

# ASTR520 Assignment 1: Topic Selection Due Jan 14 2018 via email (subject heading ASTR520: Assignment 1)



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select category (B4-B7) and up to 4 key words

Hubble Space Telescope Call for Proposals for Cycle 25 > Appendix B: Scientific Keywords

## Appendix B: Scientific Keywords

The Tables in this Appendix list the Scientific Keywords that are valid for use in the Phase I proposal template (see [Section 8.9](#)).

**Table B.1: Solar System Keywords**

BIOMARKERS	PLANETARY ATMOSPHERES
CHEMICAL COMPOSITION	PLANETARY SATELLITES
COMETS	SPACE WEATHER
GIANT PLANETS	TERRESTRIAL PLANETS
KUIPER-BELT OBJECTS	TRANSITS
MINOR PLANETS	

**Table B.2: Extrasolar Planets and Planet Formation Keywords**

BIOMARKERS	GIANT PLANETS
CHEMICAL COMPOSITION	PLANETARY ATMOSPHERES
COMETS	PLANETARY SATELLITES
CORONAGRAPHY	SPACE WEATHER
DISKS	TERRESTRIAL PLANETS
EXOPLANET HOST STARS	TRANSITS
EXTRA-SOLAR PLANETS	

**Table B.3: Stellar Physics Keywords**

ACCRETION DISKS AND JETS	HOT STARS
ASTROMETRY	INTERSTELLAR MEDIUM
ATMOSPHERES	LOW-MASS STARS
BINARIES	MAIN-SEQUENCE STARS
BROWN DWARFS	MASSIVE STARS
CHEMICAL ABUNDANCES	MOLECULAR CLOUDS
CIRCUMSTELLAR MATTER	NEUTRON STARS AND PULSARS
COOL STARS	PLANETARY NEBULAE
DUST	PRE-MAIN SEQUENCE STARS
EVOLUTION	RADIATIVE TRANSFER
EVOLVED STARS	SUPERNOVAE
GAMMA-RAY BURSTS	TRANSIENTS
HII REGIONS	VARIABLE STARS

**Table B.4: Stellar Populations**

ASTROMETRY	HII REGIONS
BULGES, SPHEROIDS, & ELLIPTICALS	HALOS

In Cycle 25, we anticipate having a panel dealing with Solar System, two panels dealing with Planets (including exoplanets, planet formation, and debris disks); three panels dealing with Stars (of any temperature and evolutionary state, and including nearby star formation and Galactic ISM); two panels dealing with Stellar Populations (resolved); three panels dealing with Galaxies and the IGM (including unresolved stellar populations and ISM in external galaxies); two panels dealing with Massive Black Holes and Hosts (including AGN and Quasars); and two panels dealing with Cosmology (including large-scale structure, gravitational lensing, and galaxy groups and clusters). Within a panel, proposals are assigned to individual expert reviewers based on the keywords given in the proposal (see [Section 8.9](#)).

CHEMICAL ABUNDANCES	HOT STARS
COLOR-MAGNITUDE DIAGRAMS	INTERSTELLAR MEDIUM
COOL STARS	IRREGULAR GALAXIES
DISTANCE LADDER	LOCAL GROUP GALAXIES
DUST	MAGELLANIC CLOUDS
DWARF GALAXIES	MICROLENSING
EVOLUTION	PLANETARY NEBULAE
GALACTIC CENTER	STAR CLUSTERS
GALACTIC STRUCTURE	STAR-FORMATION HISTORIES
GLOBULAR CLUSTERS	

**Table B.5: Galaxies and the IGM Keywords**

BULGES, SPHEROIDS, & ELLIPTICALS	LYMAN-ALPHA FOREST
CHEMICAL ABUNDANCES	LOCAL GROUP GALAXIES
CIRCUMGALACTIC MEDIUM	MAGELLANIC CLOUDS
COOLING FLOWS	METAL ABSORPTION SYSTEMS
DAMPED LYMAN-ALPHA ABSORPTION	PHOTOMETRIC REDSHIFTS
DARK MATTER HALOS	QUENCHED GALAXIES
DISKS	SCALING RELATIONS
DUST	SIMULATIONS & MODELS
DWARF GALAXIES	STAR CLUSTERS
EMMISSION-LINE GALAXIES	STARBURST GALAXIES
GALAXY FORMATION AND EVOLUTION	STAR-FORMATION HISTORIES
SPECTRAL ENERGY DISTRIBUTIONS	STELLAR HALOS
INTERACTING/MERGING GALAXIES	STELLAR POPULATIONS
IR-LUMINOUS GALAXIES	STRUCTURE AND MORPHOLOGY
IRREGULAR GALAXIES	

**Table B.6: Massive Black Holes and Their Hosts Keywords**

ACCRETION DISKS	LOW-LUMINOSITY AGN/SEYFERTS
AGN HOST GALAXIES	M-SIGMA RELATION
BAL QUASARS	QUENCHED GALAXIES
EMISSION LINES	RADIO AGN
FEEDBACK	REVERBERATION
HIGH-LUMINOSITY AGN/QUASARS	SUPERMASSIVE BLACK HOLES
JETS	WINDS AND OUTFLOWS
LINERS	X-RAY AGN

**Table B.7: Cosmology Keywords**

CHEMICAL ABUNDANCES	GRAVITATIONAL LENSING
CLUSTERS OF GALAXIES	GROUPS OF GALAXIES
COOLING FLOWS	INTRACLUSTER MEDIUM
COSMOLOGICAL PARAMETERS AND DISTANCE SCALE	LARGE-SCALE STRUCTURE
EXTRA-GALACTIC LEGACY & DEEP FIELDS	REIONIZATION
FIRST LIGHT STARS AND GALAXIES	SIMULATIONS & MODELS
GAMMA-RAY BURSTS <sub>w</sub>	SUPERNOVAE