Team	1-Apr-2017	
Full set of WIBs, flanges, FEMBs for APA#1 test arrive at CERN	CERN-test	Team	1-Apr-2017	
Full set of computers for APA test arrive at CERN	CERN-test	Team	1-Apr-2017	
May-2017				
APA 2 arrives at CERN			1-May-2017	
Jun-Sept 2017				
APA 2 arrives at CERN			1-Aug-2017	
Trigger board arrives at CERN			1-Jun-2017	
Beam Inst. Prototypes available			1-Jun-2017	
Sept-Dec 2017				
APA 4-6 arrives at CERN			1-Dec-2017	
Full DAQ computing hardware at CERN			1-Dec-2017	
2018 - commissioning				
Field cage installed			1-Feb-2018	
Beam line commissioning			1-Apr-2018	
Cryostat filling			1-May-2018	
DATA TAKING			1-Jul-2018	