# Prototype tests - list of examples

#### OBSTAP for VizieR

/tap/availability test if service is online

<u>/tap/tables</u> list the tables

tap/sync execute a synchronous query

#### Example

Toutes les colonnes

#### Telescopes

<u>Télescopes avec leurs noms alternatifs</u>

Télescope ayant un diametre plus grand que 10

#### Instruments

Télescopes avec leurs instruments

Nombre d'instruments par télescope

Nombre de télescope où apparaît un instrument

#### **Observatoires**

Télescopes avec leur observatoire

Noms, adresses, pays et types d'observatoires

Liste des télescopes pour des observatoires dont le nom commence par "H"

#### **Systemes**

Systemes avec leurs télescopes

#### Tous

<u>Vu télescopes, systemes et observatoires</u>

select c.name as "Telescope name" , a.name as "alternate name" , o.name as "Observatory name" , o.country as "Country" from observatory o , component c, component alternatename a where o.id = c.observatory and c.id = a.component id and o.country like '%Chile%'

Submit

# Telescope with alternatenames

### Main difficulty:

- Telescope name is not consistent
   (diameter or country... is the discriminant) and too short
  - Duplicated entries
- Telescope alternate name is sometimes the Observatory

select c.name as "Telescope name" , ca.name as "Telescope alternate name", ca.ambig from component c join component\_alternatename ca on c.id = ca.component\_id order by "Telescope name" Telescope alternate name Telescope name ambig AAS0 Anglo-Australian Telescope ABS Metius Observatory ABT Birooni Observatory ACBAR Explorer 71 ACT-Chile Automatic Photometric Telescope ADSIIC Advanced Electro Optical System Telescope AFS0P Akeno Observatory AGASA Anastasios Gentsidis ATG0 Bechtel Telescope AIT-Perugia Astrometric Imaging Telescope AIT-space ASTR0-F AMACS1 Antarctic Muon and Neutrino Detector Array AMI-Large\_array Arcminute Microkelvin Imager - Small Array AMS-02 CBA: Odessa ANU: 0.23m Siding Spring Observatory ANU: 0.4m Siding Spring Observatory ANU: 0.6m Siding Spring Observatory ANU: 0.6m Reynolds Telescope ANU: 0.76m Siding Spring Observatory ANU: 1.24m Siding Spring Observatory ANU:1m Siding Spring Observatory APASS-0TA1 Optical Telescope Assembly - 2 APF New Mexico State University APF NMSU AP0:2.5m Astrophysics Research Consortium APT-UNSW Amadeus APT-UNSW Red wavelengths APT-Vienna-Amadeus Blue wavelengths ARCADE-2 D03-48 ARIEL-V Devasthal Optical Telescope ARIES: 0.56m Sampurnanand Telescope ARIES: 0.56m WEBT: ARIES ARIES: 1.04m Devasthal Fast Optical Telescope ARIES: 1.3m Aristarchos Telescope ARO-Illinois:0.76m formerly in Charleston, Illinois ARO-Illinois:0.81m AR-50 ARO-Illinois:1.3m KP12m ARO-Radio: KPNO Submillimeter Telescope ARO-Radio: MGIO AAVS0: AFSA ASAS-III-A:0.07m ASAS-3 ASAS-III-B:0.07m ASAS-3 ASAS-III:0.05m ASAS-3 ASAS: 0.02m Bohdan Paczynski ASAS: 0.02m ASAS-SN Telescope ASASSN\_Bohdan\_Paczynski Cecilia Payne-Gaposchkin ASASSN\_Bohdan\_Paczynski ASAS-SN Telescope ASASSN\_Cecilia\_Payne-Gaposchkin Henrietta Leavitt ASASSN\_Cecilia\_Payne-Gaposchkin ASAS-SN Telescope ASASSN Henrietta Leavitt ASAS-SN Unit-1 Telescope

## Telescope diameters

Additional parameters allow to check the consistency of the database with smaller lists... when the information is known.

select name, valid\_From, diameter, type\_info from component where diameter > 42 order by name

name	valid_from			
Algonquin	1965	45.8	Radio	•
Arecibo	1963	305.0	Radio	
Bear_Lakes	2003	64.0	Radio	
CHIME		100.0	Radio	
Canberra-DSS-43	1972	70.0	Radio	
Effelsberg	1999	100.0	Radio	
FAST-China	2016	500.0	Radio	
GBT:100m		100.0	Radio	
GBT: 43m		42.6	Radio	
GBT:91m	1962	91.0	Radio	
GE0600	1995	600.0	Grav. w	ave
Galenki-RT-70		70.0	Radio	
Goldstone-DSS-14		70.0	Radio	
Jodrell_Bank:76.2r	n 1957	76.2	Radio	
Kalyazin-RT-64		64.0	Radio	
LMT-Serrano	2017	50.0	Radio	
Madrid-DSS-63		70.0	Radio	
Mauritius		2000.0	Radio	
Medvezhji-RT-64		64.0	Radio	
Millstone_Hill:46	n	46.0		
Millstone_Hill:67	n1963	45.7	Radio	
Miyun		50.0	Radio	
Mt_Wilson:46m	1910	46.0	Solar	
Nobeyama: 45m		45.0	Radio	
0oty		530.0	Radio	
Parkes	1961	64.0	Radio	
RATAN-600		600.0	Radio	
Ryle		5000.0	Radio	
ShA0:60m		60.0	Radio	
Stanford		46.0	Radio	
Suffa-RT-70		70.0	Radio	
TAMA300	1999	300.0	Grav. w	ave
TMRT		65.0	Radio	
Usuda:64m		64.0		
Yevpatoria-RT-70		70.0	Radio	

## Observatories with their telescopes - seems ok.

Telescope name	Observatory name	Country
Gravenwezel	's-Gravenwezel	Belgium
Lipki	1st Moscow Gymnasium Observatory	Russia
29PREMOTE	29PREMOTE Observatory	France
3_Angels	3 Angels Observatory	United States of America
3_Mile	3 Mile Observatory	United States of America
Oborniki	6ROADS Observatory 1	Poland
Nerpio	6ROADS Observatory 2	Spain
Volta	A. Volta Observatory	Italy
AAS0	AASO/Ridgemont Observatory	United States of America
APASS-0TA2	AAVSO All Sky Photometric Survey	Chile
APASS-0TA1	AAVSO All Sky Photometric Survey	United States of America
AG_Sarajevo AKARI	AG_Sarajevo Observatory AKARI	Bosnia/Herzeg
ALLEGRO	ALLEGRO	United States of America
AMACS1	AMACS1	Chile
AMOS-Austria	AMOS Observatory	Austria
ARA-Australia	ARA Observatory	Australia
ARGO-CO	ARGO-Cooperative Observatory	United States of America
ASTER:0.41m	ASTER Observatory	Canada
ASTER:0.15m	ASTER Observatory	Canada
FAUST	ATLAS 1 mission	
Aachen	Aachen Observatory	Germany
Abastumani:0.7m	Abastumani Astrophysical Observatory	Georgia

### Observatories with their telescopes - not always ok...

Address

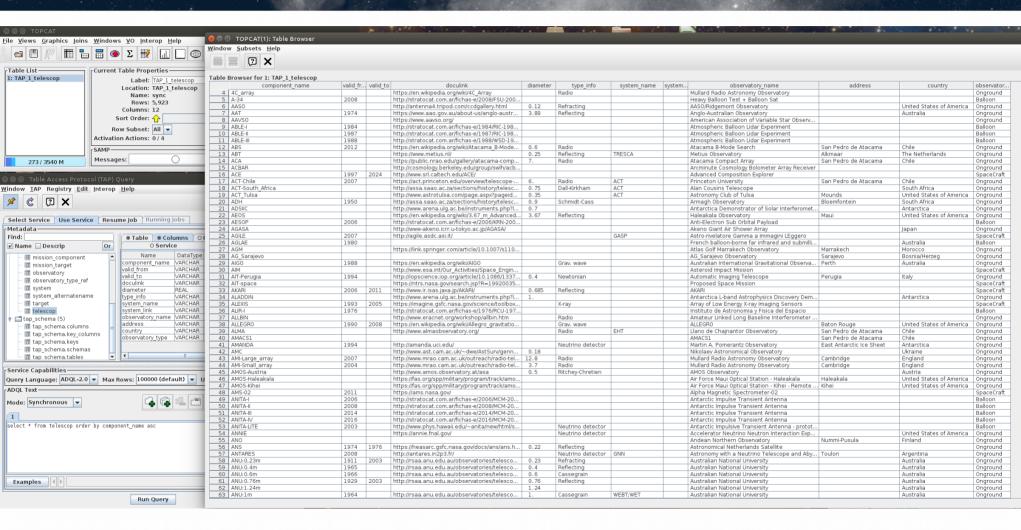
Country

Observatory name

Telescope name

29PREMOTE	29PREMOTE Observatory		Dauban	France
3_Angels	3 Angels Observatory		Moss Point	United States of America
3_Mile	3 Mile Observatory			United States of America
4C_array A-34	Mullard Radio Astronomy Observatory Heavy Balloon Test + Balloon Sat			
AAS0	AASO/Ridgemont Observatory			United States of America
AAT AAVSO ABLE-I ABLE-II	Anglo-Australian Observatory American Association of Variable Star Observers Atmospheric Balloon Lidar Experiment Atmospheric Balloon Lidar Experiment			Australia
ABLE-III ABS	Atmospheric Balloon Lidar Experiment Atacama B-Mode Search	Theorya	torynamo	Chile
ABT	Metius Observatory	Jusei va	tory name	The Netherlands
ACA	Atacama Compact Array	is som	etimes a	Chile
ACBAR	Arcminute Cosmology Bolometer Array Receiver	13 30111	curics a	
ACE	Advanced Composition Explorer	tolocco	nama	Cl '1
ACT-Chile ACT-South Africa	Princeton University Alan Cousins Telescope	releaco	pe name	Chile South Africa
				United States of
ACT_Tulsa	Astronomy Club of Tulsa		Mounds	America
ADH	Armagh Observatory		Bloemfontein	South Africa
ADSIIC	Antarctica Demonstrator of Solar Interferometric Imagir	ng & Coronagraphy		Antarctica
AE0S	Haleakala Observatory		Maui	United States of America
AES0P	Anti-Electron Sub Orbital Payload			
AGASA	Akeno Giant Air Shower Array			Japan
AGILE	Astro-rivelatore Gamma a Immagini LEggero			
AGLAE	French balloon-borne far infrared and submillimeter ins	strument		Australia
AGM	Atlas Golf Marrakech Observatory		Marrakech	Morocco
AG_Sarajevo	AG_Sarajevo Observatory		Sarajevo	Bosnia/Herzeg
AIGO	Australian International Gravitational Observatory		Perth	Australia
AIM	Asteroid Impact Mission		Daniel -	T+-1
AIT-Perugia	Automatic Imaging Telescope		Perugia	Italy
AIT-space	Proposed Space Mission AKARI			
AKARI	Antarctica L-band Astrophysics Discovery Demonstrator f	for inteferometric		
ALADDIN	Nulling			Antarctica

### Private TAP access for more tests



# More queries...

# Telescopes in Chile

Observatory names are also not consistent

Telescope name	alternate name	Observatory name	Countr
ABS	Metius Observatory	Atacama B-Mode Search	Chile
ACT-Chile	Automatic Photometric Telescope	Princeton University	Chile
AMACS1	Antarctic Muon and Neutrino Detector Array	AMACS1	Chile
ASAS-III-A:0.07m	ASAS-3	All-Sky Astronomical Survey	Chile
ASAS-III-B:0.07m	ASAS-3	All-Sky Astronomical Survey	Chile
ASAS-III:0.05m	ASAS-3	All Sky Astronomical Survey	Chile
ASAS:0.02m ASAS:0.02m	Bohdan Paczynski	All-Sky Astronomical Survey	Chile Chile
	ASAS-SN Telescope iCecilia Payne-Gaposchkin	All-Sky Astronomical Survey Las Cumbres Observatory	Chile
ASASSN Bohdan Paczynsk		Las Cumbres Observatory	Chile
Atacama_Desert	Australia Telescope Compact Array	Atacama Desert Observatory	Chile
BlackGEM	WEBT:BLK	European Southern Observatory	Chile
Blanco	AAVS0:GJJA	Cerro Tololo Inter-American Observatory	Chile
Blanco	MAS MOIXA Observatory	Cerro Tololo Inter-American Observatory	Chile
CAO-before-2013	since 2013	Calar Alto Observatory	Chile
CAO-since-2013	Trans-Neptunian Object Survey	Calar Alto Observatory	Chile
CAO-since-2013	Centro Astron≤mico Hispano-Alemßn	Calar Alto Observatory	Chile
Cerro_Calan	AAVS0:GCJ	Santiago-Cerro Calßn	Chile
CTI0-2:0.4m	2MASS Telescope	Cerro Tololo Inter-American Observatory	Chile
CTI0-3:0.4m	LCOGT Aqawan A #1	Cerro Tololo Inter-American Observatory	Chile
CTIO-A1	LCOGT-A	Cerro Tololo Inter-American Observatory	Chile
CTIO-A:1m	LCOGT Aqawan B #1	Cerro Tololo Inter-American Observatory	Chile
CTIO-B1	LCOGT-B	Cerro Tololo Inter-American Observatory	Chile
CTIO-B:1m	LCOGT-C	Cerro Tololo Inter-American Observatory	Chile
CTIO-C:1m	Solar	Cerro Tololo Inter-American Observatory	Chile
CTIO-Solar	Curtis-Schmidt telescope	Cerro Tololo Inter-American Observatory	Chile
CTIO-Solar	Heber Doust Curtis Memorial Telescope	Cerro Tololo Inter-American Observatory	Chile
CTI0:0.6m	SMARTS Telescope	Cerro Tololo Inter-American Observatory	Chile
CTI0:0.9m	SMARTS Telescope	Cerro Tololo Inter-American Observatory	Chile
CTIO:1.0m	SMARTS Telescope	Cerro Tololo Inter-American Observatory	Chile
CTIO:1.3m	SMARTS Telescope	Cerro Tololo Inter-American Observatory	Chile
Danish:0.5m	Danish Telescope	European Southern Observatory	Chile
Dutch_Telescope	CBA: Duxbury	European Southern Observatory	Chile Chile
du_Pont E-ELT	Dwingeloo Radio Telescope European Extremely Large Telescope-South	Las Campanas Observatory European Southern Observatory	Chile
E-ELT-South	enhanced - Multi-Element Radio Linked Interferometer Network	European Southern Observatory	Chile
GLORIA-CTIO	D50	GLObal Robotic-telescopes Intelligent Arra	
KMTnet-CTI0	SAA0	Korea Microlensing Telescope Network	Chile
Las_Campanas-TIE	CBA:Las_Cruces	Las Campanas Observatory-TIE	Chile
Magellan-Baade	Landon Clay Telescope	Magellan I	Chile
OCA-BMT	Hexapod Telescope	Cerro Armazones Observatory	Chile
OCA-Hexapod	Robotic Bochum Twin Telescopes	Cerro Armazones Observatory	Chile
OCA:0.41m	Infra Red Imaging Survey Telescope	Cerro Armazones Observatory	Chile
PROMPT - 1	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	sCTIO	Chile
PROMPT-2	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	s CTIO	Chile
PROMPT-3	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	sCTIO	Chile
PROMPT - 4	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	sCTIO	Chile
PROMPT-5	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	sCTIO	Chile
PROMPT-6	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	sCTIO	Chile
PROMPT-7	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	sCTIO	Chile
PROMPT-8	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	s CTIO	Chile
PROMPT-AUGOII-1	Panchromatic Robotic Optical Monitoring and Polarimetry Telescope	sAthabasca University Geo.Observatory	Chile
Putre_CRS	POP-Puzol	Putre Cosmic-Ray Station	Chile
Putre_CRS	Punto de Observaci≤n de Puτo	Putre Cosmic-Ray Station	Chile
San_Bernardo	CBA:San_Clemente	Santiago-San Bernardo	Chile
San_Bernardo	Software Systems Consulting Observatories	Santiago-San Bernardo	Chile
Swiss:0.4m	Henrietta Swope Telescope	Swiss	Chile
TAO-Atacama:1m	Tokyo Atacama Observatory	University of Tokyo	Chile
TAO-Atacama:6.5m	Tokyo Astronomical Observatory	University of Tokyo	Chile
TP	Explorer 73	Total Power Array	Chile
Vina_del_Mar	CBA:Blenheim	Vi±a del Mar	Chile

### Prototype tests

### Telescopes associated with Observatory '%Paris%'

Telescope name	<pre>valid_from valid_</pre>	todiameter	Observatory name	Country
Paris-Grande_Lunette	1891	0.83	Grande Lunette Paris Observatory	France
Paris_Exhibition	1900	1.25	Great Paris Exhibition Telescope of	1900 France
Paris	1667	0.38	Lunette Arago Paris Observatory	France

select c.name as "Telescope name", c.valid\_From, c.valid\_To, c.diameter, o.name as "Observatory name", o.country as "Country" from observatory o join component c on o.id = c.observatory where o.name like '%Paris%'

### Instruments

INSTRUMENTS  OUT  MEMBER  OIC  OIC  CIRE  OIC  CIRE  OIC  CARE  OIC  CARRE  OIC  CANALAS Camera  CAMARIAS Camera  OIC  DIRIR  ESPECT**(*grafo Multiobjeto Infra-Rojo)  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  High Optical Resolution Spectrograph  Optical Resolution Spectrograph  Optical System for langing and low-intermediate-Resolution Integrated Spectros  Adaptive optics System  High Optical Resolution Spectrograph  Optical Resolution Optical Spectrograph  Optical Resolution Optical Spectrograph  Optical Resolution Optical Sp	Inc	trumanta	GMT	MANIFEST	MANIFEST: Starbugs-based fibre positioner	
n telname 67C CIRCE CADALTS CADATTS CADALTS CADALTS CADALTS CADALTS CADALTS CADALTS CADALTS CADATTS CADALTS CADALTS CADATTS CADALTS CADATTS CADALTS CADATTS CA		CIUITICITES	Ni .			
GSWHT GSWHT GGC Canaricam CAMRAIS Camer 33AAT GTC HiPERCAM five channel High PERformance imaging instrument CEMIR Espectr@grafo Multiobjeto Infra-Rojo Dytical System for Imaging and low-Intermediate-Resolution Integrated Spectros 19MMT: 6.5m GGC HORS High Optical System for Imaging and low-Intermediate-Resolution Integrated Spectros 19MGT: 6.5m GGEnnii-North Gemini-North GGENII-North GGNS-N-EEV-3port GGENII-North GGENII-North GGENII-North GGENII-North GGENII-North GGENII-North GGNS-N-EEV-3port GGENII-North GGENII-North GGNS-N-EEV-Sport GGENII-North GGNS-N-EEV-Sport GGENII-North GGNS-N-EEV-Sport GGENII-North GGNS-N-EEV-GGENII-North GGNS-N-EEV-GGNS-N-GGNII-NORTH GGNS-N-EEV-GGNS-N-GGNII-NORTH GGNS-N-GGNII-NORTH GGNS-N-GENII-NORTH GGNS-N-GGNII-NORTH GGNS-N-GGNII-NOR						
G3MHT  G1C  G1RER	1 14 10 10	n telname			•	
33AAT 37C HiPRCAM 57C HIPRCAM 67C HIPRCAM HiPRCAM High PERformance imaging instrument Espectrograph High Optical System of Imaging and low-Intermediate-Resolution Integrated Spectros High Optical System of Imaging and low-Intermediate-Resolution Integrated Spectros High Optical System High Optical Resolution Spectrograph High Optical System High Optical Resolution Spectrograph High Optical Processor High Optical Resolution Spectrograph High Optical Resolution Spectrograph High Optical Spectrograph South - Hamamatsu CCD chips Gemini-Horth Gemini-Horth Holloys-In-Hamamatic High Resolution Optical Spectrograph High Optical Spectrograph Sout		63WHT			-	
23CFHT GTC BIR Espectregrafo Multiobjeto Infra-Rojo 21 Mayall 31 Mayall 41 GTC OSIRIS Optical System for Imaging and low-Intermediate-Resolution Integrated Spectros 41 MoRS 4						
21 Mayall GTC HORS High Optical Resolution Spectrograph Hors						
19 MMT:6.5m						οv
198Mm1:North 196emini-North 171NT 196emini-North 175Ubaru 175Ubaru 186ini-North 186iverpool:2m 1						r y
196enin1-North 177NT Gemini-North H.TAIR-LGS ALTtitude conjugate Adaptive optics for the InfraRed - Laser Guide Star 175ubaru Gemini-North H.TAIR ALTITUDE conjugate Adaptive optics for the InfraRed - Gemini-North 16Liverpool:2m Gemini-North ALTAIR-RLP ALTITUDE conjugate Adaptive optics for the InfraRed - Field Lens Prototype 15Gemini-South Gemini-North DSSI Differential Speckle Survey Instrument 14LBT Gemini-North GMUS-N Gemini Multi-Object Spectrograph North - 3 e2v CCD chips 13SOAR Gemini-North GMUS-N Gemini-North InfraRed Spectrometer 12NOT Gemini-North GMISS Gemini-North InfraRed Spectrometer 11Blanco Gemini-North TEXES Gemini-North InfraRed Spectrometer 11HST Gemini-North TEXES Texas Echelon Cross Echelle Spectrograph 10MTVN:3.5m Gemini-North GMUS-N-EEV-6port Gemini Multi-Object Spectrograph North - 6 e2v CCD chips 10SDSS Gemini-North GMUS-N-HAUL Gemini-Morth GMUS-N-HAUL Gemini-South GMUS-N-HAUL Gemini-Multi-Object Spectrograph South - 4ev CCD chips 1 Gemini-South Gemini-South GMUS-N-HAUL Gemini-Multi-Object Spectrograph South - 4ev CCD chips 1 Gemini-South Gemini-South Gemini-Multi-Object Spectrograph South - 4ev CCD chips 1 Gemini-South Gemini-South Gemini-Multi-Object Spectrograph South - 4ev CCD chips 1 Gemini-South Gemini-South Gemini-Multi-Object Spectrograph South - 4ev CCD chips 1 Gemini-South Gemini-South Gemini-Multi-Object Spectrogra						
17TNT 17Subaru Gemini-North ALTAIR ALTitude conjugate Adaptive optics for the InfraRed 16Liverpool:2m Gemini-North ALTAIR-NGS ALTitude conjugate Adaptive optics for the InfraRed - Field Lens Prototype 15Gemini-South Gemini-North Gemini-Nor		19Gemini-North		•		
17 Subaru Gemini-North ALTAIR ALTitude conjugate Adaptive optics for the InfraRed 16 Leverpool: 2m Gemini-North Gemini-North Gemini-North Gemini-South Gemini-North Gemini-North Gemini-North Gemini-North GMOS-N Gemini Multi-Object Spectrograph North 32 SOAR Gemini-North GMOS-N Gemini-North North InfraRed Spectrograph North - 3 e2v CCD chips Gemini-North GMOS-N Gemini-North North InfraRed Spectrograph North - 3 e2v CCD chips Gemini-North GMOS-N Gemini-North North North InfraRed Spectrograph North - 3 e2v CCD chips Gemini-North GMOS-N-MAI Facility Calibration Unit - North GMOS-N-MAI Facility Calibration Unit - North GMOS-N-EEV-Gport Gemini-North GMOS-N-EEV-Gport Gemini-North GMOS-N-EEV-Gport Gemini-North GMOS-N-EEV-Gport Gemini-Morth GMOS-N-EEV-Gport Gemini-Morth GMOS-N-MAI Gemini-North GMOS-N-MAI Gemini-North GMOS-N-MAI Gemini-North NIRI GMOS-N-MAI Gemini-North NIRI Near InfraRed Imager And spectrograph North - 6 e2v CCD chips Gemini-North GMOS-N-MAI Gemini-North OSCIR Mid-infrared imager/spectrograph North - 6 e2v CCD chips Gemini-North GMOS-N-MAI Gemini-South GMOS-N-MAI Gemini-South GMOS-N-MAI Gemini-South GMOS-S-EEV-Gmoini Planet Imager  8 CAO:3.5m Gemini-South GMOS-S-EEV Gemini Planet Imager  9 UKRRT Gemini-South GMOS-S-EEV Gemini Nouth Adaptive Optics Imager  1 CAD-Port Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - Hamamatsu CCD chips Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips Gemini-South GMOS-S-EEV Gemini Multi-Object Topectorgraph South - e2v CCD chips Gemini-South GMOS-S-EEV Gemini Multi-Object Topectorgraph South - e2v CCD chips Gemini-South Gemini-South GMOS-S-EEV Gemini Multi-Object Topectorgraph South - e2v CCD chips Gemini-South Gemini-South Gemini-South Gemini-South Mac		17 INT				
16Liverpool: 2m 15 Gemini-South 15 Gemini-South 14 LBT 15 Gemini-South 14 LBT 15 Gemini-North 15 Gemini-North 16 Gemini-North 16 Gemini-North 17 Gemini-North 18 Gemini-North 10 WTYN: 3.5 m 10 Magellan-Clay 18 Gemini-North 18 Gemini-North 18 Gemini-North 19 Magellan-Clay 18 GrC 18 JKT 18 Gemini-North 18 Gemini-North 18 Gemini-North 18 Gemini-North 18 Smith_Harlan 18 CAO: 3.5 m 18 Gemini-South 18 CAO: 3.5 m		17 Subaru			1 ' 2	
ALTAIR-NGS   ALTAIR-NGS   ALTAIR-NGS   ALTAIR-NGS   ALTAIR-NGS   Survey Instrument						
14LBT Gemini-North GMOS-N Gemini Multi-Object Spectrograph North 13SOAR Gemini-North GMOS-N-EEV-3port Gemini Multi-Object Spectrograph North - 3 e2v CCD chips Gemini-North GMOS-N-EEV-3port Gemini Multi-Object Spectrograph North - 3 e2v CCD chips Gemini-North GMOS-N-EEV-3port Gemini Multi-Object Spectrograph North - 3 e2v CCD chips Gemini-North Infrared Spectrometer Gemini-North Infrared Spectrometer Spectrograph Spectrometer Gemini-North Infrared Integral Field Spectrometer Gemini-North GCAL Gemini-North North Gemini-North GCAL Gemini-North GMOS-N-EEV-6port Gemini Multi-Object Spectrograph North - 6 e2v CCD chips Gemini-North GMOS-N-HANI Gemini-North GRACES Gemini Multi-Object Spectrograph North - 4 mamatsu CCD chips Gemini-North GRACES Gemini Multi-Object Spectrograph North - 4 mamatsu CCD chips Gemini-North GRACES Gemini Remote Access to CFHT ESPaDOnS Spectrograph Grace Gemini-North GRACES Gemini Remote Access to CFHT ESPaDOnS Spectrograph Grace Gemini-North GRACES Gemini Remote Access to CFHT ESPaDOnS Spectrograph Gemini-North Gemini-North Gemini-North Gemini-North Gemini-North Gemini-North Gemini-North Gemini-South Gemini-North Gemini-North Gemini-North Gemini-North Gemini-North Gemini-North Gemini-North Gemini-South Gemini-North Gemini-South		•				
13 SOAR Gemini-North GMOS-N-EEV-3port Gemini Multi-Object Spectrograph North 12 NOT Gemini-North GMISS Gemini-North InfraRed Spectrometer  11 Blanco Gemini-North NIFS Gemini-North Near-Infrared Integral Field Spectrometer  11 HST Gemini-North GMOS-N-EEV-6port Gemini-Facility Calibration Unit - North OKPNO: 2.1 m Gemini-North Gemini-North GMOS-N-EEV-6port Gemini Halti-Object Spectrograph Gemini-North GMOS-N-HAM Gemini Facility Calibration Unit - North Gemini-North GMOS-N-HAM Gemini Halti-Object Spectrograph North - 6 e2v CCD chips Gemini-North GMOS-N-HAM Gemini Multi-Object Spectrograph North - 6 e2v CCD chips Gemini-North GMOS-N-HAM Gemini Renote Access to CFHT ESPaDONS Spectrograph Gemini-North GMOS-N-HAM Gemini-Rorth GMOS-N-HAM Gemini-Rorth GMOS-N-HAM Gemini-Rorth GMOS-N-HAM Gemini-Rorth GMOS-N-HAM Gemini-Rorth GEMIN-RORTH GEMIN-NORTH GEMIN-NORTH GEMIN-NORTH GEMIN-South GEMIN-Sou						
13SOAR 12NOT Gemini-North GMOS-N-EEV-3port Gemini Multi-Object Spectrograph North - 3 e2v CCD chips 12NOT Gemini-North GMIRS Gemini-North Infraked Spectrometer 11Blanco Gemini-North NIFS Gemini-North Near-Infrared Integral Field Spectrometer 11HST Gemini-North GCAL Gemini Facility Calibration Unit - North 10KPNO:2.1m Gemini-North GMOS-N-EEV-6port Gemini Multi-Object Spectrograph 10WIYN:3.5m Gemini-North GMOS-N-HAM Gemini Multi-Object Spectrograph North - 6 e2v CCD chips 10 SDSS Gemini-North GRACES Gemini Remote Access to CFHT ESPaDOnS Spectrograph 9 Magellan-Clay Gemini-North OSCIR Mid-infrared imager and spectrograph 8 GTC Gemini-North QUIRC near-infrared imager/spectrometer 8 JKT Gemini-North QUIRC near-infrared imager / Spectrograph 8 CAO:3.5m Gemini-South GFI Gemini South Adaptive Optics Imager 7 du_Pont Gemini-South Gemi					· · · · · · · · · · · · · · · · · · ·	
12NOT 11Blanco Gemini-North NTFS Gemini-North NFS Gemini-North MOS-N-HAM GEMINI-NORTH GEMINI-NORTH GEMINI-NORTH GEMINI-NORTH MOS-N-HAM GEMINI-NORTH GEMINI-NORTH MOS-N-HAM GEMINI-NORTH GEMINI-NORTH MOS-N-HAM GEMINI-NORTH MOS-N-HAM GEMINI-NORTH GEMINI-NORTH MOS-N-HAM GEMINI-NORTH MUST-N-HAM MUST-N-HAM GEMINI-NORTH MUST-N-HAM MUST-N-HAM GEMINI-NORTH MUST-N-HAM MUST-N-HA						
11HST Gemini-North GCAL Gemini Facility Calibration Unit - North 10KPNO:2.1m Gemini-North GCAL Gemini Facility Calibration Unit - North 10WIYN:3.5m Gemini-North GMOS-N-EEV-6port Gemini Multi-Object Spectrograph North - 6 e2v CCD chips 10 SDSS Gemini-North GRACES Gemini Remote Access to CFHT ESPaDOnS Spectrograph 9 Magellan-Clay Gemini-North NIRI Near InfraRed Imager and spectrograph 8 GTC Gemini-North QUIRC near-infrared imager  8 Smith_Harlan Gemini-South GPI Gemini-South GSAI Gemini-South Adaptive Optics Imager  7 IRAM Gemini-South GMOS-S-HAM Gemini-South GMOS-S-HAM Gemini-South GMOS-S-HAM Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips  7 VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips  8 VLTI Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips  9 VLT-UT4 Gemini-South GMOS-S Gemini Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph  11 Cambridge InfraRed PAnoramic Survey Spectrograph  12 Cambridge InfraRed PAnoramic Survey Spectrograph  13 Cambridge InfraRed PAnoramic Survey Spectrograph  14 Cambridge InfraRed PAnoramic Survey Spectrograph  15 Cambridge InfraRed PAnoramic Survey Spectrograph  16 Palomar:5m		12N0T		-		
10KPN0:2.1m		11Blanco	Gemini-North	NIFS	Gemini-North Near-Infrared Integral Field Spectrometer	
10 KPN0:2.1m 10 WIYN:3.5m Gemini-North SGRACES Gemini Remote Access to CFHT ESPaDOnS Spectrograph Mid-infrared imager and spectrograph Gemini-North SGRACES Gemini-North Gemini-North SGRACES Gemini-Remote Access to CFHT ESPaDOnS Spectrograph Mid-infrared imager and spectrograph Gemini-South SGRACES Gemini-Remote Access to CFHT ESPaDOnS Spectrograph Mid-infrared imager Gemini-South Gemini-North Gemini-South		11 HST	Gemini-North	TEXES	, , ,	
10 WIYN: 3.5 m Gemini-North Gemini-North 10 SDSS Gemini-North Gemini-South Gemini-S					•	
10 SDSS   Gemini-North   GMOS-N-HAW   Gemini Multi-Object Spectrograph North - Hamamatsu CCD chips				•		
9 Magellan-Clay Gemini-North NIRI Near InfraRed Imager and spectrograph 8 GTC Gemini-North OSCIR Mid-infrared imager/spectrometer 8 JKT Gemini-South Adaptive Optics Imager 7 du_Pont Gemini-South Gemin						
8 GTC Gemini-North OSCIR Mid-infrared imager/spectrometer 8 JKT Gemini-North QUIRC near-infrared imager 8 Smith_Harlan Gemini-South T-Recs Thermal-Region Camera Spectrograph 8 CAO:3.5m Gemini-South GPI Gemini Planet Imager 8 UKIRT Gemini-South GSAOI Gemini South Adaptive Optics Imager 7 du_Pont Gemini-South NICI Near-Infrared Coronagraphic Imager 9 IRAM Gemini-South GMOS-S-HAM Gemini Multi-Object Spectrograph South - Hamamatsu CCD chips 9 VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips 9 VLT-UT4 Gemini-South GMOS-S Gemini Multi-Object Spectrograph South 9 VLT-UT4 Gemini-South FLAMINGOS1 Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph 10 APO:3.5m Gemini-South bHROS bench-mounted High Resolution Optical Spectrograph						
8 JKT Gemini-North QUIRC near-infrared imager  8 Smith_Harlan Gemini-South T-Recs Thermal-Region Camera Spectrograph  8 CA0:3.5m Gemini-South DSSI Differential Speckle Survey Instrument  8 UKIRT Gemini-South GSAOI Gemini South Adaptive Optics Imager  7 du_Pont Gemini-South NICI Near-Infrared Coronagraphic Imager  7 IRAM Gemini-South GMOS-S-HAM Gemini Multi-Object Spectrograph South - Hamamatsu CCD chips  7 VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips  7 VLT-UT4 Gemini-South GMOS-S  6 Gemini-South Gemini-South GMOS-S  6 APO:3.5m Gemini-South Gemin		9				
8 Smith_Harlan Gemini-South GPI Gemini Planet Imager 8 CAO:3.5m Gemini-South GSAOI Differential Speckle Survey Instrument 8 UKIRT Gemini-South GEMINI-South GEMINI-South Adaptive Optics Imager 7 du_Pont Gemini-South GEMINI-South GEMINI-South GEMINI-South Adaptive Optics Imager 7 IRAM Gemini-South GMOS-S-HAM Gemini Multi-Object Spectrograph South - Hamamatsu CCD chips 7 VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips 7 VLT-UT4 Gemini-South GMOS-S Gemini-South GMOS-S Gemini Multi-Object Spectrograph South 7 VLTI Gemini-South GMOS-S Gemini Multi-Object Spectrograph South Florida Multi-Object Spectrograph South 7 VLTI Gemini-South GMOS-S Gemini Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph 6 APO:3.5m Gemini-South AcqCam Acquisition Camera 6 Palomar:5m Gemini-South bHROS Differential Speckle Survey Instrument Gemini Planet Imager Gemini South Adaptive Optics Imager Gemini Multi-Object Spectrograph South Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph 6 Palomar:5m						
Gemini-South GPI Gemini Planet Imager  KAO: 3.5m Gemini-South DSSI Differential Speckle Survey Instrument  KIRT Gemini-South GSAOI Gemini South Adaptive Optics Imager  Mu_Pont Gemini-South NICI Near-Infrared Coronagraphic Imager  REMINITIES Gemini-South GMOS-S-HAM Gemini Multi-Object Spectrograph South - Hamamatsu CCD chips  VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips  KULT-UT4 Gemini-South GMOS-S Gemini Multi-Object Spectrograph South  KULTI Gemini-South GMOS-S Gemini Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Gemini-South Gemini-South GEMOS-S Cambridge InfraRed PAnoramic Survey Spectrograph  KULTI Gemini-South AcqCam Acquisition Camera  KULTI Gemini-South AcqCam Acquisition Camera  KULTI Gemini-South AcqCam Acquisition Camera  KULTI Gemini-South BHROS bench-mounted High Resolution Optical Spectrograph		8 JKT		•		
8 CAO:3.5m Gemini-South GPI Gemini Planet Imager 8 UKIRT Gemini-South GSAOI Gemini South Adaptive Optics Imager 7 du_Pont Gemini-South GMOS-S-HAM Gemini Multi-Object Spectrograph South - Hamamatsu CCD chips 7 VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips 7 VLT-UT4 Gemini-South GMOS-S Gemini-South GMOS-S Gemini Multi-Object Spectrograph South FLAMINGOS1 Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Gemini-South Gemini-South GMOS-S Gemini-South GMOS-S Gemini-South GMOS-S Gemini Multi-Object Spectrograph South FLAMINGOS1 Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Gemini-South Gemini-South GMOS-S Gemini-South Gemini-South GMOS-S Gemini-South Gemini-South GMOS-S Gemini Multi-Object Spectrograph South Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Gemini-South Gemini-South Gemini-South Gemini-South Gemini-South AcqCam Acquisition Camera Gemini-South Ge		8 Smith_Harlan				
8 UKIRT Gemini-South Gemini-Sou						
7 du_Pont Gemini-South NICI Near-Infrared Coronagraphic Imager 7 IRAM Gemini-South GMOS-S-HAM Gemini Multi-Object Spectrograph South - Hamamatsu CCD chips 7 VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips 7 VLT-UT4 Gemini-South GMOS-S Gemini Multi-Object Spectrograph South 7 VLTI Gemini-South GEMOS-S Gemini Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Gemini-South GIRPASS Cambridge InfraRed PAnoramic Survey Spectrograph 6 APO:3.5m Gemini-South BHROS bench-mounted High Resolution Optical Spectrograph					·	
7 IRAM Gemini-South GMOS-S-HAM Gemini Multi-Object Spectrograph South - Hamamatsu CCD chips 7 VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips 7 VLT-UT4 Gemini-South GMOS-S Gemini Multi-Object Spectrograph South - e2v CCD chips 7 VLTI Gemini-South FLAMINGOS1 Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph 6 APO:3.5m Gemini-South AcqCam Acquisition Camera 6 Palomar:5m Gemini-South BHROS bench-mounted High Resolution Optical Spectrograph						
7 VLA Gemini-South GMOS-S-EEV Gemini Multi-Object Spectrograph South - e2v CCD chips Gemini-South GMOS-S Gemini Multi-Object Spectrograph South VLTI Gemini-South GMOS-S Gemini Multi-Object Spectrograph South FLAMINGOS1 Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph Gemini-South AcqCam Acquisition Camera Florida Multi-Object Spectrograph Acquisition Camera Florida Multi-Object Spectrograph South - e2v CCD chips Gemini-South Florida Multi-Object Spectrograph South Florida Multi-Object Spectrograph South Florida Multi-Object Spectrograph South Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Cambridge InfraRed PAnoramic Survey Spectrograph						
7 VLT-UT4 Gemini-South GMOS-S Gemini Multi-Object Spectrograph South 7 VLTI Gemini-South FLAMINGOS1 Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Gemini-South CIRPASS Cambridge InfraRed PAnoramic Survey Spectrograph Gemini-South AcqCam Acquisition Camera Gemini-South bHROS bench-mounted High Resolution Optical Spectrograph						
Gemini-South FLAMINGOS1 Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - Gemini-South CIRPASS Cambridge InfraRed PAnoramic Survey Spectrograph APO:3.5m Gemini-South AcqCam Acquisition Camera Palomar:5m Gemini-South bHROS bench-mounted High Resolution Optical Spectrograph						
7 VLTI Gemini-South CIRPASS Cambridge InfraRed PAnoramic Survey Spectrograph 6 APO:3.5m Gemini-South AcqCam Acquisition Camera 6 Palomar:5m Gemini-South bHROS bench-mounted High Resolution Optical Spectrograph		7 VLT-UT4				
6 APO:3.5m Gemini-South AcqCam Acquisition Camera 6 Palomar:5m Gemini-South bHROS bench-mounted High Resolution Optical Spectrograph		7 VLTI				
6 Palomar:5m Gemini-South bHROS bench-mounted High Resolution Optical Spectrograph		6 AP0:3.5m				
		6 Palomar:5m			·	
6 Keck-II Gemini-South GEMS Gemini Multi-Conjugate Adaptive Optics System						
		O NECK-II			Florida Multi-Object Imaging Near-Infrared Grism Observational Spectrometer - 2	

Far Ultraviolet Detector

Near Ultraviolet Detector

Instrument full name

Telescope nameInstrument name

FUV

NUV

GALEX

GALEX