

W.M.Keck Observatory

**Lexicon**

10 Sep 03

**ACS**

Active Control System – dynamically controls orientation of primary mirror segments to maintain nominal primary (Primary mirror system).

**ADC**

Analog to digital converter – an electronic circuit component that converts a voltage level to a digital value.

**AED**

Automatic External Defibrillator (Summit First Aid Room)

**ALH**

Alarm Handler – user interface that interfaces to CA or CDEV.

**AO**

Adaptive Optics – optical systems that measure and correct wavefront aberrations in real time. (Left Nasmyth platforms)

**APC**

Actuator Position Counter – incremental encoder counter reflecting length of ACS actuator relative to a fiducial mark.

**API**

Applications Programming Interface – a stable definition of an interface to a software library, which programmers can use in coding.

**AR**

Archiver – part of EPICS

**AUT**

Autoguider – feedback system which moves the telescope while fixed on a sky object.

**AUX crate**

Auxiliary control (VME microcomputer) (Computer rooms)

**AXE**

Axis control – DCS subsystem

**BS**

Bottom shutter (Keck I & II) (Dome)

**CA**

Channel access – the client-server model used in EPICS.

**CAKE**

Channel Access Keyword – thin generic software layer providing KTLkeyword access to EPICS systems

**Caltech**

California Institute of Technology

**Capt Marvel**

Radio control used to control Keck I & II domes, shutters, lights, & cranes

**CARA**

California Association for Research in Astronomy

**CCD**

Charge Coupled Device – image detector technology.

**CDEV**

Common Device interface – a layer parallel to KTL, used by MEDM and ALH.

**CDR**

Critical Design Review

**CFHT**

Canada-France-Hawaii Telescope

**CIE crate**

Chopper control (VME microcomputer)

**CIT**

California Institute of Technology

**CM**

Cassegrain module

**COKE**

Corba Keyword Interface – layer providing KTL keyword access to CORBA.

**COKO**

CDEV Object Keyword Orb

**CORBA**

Common Object Request Broker Architecture – a standard for distributed (complex server architecture) programs. Allows for multi-platform, highly portable client- server interactions.

**COTS**

Commercial off-the-shelf

**CP**

Dome Control Panel (Keck I & II) (Dome)

**CP1**

Dome manual Control Panel (Keck I)(Dome)

**CP2**

Dome manual Control Panel (Keck II) (Dome)

**CVS**

Concurrent Version Control – front end to RCS which maintains directory hierarchy of software repository.

**DCS**

Drive and Control system – TS subsystem. (Computer rooms)

**DDL**

Device Description Language – MEDM configuration file for specific UI?

**DEIMOS**

Deep Extragalactic Imaging Multi-Object Spectrograph (Keck II Right Nasmyth Platform)

**DM**

Deformable mirror (Adaptive Optics)

**DOM**

Dome control – DCS subsystem

**DSM**

Dual Star Module

**ECR**

Engineering change request

**EF1**

Exhaust fan (Keck I) (Subterranean mechanical room)

**EF2**

Exhaust fan (Keck II) (Subterranean mechanical room)

**ENV**

Environmental monitoring – DCS subsystem

**EPCOM**

EPICS Common Subsystem – EPICS “stuff” shared by various EPICS systems.

**EPICS**

Experimental Physics and Industrial Control System – a client-server high- efficiency system and development environment. A set of software tools and applications for building control systems.

**ESI**

Echelle Spectrograph and Imager – versatile, multi-mode spectrograph and imager.  
(Keck II)

**ESO**

European Southern Observatory

**EZAR**

EeZee Archiver – Keck-modified version of AR

**f/15**

f/15 top end secondary module (Keck I and II)

**f/25**

f/25 top end secondary module (Keck I)

**f/40**

f/40 top end secondary module (Keck II)

**FATCAT**

Five two-way beam combiners & two cameras that work at two microns

**FCM**

Forward Cassegrain Module (Keck I)

**FDL**

Fast delay lines

**FFRDC**

Federally Funded Research & Development Center

**FOV**

Field of View

**FPA**

Focal Plane Array

**FRC**

Financial Review Committee

**FTE**

Full-time Equivalent

**FWHM**

Full-Width Half-Maximum

**GENSET**

Emergency generator (Next to Keck II machining room)

**GFCS**

Global facility coordinate system

**GI**

Guest Investigator

**GUI**

Graphical user interface

**HBS**

Hydrostatic bearing system

**HIRES**

High Resolution Echelle Spectrograph – in-plane echelle spectrograph with grating cross-dispersion

**HST**

Hubble Space Telescope

**ICD**

Interface Control Document

**IFSM**

Infrared Fast Steering Mechanism (f/25 and f/40)

**IOP**

Internet InterOrb Protocol – allows communication among different vendors' ORBs.

**IIR**

Instrument Interconnect Rack (Keck I and II computer rooms)

**IPAC**

Infrared Processing & Analysis Facility

**IR**

Infrared

**IS**

Instrument scientist/specialist

**ISC**

Interferometer Science Center – administrative body

**ISDC**

Interferometer Science Data Center

**JDBC**

Java Database Connectivity – allows Java programs to interact with databases in a way that is independent of the specific database.

**JLG**

Personnel lift (manufacturer's name) (Both domes)

**JNI**

Java Native Interface

**JPL**

Jet Propulsion Laboratory located in Pasadena, California

**JRE**

Java Runtime Environment

**JUICE**

Java Uniform Interface to COKE Environment

**JVM**

Java Virtual Machine – native program that runs Java byte code on a particular physical computer platform.

**KAT**

Keck Angle Tracker

**KAVA**

Ktl for Java – layer (in Java and C using JNI) implementing server-side RMI over KTL (obsolete in favor of JUICE)

**KCAM**

Temporary adaptive optics science camera (Adaptive Optics)

**KDSM**

Keck dual star module

**KEZAR**

Keck EZAR

**KI**

Keck Interferometer

**KIA**

Keck Interferometer Array

**KIRMOS**

Keck Infrared Multi-object Spectrograph

**KISSG**

Keck Interferometer Science Steering Group

**KOA**

Keck Observatory Archive

**KOFE**

Keyword Orb for Everyone – interface layer between COKE and KTL

**KORB**

Ktl AAA – layer between KTL and COKE – a CORBA ORB (obsolete in favor of KOFE)

**KSD**

Keck Software Document – one of a collection of informational documents online

**KSS**

Keck SubSystems – kroot applications subdirectory containing common subsystems.

**KTL**

Keck Task Library – a software layer that unifies a number of keyword- oriented technologies under one (C) API

**KUI**

Keck User Interface – kroot generic UI applications subdirectory.

**LDL**

Long delay line

**LGS**

Laser Guide Star

**LRIS**

Low Resolution Imaging Spectrograph – imaging spectrometer which operates at the f/15 Cassegrain focus of the Keck telescope. (Keck I)

**LRIS-B**

Blue-side upgrade to the Low Resolution Imaging Spectrograph Keck I

**LWIRC**

Long Wavelength Infrared Camera

**LWS**

Long Wavelength Spectrometer – facility instrument that produces diffraction- limited images, low-resolution spectra, and moderate resolution spectra, over the mid- infrared range of 8-25  $\mu\text{m}$ . (Keck I FCM)

**MAlign**

Mirror Alignment

**MCP**

Manual Control Panel (Keck I & II) (Computer rooms)

**MEDM**

Motif Editor and Display Manager – EPICS user interface tool that interfaces to CA or CDEV.

**MICO**

Mico is CORBA – CORBA ORB implementation

**MIG**

Metal inert gas (welding process)

**MIKE**

Music Keyword Interface – layer providing KTL keyword access to MUSIC.

**MIRLIN**

Mid-InfraRed Large-well Imager – visiting instrument (Keck II Right Bent Cassegrain

**MOWG**

Management Operations Working Group

**MUSIC**

Multi-User System for Instrument Control – control system API from Lick Observatory.

**N/LGS**

Natural & Laser Guide Star

**NA**

Night Attendant

**NASA**

National Aeronautics and Space Administration

**NDUT**

Non-destructive ultrasonic testing

**NGS**

Natural Guide Star

**NIRC**

Near Infrared Camera – designed to produce both infrared images and low- resolution spectra in the 1-5  $\mu\text{m}$  spectral range. (Keck I FCM)

**NIRC2**

Dedicated AO science instrument built at Caltech (Keck II AO—future)

**NIRSPEC**

Near Infrared Spectrometer – a cryogenic cross-dispersed echelle spectrograph (Keck II Right Nasmyth Platform)

**NRA**

NASA Research Announcement

**OA**

Observing Assistant

**OAP**

Off-axis parabola

**ORB**

Object Request Broker – the central “hub” of client-server interactions in CORBA.

**OSCIR**

mid-IR camera and spectrometer system - visiting instrument (Keck II Right Bent Cassegrain)

**OSIRIS**

OH-Suppressing Infra-Red Imaging Spectrograph. built by UCLA, first light is expected 2004

**P2i**

Brand name, vacuum pumping station

**PCI**

Personal Computer Interface (an internal computer bus standard)

**PCS**

Phasing Camera System (Keck I and II Left Bent Cassegrain)

**PDR**

Preliminary Design Review

**PI**

Principal Investigator

**PIP**

Project Implementation Plan

**Pizza Oven**

Main power switch for SAA and AAA (Computer rooms)

**PLC**

Programmable Logic Controller (dome/shutter control) (Domes)

**PNT**

Pointing control – DCS subsystem

**PPC**

Power PC (Motorola processor family)

**PTI**

Palomar Testbed Interferometer – provided code modified to control siderostat.

**QFIX**

Quick FIX – data base for telescope systems parameter tweaks.

**RA**

Remote Agent – a NASA/Ames project, descheduled from interferometer project

**RCS**

Revision Control System – software tool.

**RICST**

Real-time Interferometer Control System Testbed

**RICST**

Real time control system from JPL

**RMI**

Remote Method Invocation – Sun technology for implementing Java method calls across a network.

**RPC**

Remote Procedure Call – Sun technology for implementing C function calls across a network.

**SA**

Support Astronomer

**SAA**

Servo Amplifier Assembly (telescope drives) (Computer rooms)

**SCAM**

NIRSPEC internal slit-viewing camera to be used with adaptive optics

**SCC**

Software Coordination Committee – administrative body to coordinate use of tools and technologies.

**SDC**

Science Data Center

**SEC**

Secondary mirror control – DCS subsystem

**SIDS**

Siderostat (Outside domes)

**SIM**

Space Interferometer Mission

**SSC**

Science Steering Committee – group of representatives from UC and Caltech who determine the development and use and direction of WMKO instruments.

**SSC**

Star-Stacking Camera (Left Bent Cassegrain)

**STB**

Save The Bits – Keck data archive software

**STEPS**

Stellar Planetary Survey, CCD astrometry program – visiting instrument

**STScI**

Space Telescope Science Institute

**TAC**

Time Allocation Committee

**TDC crate**

Telescope Drive Control (VME microcomputer) (Computer rooms)

**TERT**

Tertiary module (Keck I and II)

**TIG**

Tungsten inert gas (welding process)

**TOPS**

Toward Other Planetary Systems

**TOTS**

Temporary Optical Test Site (Outside domes)

**TPFA**

Terrestrial Planet Finder Array

**TS**

Top shutter (Keck I & II)

**UAE**

Universal Applications Environment – EPICS extension that uses CVS to make and manage releases.

**UC**

University of California

**UI**

User interface

**V2**

Visibility (modulus) squared

**VDL**

Vacuum Delay Line = underground pipes to bring the light from outrigger telescopes to the Keck basement. These are pumped out continuously to remove air in them in order to improve the "seeing" in the pipes.

**VME**

VersaModule Eurocard bus

**VME**

Virtual Memory Extension (a computer bus standard)

**WAN**

Wide Area Network

**WBS**

Work Breakdown Structure

**WMKO**

W.M. Keck Observatory

**XFM**

Transfer module (Keck I and II)