

HETDEX Acronyms

August 2021

Comments to Robyn Henry
McDonald Observatory
The University of Texas at Austin
USA (432)426-3664
rhenry@astro.as.utexas.edu

Function	Signature	Date
Originator	Richard Savage	9/21/08
Principal Investigator	Gary Hill	9/21/08
HET Facility Manager	Herman Kriel	02/01/09
Editor	Robyn Henry	07/11/17

Revision Summary

1. Date: 23 February 2008

Revision: 1

ECR: NA

2. Date: 2 April 2008

Revision: 2

ECR: 0007

3. Date: 8 September 2008

Revision: 3

ECR: 0013

4. Date: 25 March 2009

Revision: 4

ECR: 0025

5. Date: 6 July 2009

Revision: 5

ECR: 0030

6. Date: 19 June 2013

Revision: 6

ECR: 0095

7. Date: 9 September 2015

Revision: 7

ECR: 0123

8. Date: 21 September 2015

Revision: 8

ECR: 0124

9. Date: 14 December 2015

Revision: 9

ECR: 0126

10. Date 11 July 2017

Revision: 10

ECR: 0128

11. Date 10 August 2017

Revision: 11

ECR: 0129

12. Date 9 October 2017

Revision: 12

ECR: 0130

13. Date 31 May 2018

Revision: 13

Based on Comments from HET Operations Staff

14. Date 12 June 2019

Revision: 14

Based on New Procedures and Comments from HET Operations Staff

15. Date 17 November 2020

Revision: 15

Based on input from Gary Hill

16. Date 17 June 2021

Revision: 16

Based on input from Steven Janowiecki

17. Date 02 August 2021

Revision: 17

Based on input from John Good and Hanshin Lee

Table of Contents

1	Introduction	7
2	Acronyms	7

1 Introduction

This document contains a list of acronyms that are used throughout the HETDEX project. It will be periodically updated by systems engineering as the project progresses.

2 Acronyms and Abbreviations

AC	A lternating C urrent
ACAM	A cquisition C amera
ACFM	A ctual C ubic F eet p er M inute
ACQ	A cquisition C amera
ACT	A ppplied C ryogenic T echnology
ADC	A tmospheric D ispersion C orrector A nalog-to- D igital C onverter
ADU	A nalog-to- D igital U nits
AHU	A ir H andling U nit
AIP	A strofysikalisches I nstitut P otsdam A uxiliary I nstrument P ort
AL	A stronomer's L odge
AMB	A lignment M aintenance B aseline
ANSI	A merican N ational S tandards I nstitute
AOA	A daptive O ptics A ssociates
AOI	A nge o f I ncidence
API	A pplication P rogramming I nterface
AR	A nti R election
ARC	A stronomical R esearch C ameras I nc
ARL	A ppplied R esearch L ab
ARO	A fter R eceipt of O rders
ASCII	A merican S tandard C ode for I nformation I nterchange
ASE	A mplified S pontaneous E mission
ASIC	A pplication- S pecific I ntegrated C ircuit
ASME	A merican S ociety of M echanical E ngineers

ATP	Acceptance Test Plan Adjustable Tail Piece
ATST	Advanced Technology Solar Telescope
AWFS	Analysis Wavefront Sensor (in reality same as DWFS08)
BAO	Baryonic Acoustic Oscillations
BC	Bayonet Connection
BCD	Bank Control Demon Binary Coded Decimal
BIB	Boresight Imaging Bundle
BOM	Bill of Materials
CAD	Computer Aided Design
CAMRA	CCD Array Management and Recording Application
CAN	Controller Area Network
CAT	Celestron Alignment Telescope
CBA	Cold Block Assembly
CC	Conduit Clamp
CCAS	Center of Curvature Alignment System
CCB	Change Control Board
CCD	Charge Coupled Device
CCP	Cluster Control Processor
CD	Compact Disk Contractor Deliverable
CDR	Critical Design Review
CDRC	Cluster Data Router/Concentrator
CEM	Center for Electromechanics
CF	Contractor Furnished
CFB	Coherent Fiber Bundle
CFD	Computational Fluid Dynamics Constant Force Drive

CG	Center of Gravity
CGA	Compressed Gas Association
CLC	Circle of Least Confusion
COC	Center of Curvature
CMA	Camera-Mirror Assembly (VIRUS)
CoDR	Conceptual Design Review
COLC	Circle of Least Confusion
COTS	Commercial Off the Shelf
CPU	Central Processing Unit
CQI	Catalog Query Interface
CS	Cryogenic System
CSS	Cryogenic Safety System
CTE	Charge Transfer Efficiency
	Coefficient of Thermal Expansion
CV	Check Valve
CWFS	Calibration Wavefront Sensor
DAS	Data Acquisition Software
	Data Acquisition System
	Dome Automation Server
DEC	Declination
DC	Direct Current
DEX	Dark Energy Experiment
DIMM	Differential Image Motion Monitor
DMI	Distance Measuring Interferometer
DOF	Degrees of Freedom
DPT	Differential Pressure Transmitter
DR	Design Review
DSF	Defocused Spectral Flats
DSP	Digital Signal Processor

DVS	Dome Ventilation System
dWFS	deployable Wavefront Sensor (have numbers to ID)
EAP	Elevated Auxiliary Platform
ECR	Engineering Change Request
EE50	50% Encircled Energy
EE80	80% Encircled Energy
EFL	Effective Focal Length
EMO	Emergency Off
ENWA	Entrance Window Assembly
EOM	End of Message
EON	End of Night
ESC	EGun Source Controller
ESD	Electrostatic Discharge
ESTOP	Emergency Stop
EXWA	Exit Window Assembly
FAT	Factory Acceptance Test
FAT32	File Allocation Table (32)
FATP	Factory Acceptance Test Plan
FBS	Fiber Bundle Sleeve
FCU	Facility Calibration Unit
FEA	Finite Element Analysis
FF	Field Flattener
FFLA	Field Flattener Lens Assembly
FIF	Fiber Instrument Feed
FITS	Flexible Image Transport System
FMS	Fiber Management System
FOV	Field of View
FRD	Focal Ratio Degradation
FWHM	Full Width at Half Max

GP1	Guide Probe 1
GP2	Guide Probe 2
GB	Giga Byte Groove Block
GBA	Groove Block Assembly
GBC	Groove Block Cap
GC	Guide Camera
GFoV	Guiding Field of View
GMT	Giant Magellan Telescope
GRoC	Global Radius of Curvature
GTAG	George T. Abell Visitors Gallery
GUI	Graphical User Interface
HEFI	Hartmann Extra Focal Instrument
HE	High Efficiency
HET	Hobby-Eberly Telescope
HETDEX	Hobby-Eberly Telescope Dark Energy Experiment
HCP	Hexagonal Close Pack
HFC	Hardware Fault Controller
HObs	HET Observation Scheduler
HPF ACQ	Habitable Planet Finder Acquisition Camera
HRS	High Resolution Spectrograph
HTF	Hartmann Test Fixture
Htopx	HET target selection tool
HVAC	Heating, Ventilation and Air Conditioning
HPF	Habitable Zone Planet Finder
IC	Inside Cryostat
ICD	Interface Control Document
ICL	Input Cover Lens
ICP	Information Control Plan

ID	I dentification
	Inside D ome
	Inside D iameter
I&C	Installation and C ommissioning
I&CP	Installation and C ommissioning P lan
IE	Inside Spectrograph E nclosure
IFU	Integral F ield U nit
IH	Input H ead
IHMP	Input H ead M ounting P late
IISW	Instrument Interface S oftware
IMS	Information M anagement S ystem
IQ	Image Q uality
IR	I nfrared
IRAF	Image R eduction and A nalysis F acility
IT	Information T echnology
I&T	Integration and T est
I&TP	Integration and T est P lan
ITL	Imaging T echnology L aboratory (University of Arizona)
ITI&C	Integration, T esting, Installation and C ommissioning
IU	Inside U pper Electrical Room
JCAM	J -band C amera
JLG Jr	Electric 60-foot boom lift in the dome
JLG Sr	Gas 80-ft boom lift in the dome
JPEG	Joint P hotographic E xperts G roup
KEF	K nife E dge F ocus
KFV	K ee P F ull V alve
KMB	K inematic M ounting B all
KO	K ick o ff

KVM	Keyboard Video Mouse
LAE	Lyman-α Emitter
LAN	Local Area Network
LC	Inductor Capacitor
LCU	Lab Calibration Unit
LCV	Level Control Valve
LDAS	LRS2 Data Acquisition System
LDLS	Laser Driven Light Source
LER	Lower Electrical Room
LIP	Lower Instrument Package
LISE	Low Coherence Interferometric Sensor
LLNL	Lawrence Livermore National Laboratory
LN	Liquid Nitrogen
LNST	Liquid Nitrogen Storage Tank
LRS	Low Resolution Spectrograph
LRS-J	Low Resolution Spectrograph J-Band
LRS2	Low Resolution Spectrograph 2
LRS2-B	Low Resolution Spectrograph 2 – Blue
LRS2-R	Low Resolution Spectrograph 2 – Red
LVDS	Low-Voltage Differential Signal (VIRUS Clock)
LVDT	Linear Variable Displacement Transducer
MARS	Mirror Alignment Recovery System
M1	Primary Mirror
MB	Moving Baffle
MCS	Master Control System
MDO	McDonald Observatory
MLM	Monolithic Lenslet Module
MMI	Man Machine Interface
MMT	Multiple Mirror Telescope

MOS	M ulti- O bject S pectrograph
MPD	M easurement P rocedure D ocument
MPE	M ax- P lanck-Institut fuer E xtraterrestrische Physik
MPP	M ulti P in P hase
MSDS	M aterial S afety D ata S heet
MSFC	M arshal S pace F light C enter
MSV	M anual S hutoff V alve
MTBF	M ean T ime B etween F ailure
MTM	M aster T iming M odule
MTTR	M ean T ime t o R epair
MUSYC	M ultiwavelength S urvey by Y ale C hile
MWFS	M oment- B ased W avefront S ensing
NA	N ot A pplicable
NAN	N ot a N umber
NASA	N ational A eronautics and S pace A dministration
NER	N ormal E vaporation R ate
NESSI	N ear E arth S pace S urveillanc I Initiative
NFPA	N ational F ire P rotection A ssociation
NGST	N orthrop G rumman S pace T echnology
NOSS	N ight O perations S oftware S ystem
NWD	N ightly W orking D irectory
OC	O utside C ryostat
OCD	O bserving C onditions D ecision (scheduling tool)
OCDD	O perational C oncepts D efinition D ocument
OCS	O bservatory C ontrol S ystem
OCU	O perations C ontrol U nit
OD	O utside D iameter
ODH	O xygen D eficiency H azard
OFB	O ptical F iber B undle

OFC	O ptical F iber C onduit
OFCC	O ptical F iber C onduit C onnecto r
OFCS	O ptical F iber C onduit S leeve
OH	O utput H ead
OL	O utput L ens
OMS	O xygen M onitoring S ystem
OS	O bserving S upport/ Mt. Locke Staff O perating S ystem
OSL	O bservatory S cience L td
OWA	O ptical W indow A ssembly
OWFS1,2	O perational W avefront S ensor (number 1 and 2)
PA	P arallactic A ngle
PAS	P ayload A lignment S ystem
PCB	P rinted C ircuit B oard
PCI	P eripheral C omponent I nterconnect (VIRUS interface card)
PCIe	P eripheral C omponent I nterconnect - E xpress
PCS	P ackage C oordinate S ystem
PDR	P reliminary D esign R evie w
PFIP	P ri m e F ocus I nstrument P ackage
PI	P ri n cipal I nvestigato r
PID	P roportional- I ntegral- D erivative C ontrol L oop
PLC	P rogrammable L ogic C ontroll e r
PM	P roject M anager P reventive M aintenance
PMAC	P rogrammable M ulti A xis C ontroll e r
PMC	P ri m ary M irror C ontroll e r
PMT	P hoto m ultiplier T ube
POC	P ro o f- o f- C oncept
PPA	P upil P lane A ssembly

PRR	P roduction R eadiness R eview
PS	P roject S cientist
PSF	P oint S pread F unction
PSU	P ennsylvania S tate U niversity
PSV	P neumatic S hutoff V alve
PVC	P olyvinyl C hloride
PV	P upil V iewer
QAP	Q uality A ssurance P lan
QE	Q uantum E fficiency
QP	Q uick-look P ipeline
QTH	Q uartz- T ungsten H alogen
RA	R esident A stronomer, R ight A scension
RAM	R andom A ccess M emory
REU	R esearch E xperience for U ndergraduates
RFI	R equest for I nformation
RFP	R equest for P roposal
RFS	R equest for S ervices
RLC	R esistor I nductor C apacitor
RH	R elative H umidity
RMS	R oot M ean S quare
RP	R eference P oint
RPT	R eport
RSE	R oot S quare E rror
RSI	R adiation S ystems I ncorporated U niversal A ntennas D ivision
RTD	R esistance T emperature D etector
RTO	R eady to O perate
SAAO	S outh A frican A stronomical O bservatory
SAC	S pherical A berration C orrector

SALT	South African Large Telescope
SAMS	Segment Alignment Maintenance System
SAO	Smithsonian Astrophysical Observatory
SAT	Sub-Array Test, Site Acceptance Test
SATP	Site Acceptance Test Plan
SAW	Strip and Wash
SC	Study Contractor
SCI	Scull Cap Imager (DWFS deployed in the IHMP as an imager)
SCFM	Standard Cubic Feet per Minute
SCP	System Control Processor
SCS	Segment Control System
SCS2	Segment Control System 2
SD	Specification Document
SE	Systems Engineer
SEP	Systems Engineering Plan
SFoV	Science Field of View
SI	Le Système International d'unités
SIRP	Stationary-Image Rotation Point
SLED	Super-Luminescent Diode
SMOCO	Segment Motion Controller
SOW	Statement of Work
SP	Service Platform
SPEC	Specification
SPIE	Professional Society for Optics & Photonics Technology
SPS	Segment Positioning System
SRCB	Strain Relief Clamp Block
SR1CB	Strain Relief 1 Clamp Block
SR3CB	Strain Relief 3 Clamp Block
SRD	Science Requirements Document

SRR	Science Requirements Review
SSP	Stackable System Processor
SST	Spectroscopic Survey Telescope
STA	Semiconductor Technology Associates, Inc.
SWAG	The Accuweather temperature-at-sunset prediction
SW	SolidWorks
TA	Test Article
TAA	Telescope and Atmosphere
TACC	Texas Advanced Computing Center
TAMU	Texas A&M University
TBC	To be Confirmed
	To be Continued
TBD	To be Determined
TBV	To be Verified
TC	Thermal Connection
TCP/IP	Transmission Control Protocol/Internet Protocol
TCS	Telescope Control System
	Telescope Computer System
TE	Telescope Enclosure
TFA	Tracker Field Angle
TIFF	Tag Image File Format
TMCS	Tracker Motion Control System
TMS	Tracker Metrology System
TO	Telescope Operator
TR	Technical Review
TRD	Technical Requirements Document
TS	Thermal Siphon
Tss	Tracker Subsystem
TT	Tip-Tilt

TTCAM	Tip-Tilt Camera
TTP	Tip-Tilt-Piston
TTS	Tip-Tilt Sensor
UER	Upper Electrical Room
UF	University Furnished
UA	University of Arizona
UPS	Uninterruptible Power Supply
USM	Universitaets-Sternwarte Muenchen
UT	University of Texas
	Universal Time
VACDS	VIRUS Alignment Characterization Data Set
VAT	Video Alignment Telescope
VCS	VIRUS Cryogenic System
VE1	VIRUS Enclosure 1 (on the right facing the telescope from the low end of the primary mirror and looking up the slope of the primary mirror)
VE2	VIRUS Enclosure 2 (on the left facing the telescope from the low end of the primary mirror and looking up the slope of the primary mirror)
VDAS	VIRUS Data Acquisition System
VDS	VIRUS Data System
VI	Virtual Instrument
VIFU##	VIRUS production IFU version ## (06 is final production design)
VIRUS	Visible Integral-Field Replicable Unit Spectrograph
VIRUS-P	VIRUS Prototype
VIRUS-PP	VIRUS Preproduction Prototype
VJ	Vacuum Jacketed
VLТ	Very Large Telescope
VNC	Virtual Network Computing
VOC	Volatile Organic Compound
VP	Verification Plan

	VIRUS Prototype
VPH	Volume Phase Holographic
VPHG	Volume Phase Holographic Grating
VSIM	VIRUS Simulator
VSS	VIRUS Support Structure
WBS	Work Breakdown Structure
WCS	World Coordinate System
WFC	Wide Field Corrector
WFS	Wave Front Sensor
WFSFoV	Wave Front Sensor Field of View
WFU	Wide Field Upgrade
wrt	with respect to
XRS	XRS is a placeholder acronym for any future instrument
ZEMAX	Optical design software offered by ZEMAX Development Corporation, 3001 112 th Avenue NE, Suite 202, Bellevue, WA 98004-8017 USA (425) 822-3406 www.ZEMAX.com