Scientific Justification (required for all)

Cosmic ipsum transit planet pulsar Venus circumpolar culmination telescope translunar bolometer Mercury cislunar occultation umbra Deneb meteorite density retrograde Mir rings outer planets inner planets moon transparency zodiac hyperbolic orbit interstellar hypernova gravitational constant orbital eccentricity interstellar dust radiant geostationary scientific notation orbit gas giant docking solstice shooting star Pluto seeing galaxy perihelion gibbous moon gravity escape velocity superior planets star coriolis force

Parallax nova radiant spectrum azimuth escape velocity equinox telescope Hubble telescope plane of the ecliptic meteor shower deep space probe moon cosmos quasar ecliptic Bailey's beads opposition Milky Way north star minor planet axial tilt libration perturbation cosmonaut Van Allen belt flare pole star terrestrial white giant meteorite day new moon dwarf star Venus globular cluster partial eclipse yellow dwarf terminator rings inner planets gas giant meteoroid lunar Lagrange points syzygy rocket

Space station event horizon plane of the ecliptic outer planets local group Kepler's laws supernova orbit moon gas giant Saturn culmination waning binary star spectrum sun flare conjunction declination orbital eccentricity astronomer aphelion Neptune eccentricity lunar dust translunar meteorite scintillation yellow dwarf Deneb inclination Kirkwood gaps astronomy north star vernal equinox interstellar ecliptic Lunar mare hyperbolic orbit magnitude black hole Mars exoplanet perturbation full moon synodic Pluto

Transneptunians sun black body ionosphere axial tilt Mercury orbital eccentricity azimuth cosmos partial eclipse Mars libration Earthshine yellow dwarf radiant helium exoplanet umbra Deneb plane of the ecliptic seeing Hubble's law dark matter falling star nadir quarter moon outer planets inferior planets rocket flare dwarf star Kuiper belt perihelion escape velocity inclination inner planets muttnik elliptical orbit satellite corona equinox black hole minor planet Earth parsec terrestrial shooting star variable star

Rings axial tilt vacuum twinkling solstice apastron heliocentric Mercury red giant star comet black hole event horizon singularity waning Sputnik ephemeris penumbra Lagrange points double star gegenschein occultation red dwarf sky eclipse Venus half moon universe satellite culmination hyperbolic orbit astronomer planetoid Oort cloud Kirkwood gaps Mars astronomy space exploration astronaut gravitational constant terrestrial dust perturbation quarter moon sun hypernova Messier object cosmonaut planisphere

Geosynchronous zodiac cluster apogee translunar density declination cosmos local group black body variable star sidereal gegenschein red shift outer planets Mars Neptune astronaut Kuiper belt Earthshine wormhole deep space cosmonaut Alpha Centauri total eclipse galaxy spectrum retrograde solar supernova circumpolar solstice perturbation wavelength perihelion gamma ray precession waning Messier object new moon albedo space kiloparsec inclination orbital inclination crescent moon docking solar apogee Mercury new moon sidereal aphelion dwarf planet Sputnik radiant occultation umbra constellation terrestrial total eclipse full moon Saturn falling star Alpha Centauri dark matter heliocentric syzygy translunar binary star Oort cloud half moon Milky Way inertia variable star waning red shift cosmology Lagrange points meteor meteoroid escape velocity scientific notation ice giant black hole singularity precession

moon planetary nebula meteor shower libration rings telescope Hubble's law pole star supernova double star perigee celestial equator translunar right ascension Lunar mare transparency meteor shower astronomy minor planet Roche limit gravitational constant spectrum seeing Lagrange points interstellar dust bolometer Oort cloud syzygy universe dwarf planet Deneb density quarter moon waning interstellar geostationary scientific notation quasar gamma ray observatory helium astronomer limb visual magnitude vacuum sidereal new moon transit Alpha Centauri Sputnik Bailey's beads starlight space sun galaxy astronaut opposition earth gravitational constant Neptune astronomical unit waning translunar mass solar system flare meteoroid space exploration meteor shower ephemeris hypernova visual magnitude new moon precession gamma ray sidereal orbit inclination vacuum weightlessness constellation free fall space parsec flyby Roche limit universe rocket interstellar cosmonaut exoplanet totality moon singularity wormhole cosmology kiloparsec muttnik gravitational lens eclipse elliptical orbit retrograde terrestrial background radiation apastron radiation satellite corona probe star flyby Messier object quarter moon gegenschein geostationary comet Hubble telescope Hubble's law declination waxing muttnik Uranus totality scintillation exoplanet Mercury synodic transparency asteroid libration plane of the ecliptic meteor shower opposition twinkling double star binary star Roche limit transit apogee Jupiter orbit red shift extragalactic Neptune gravitation superior planets eclipse parsec Van Allen belt supernova Kepler's laws minor planet Lagrange points

Light-year gegenschein Mercury celestial equator astronomy Alpha Centauri Hubble's law zenith equinox binary star solstice neutron star muttnik kiloparsec pulsar crescent moon wavelength black hole satellite flyby asteroid inertia sidereal meteorite gravitation local group conjunction outer planets docking free fall asterism Uranus Jupiter gamma ray H-R diagram Kuiper belt probe cosmonaut scientific notation deep space perigee planetary nebula ecliptic vernal equinox azimuth Van Allen belt rings albedo

Retrograde spectrum white giant Mir density outer planets red dwarf flare partial eclipse Kepler's laws Alpha Centauri Hubble telescope new moon opposition minor planet cluster Doppler shift star weightlessness local arm x-rays right ascension orbital eccentricity docking precession white dwarf perihelion mass asterism vernal equinox yellow dwarf terminator binary star aperature seeing hypernova background radiation Messier object equinox parallax twinkling waning axial tilt wormhole meteorite Milky Way telescope cosmonaut space exploration phase dwarf star coriolis force nova seeing conjunction perigee gravity right ascension nadir black hole radiation local group culmination umbra Sputnik magnitude scintillation zodiac cluster Venus opposition scientific notation ice giant elliptical orbit apastron interstellar sunspot Mercury twinkling planet starlight equinox white dwarf universe solstice radiant black body solar sidereal astronomy limb hyperbolic orbit NASA ephemeris eclipse gibbous moon

Constellation planet total eclipse hypernova cosmic rays conjunction neutron star eclipse astronomy dust Jupiter double star quasar escape velocity twinkling partial eclipse perihelion revolve docking lunar gravity vernal equinox density plane of the ecliptic Mars superior planets parallax supernova red shift culmination gegenschein telescope scientific notation declination planisphere satellite globular cluster sunspot x-rays Milky Way sky sun crescent moon deep space background radiation Oort cloud precession orbital inclination Mars astronomer Earth astronomical unit red giant star asteroid crater celestial equator gravitation crescent moon telescope

singularity cosmos radiation Venus galaxy totality Van Allen belt Kirkwood gaps Milky Way translunar zodiac cislunar ecliptic docking lens free fall probe observatory corona pole star visual magnitude sunspot moon meteorite north star Bailey's beads revolve dust extragalactic Earthshine perihelion pulsar planetary nebula flare flyby starlight cosmology

Description of Observations (required for all GO and Survey)

Cosmic ipsum red shift Hubble telescope globular cluster limb yellow dwarf phase right ascension pulsar planet Lunar mare corona double star celestial minor planet waning star waxing cislunar cosmonaut eccentricity supernova dark matter lunar hypernova neutron star radiation orbital eccentricity universe solstice free fall lens muttnik opposition sidereal extragalactic dwarf planet white dwarf Roche limit gravity transparency orbital inclination meteoroid gravitational constant H-R diagram meteor shower precession Pluto kiloparsec escape velocity Bailey's beads cosmology circumpolar Neptune interstellar dust transparency shooting star moon interstellar exoplanet heliocentric perigee aperature Earthshine muttnik penumbra binary star Hubble's law asteroid rocket perturbation outer planets universe radiant Hubble telescope solar wind extragalactic azimuth cosmic rays new moon sky dwarf star singularity Pluto zodiac superior planets pulsar white giant radiation vacuum nova declination perihelion planetoid Milky Way inclination galaxy

Parsec transparency local group celestial conjunction interstellar dust meteor shower satellite celestial coordinates Hubble telescope hyperbolic orbit weightlessness planetary nebula equinox perturbation vacuum declination geostationary probe twinkling nova zenith superior planets nebula orbital inclination comet syzygy event horizon apastron muttnik sidereal telescope ecliptic waning Saturn radiation inertia supernova astronomer Sputnik kiloparsec aperature phase singularity Bailey's beads exoplanet cosmic rays gravitational lens penumbra exoplanet interstellar meteoroid radiation syzygy observatory corona coriolis force Messier object rings half moon inclination limb telemetry terrestrial heliocentric solar wind pole star Uranus dwarf star nebula dwarf planet Oort cloud Earth star orbital inclination Doppler shift eccentricity white giant Kuiper belt celestial apastron conjunction transparency retrograde meteor shower NASA Drake equation totality gibbous moon interstellar dust asteroid Saturn ephemeris gravitational constant day meridian

Mars yellow dwarf flare x-rays Oort cloud cluster terrestrial docking space station Van Allen belt Saturn shooting star superior planets wormhole meteoroid asteroid half moon seeing orbit astronomical unit orbital eccentricity gamma ray waxing sidereal elliptical orbit Earth Jupiter Hubble's law terminator spectroscope dust pulsar star cosmic rays Doppler shift exoplanet Pluto geosynchronous universe nebula visual magnitude mass NASA outer planets total eclipse celestial black body revolve aperature planetary nebula gas giant perturbation mass radiant spectrum Venus cluster plane of the ecliptic terrestrial wavelength translunar umbra gravitational lens quasar asterism dark matter totality crater pulsar planisphere globular cluster spectroscope meridian synodic radiation pole star parsec local group conjunction Alpha Centauri dwarf star inner planets flyby superior planets gegenschein zodiac telescope NASA full moon ephemeris opposition asteroid scientific notation muttnik meteor Mercury new moon comet gravitational lens asterism inferior planets meridian sky local arm retrograde inclination dwarf planet ice giant terrestrial space

station coriolis force H-R diagram zenith nebula Sputnik Hubble telescope Mir sunspot terminator cosmonaut variable star Messier object conjunction flyby astronaut apogee Saturn falling star deep space axial tilt planetary nebula equinox Kuiper belt binary star Van Allen belt occultation twinkling observatory Earth local group galaxy inertia orbital inclination Hubble's law

Waning gamma ray pole star meteor shower zodiac sky dust nebula celestial coordinates limb white dwarf Kepler's laws Jupiter Alpha Centauri minor planet phase wavelength ice giant gravitational lens white giant partial eclipse terminator Hubble's law orbit supernova space station ephemeris elliptical orbit inertia black hole perihelion spectrum Van Allen belt right ascension solar wind planetoid parsec free fall perturbation constellation declination satellite interstellar geostationary axial tilt event horizon zenith Mercury

Analysis Plan (required for all AR and Calibration GO)

Cosmic ipsum seeing eccentricity Uranus telescope escape velocity circumpolar equinox local arm solstice singularity Oort cloud lens gamma ray aperature perigee telemetry Lagrange points terrestrial background radiation globular cluster transparency gravitational lens hypernova quasar waning azimuth Venus crescent moon astronomy orbit cosmonaut satellite penumbra plane of the ecliptic flyby precession synodic minor planet rocket conjunction Earthshine helium libration translunar superior planets big bang theory meteorite Earth

Oort cloud telescope Deneb Hubble's law starlight new moon lunar yellow dwarf orbital eccentricity hydrogen Earthshine waning solstice variable star escape velocity orbital inclination exoplanet Hubble telescope globular cluster weightlessness celestial circumpolar solar system meteor Alpha Centauri seeing half moon space station pole star meteoroid red shift docking sunspot scintillation planetary nebula rings Kepler's laws gegenschein event horizon dust ionosphere equinox parsec spectroscope radiation outer planets elliptical orbit aperature seeing astronomical unit circumpolar ephemeris planetary nebula syzygy solar translunar superior planets Kepler's laws magnitude white dwarf penumbra Earth gibbous moon event horizon celestial crescent moon Mars asteroid synodic big bang theory precession totality radiation Doppler shift asterism spectroscope coriolis force twinkling astronaut quasar transneptunians heliocentric aperature wavelength comet exoplanet rings planet revolve H-R diagram nebula full moon globular cluster eccentricity axial tilt moon Saturn aperature Alpha Centauri eclipse inner planets shooting star ionosphere supernova weightlessness zenith gravitational constant Earthshine retrograde escape velocity double star translunar star perihelion geostationary spectroscope nova transit seeing planetary nebula solar system

Cosmology translunar vernal equinox corona sun ecliptic kiloparsec density gegenschein yellow dwarf ice giant parallax orbital inclination solar star Kirkwood gaps Kuiper belt apogee planet vacuum pole star light-year umbra Alpha Centauri revolve neutron star space station local group dwarf planet docking elliptical orbit black hole declination Lunar mare deep space penumbra dark matter astronaut solar system meteor background radiation rocket zodiac exoplanet phase meteoroid transparency white dwarf asterism albedo parsec Mercury space meteorite Milky Way umbra starlight culmination meteoroid telemetry lens observatory zodiac sky libration superior planets Mir extragalactic deep space local group minor planet terrestrial meridian Neptune.

Supplemental Information (if any)

Special Requirements (if any)

Cosmic ipsum azimuth red shift orbital inclination umbra binary star gas giant event horizon interstellar dust sidereal asteroid occultation white giant free fall solar wind parallax nova rocket starlight escape velocity planetary nebula scintillation red dwarf black hole wavelength twinkling celestial exoplanet radiant Earth apogee Earthshine transit new moon globular cluster Deneb meteor wormhole geostationary Hubble telescope mass perihelion north star bolometer totality extragalactic ionosphere waning heliocentric

Justify Coordinated Parallel Observations (if any)

Cosmic ipsum azimuth red shift orbital inclination umbra binary star gas giant event horizon interstellar dust sidereal asteroid occultation white giant free fall solar wind parallax nova rocket starlight escape velocity planetary nebula scintillation red dwarf black hole wavelength twinkling celestial exoplanet radiant Earth apogee Earthshine transit new moon globular cluster Deneb meteor wormhole geostationary Hubble telescope mass perihelion north star bolometer totality extragalactic ionosphere waning heliocentric

Celestial perihelion dust magnitude satellite Roche limit day astronomy planetary nebula Neptune Bailey's beads rings space equinox new moon Uranus event horizon gas giant axial tilt parallax seeing sidereal limb dwarf planet gravitational lens orbital inclination penumbra inclination celestial coordinates orbital eccentricity Kepler's laws spectrum dwarf star astronaut Kuiper belt neutron star exoplanet star aperature lunar perigee azimuth Sputnik ice giant quarter moon gamma ray density supernova

Justify Duplications (if any)

Cosmic ipsum azimuth red shift orbital inclination umbra binary star gas giant event horizon interstellar dust sidereal asteroid occultation white giant free fall solar wind parallax nova rocket starlight escape velocity planetary nebula scintillation red dwarf black hole wavelength twinkling celestial exoplanet radiant Earth apogee Earthshine transit new moon globular cluster Deneb meteor wormhole geostationary Hubble telescope mass perihelion north star bolometer totality extragalactic ionosphere waning heliocentric

Justify Coordinated Observations with Other Facilities (if any)

Cosmic ipsum azimuth red shift orbital inclination umbra binary star gas giant event horizon interstellar dust sidereal asteroid occultation white giant free fall solar wind parallax nova rocket starlight escape velocity planetary nebula scintillation red dwarf black hole wavelength twinkling celestial exoplanet radiant Earth apogee Earthshine transit new moon globular cluster Deneb meteor wormhole geostationary Hubble telescope mass perihelion north star bolometer totality extragalactic ionosphere waning heliocentric

References

Mhyre 2017, cosmic-ipsum, https://github.com/eryhM/cosmic-ipsum

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