Appendix D:

SSA Data Model Summary

Here is a table with corrected UCD suggestions from Sebastien and Mireille
- Flag for *meta.curation* is proposed as S. cf commits on github/ivoa-ucd/UCDList
- *instr.fov* has prefix S in UCDList but was used as P:
- combining with S allows to make explicit what is measured related to the shape of the region viewed by the instrument : area, extent, central position, polygon, etc . i.e *phys.angArea;instr.fov*, *phys.angSize;instr.fov*, …, etc.
- all other terms are valid against UCD1.4 and follow combination rules .

UTYPE	UCD/proposed changes	In replacement of	Description
		In REC SSA 1.1 20120210	
Query			**Query Metadata**
Query.Score			Degree of match to query parameters
Query.Token			Continuation token for large queries
Association			**Association Metadata**
Association.Type			Type of association
Association.ID			Association identifier
Association.Key			Key used to distinguish association elements
Access			**Access Metadata**
Access.Reference	meta.ref.url		URL used to access dataset
Access.Format	meta.code.mime		Content or MIME type of dataset
Access.Size	phys.size;meta.file		Estimated dataset size
Protocol			**Protocol Metadata**
ssa			XML name space for SSA protocol
spec			XML name space for Spectrum data model
Spectrum			**General Dataset Metadata**
Dataset.DataModel			Datamodel name and version
Dataset.Type			Dataset or segment type
Dataset.Length	meta.number		Number of points
Dataset.Deleted			Set if dataset is deleted
Dataset.TimeSI			SI factor and dimensions
Dataset.SpectralSI			SI factor and dimensions
Dataset.FluxSI			SI factor and dimensions
Dataset.SpectralAxis			Table column containing spectral coord
Dataset.FluxAxis			Table column containing flux values
DataID			**Dataset Identification Metadata**
DataID.Title	meta.title;meta.dataset		Dataset Title
DataID.Creator	meta.id		Dataset creator
DataID.Collection	meta.id		Data collection to which dataset belongs
DataID.DatasetID	meta.id;meta.dataset		IVOA Dataset ID

DataID.CreatorDID	meta.id		Creator's ID for the dataset
DataID.Date	time.processing;meta.dataset	time;meta.dataset	Data processing/creation date
DataID.Version	meta.version;meta.dataset		Version of dataset
DataID.Instrument	meta.id;instr		Instrument name
DataID.Bandpass	instr.bandpass		Band as in RSM Coverage.Spectral
DataID.DataSource			Original source of the data
DataID.CreationType	meta.code.status		Dataset creation type
DataID.Logo	meta.ref.url		URL for creator logo
DataID.Contributor			Contributor
Curation			**Curation Metadata**
Curation.Publisher	meta.id;meta.curation		Dataset publisher
Curation.PublisherID	meta.ref.ivoid;meta.curation	meta.ref.url;meta.curation	URI for VO Publisher
Curation.PublisherDID	meta.ref.ivoid	meta.ref.url;meta.curation	Publisher's ID for the dataset ID
Curation.Date	time.processing;meta.curation		Date curated dataset last modified
Curation.Version	meta.version;meta.curation		Publisher's version of the dataset
Curation.Rights	meta.code.status		Restrictions on data access
Curation.Reference	meta.bib.bibcode		URL or Bibcode for documentation
Curation.Contact.Name	meta.bib.author;meta.curation		Contact name
Curation.Contact.Email	meta.email;meta.curation	meta.ref.url;meta.email	Contact email
Target			**Target Metadata**
Target.Name	meta.id;src		Target name
Target.Description	meta.note;src		Target description
Target.Class	src.class		Object class of observed target
Target.Pos	pos.eq;src		Target RA and Dec
Target.SpectralClass	src.spType		Object spectral class
Target.Redshift	src.redshift		Target redshift
Target.VarAmpl	src.var.amplitude		Target variability amplitude (typical)
Derived			**Derived Metadata**
Derived.SNR	stat.snr		Signal-to-noise for spectrum
Derived.Redshift.Value	src.redshift;spect		Measured redshift for spectrum
Derived.Redshift.StatError	stat.error;src.redshift;spect	stat.error;src.redshift	Error on measured redshift
Derived.Redshift.Confidence			Confidence value on redshift
Derived.VarAmpl	src.var.amplitude;arith.ratio		Variability amplitude as fraction of mean
CoordSys			**Coordinate System Metadata**
CoordSys.ID			ID string for coordinate system
CoordSys.SpaceFrame.Name	pos.frame		Spatial coordinate frame name
CoordSys.SpaceFrame.Ucd	meta.ucd;pos.frame	meta.ucd	Space frame UCD
CoordSys.SpaceFrame.RefPos	meta.ref;pos.frame		Origin of SpaceFrame
CoordSys.SpaceFrame.Equinox	time.equinox;pos.frame		Equinox
CoordSys.TimeFrame.Name	time.scale		Timescale
CoordSys.TimeFrame.Ucd	meta.ucd;time.scale	meta.ucd	Time frame UCD
CoordSys.TimeFrame.Zero	arith.zp;time.scale	arith.zp;time	Zero point of timescale in MJD
CoordSys.TimeFrame.RefPos	meta.ref;pos;time.scale	time.scale	Location for times of photon arrival
CoordSys.SpectralFrame.Name			Spectral frame name
CoordSys.SpectralFrame.Ucd	meta.ucd		Spectral frame UCD

CoordSys.SpectralFrame.RefPos	meta.ref	sdm:spect.frame	Spectral frame origin
CoordSys.SpectralFrame.Redshift	src.redshift		Redshift value used if restframe corrected
CoordSys.RedshiftFrame.Name			Redshift frame name
CoordSys.RedshiftFrame.DopplerDefinition			Type of redshift
CoordSys.RedshiftFrame.RefPos			Redshift frame origin
Char.SpatialAxis			**Spatial Axis Characterization**
Char.SpatialAxis.Name			Name for spatial axis
Char.SpatialAxis.Ucd	meta.ucd		UCD for spatial coord
Char.SpatialAxis.Unit	meta.unit		Unit for spatial coord
Char.SpatialAxis.Coverage.Location.Value	pos.eq		Spatial Position
Char.SpatialAxis.Coverage.Bounds.Extent	phys.angSize; instr.fov	instr.fov	Aperture angular size
Char.SpatialAxis.Coverage.Support.Area	pos.outline;instr.fov		Aperture region
Char.SpatialAxis.Coverage.Support.Extent	phys.angArea; instr.fov	instr.fov	Field of view area, sq. deg.
Char.SpatialAxis.SamplingPrecision.SampleExtent	phys.angSize;instr.pixel		Spatial bin size
Char.SpatialAxis.SamplingPrecision.FillFactor	stat.filling;pos.eq		Spatial sampling filling factor
Char.SpatialAxis.Accuracy.StatError	stat.error;pos.eq		Astrometric statistical error
Char.SpatialAxis.Accuracy.SysError	stat.error.sys;pos.eq		Astrometric systematic error
Char.SpatialAxis.Calibration	meta.code.qual		Type of spatial coord calibration
Char.SpatialAxis.Resolution	pos.angResolution		Spatial resolution of data
Char.SpectralAxis			**Spectral Axis Characterization**
Char.SpectralAxis.Name			Name for spectral axis
Char.SpectralAxis.Ucd	meta.ucd		UCD for spectral coord
Char.SpectralAxis.Unit	meta.unit		Unit for spectral coord
Char.SpectralAxis.Coverage.Location.Value	em.wl;instr.bandpass		Spectral coord value
Char.SpectralAxis.Coverage.Bounds.Extent	instr.bandwidth	em.wl;instr.bandwidth	Width of spectrum
Char.SpectralAxis.Coverage.Bounds.Start	em.wl;stat.min		Start in spectral coordinate
Char.SpectralAxis.Coverage.Bounds.Stop	em.wl;stat.max		Stop in spectral coordinate
Char.SpectralAxis.Coverage.Support.Extent	instr.bandwidth	em.wl;instr.bandwidth	Effective width of spectrum
Char.SpectralAxis.SamplingPrecision.SampleExtent	spect.binSize	em.wl;spect.binSize	Wavelength bin size
Char.SpectralAxis.SamplingPrecision.FillFactor	stat.filling;em		Spectral sampling filling factor
Char.SpectralAxis.Accuracy.BinSize	spect.binSize	em.wl;spect.binSize	Spectral coord bin size
Char.SpectralAxis.Accuracy.StatError	stat.error;em		Spectral coord statistical error
Char.SpectralAxis.Accuracy.SysError	stat.error.sys;em		Spectral coord systematic error
Char.SpectralAxis.Calibration	meta.code.qual		Type of spectral coord calibration
Char.SpectralAxis.Resolution	spect.resolution;stat.fwhm	spect.resolution;em	Spectral resolution FWHM
Char.SpectralAxis.ResPower	spect.resolution		Spectral resolving power
Char.TimeAxis			**Time Axis Characterization**
Char.TimeAxis.Name			Name for time axis
Char.TimeAxis.Ucd	meta.ucd		UCD for time
Char.TimeAxis.Unit	meta.unit		Unit for time
Char.TimeAxis.Coverage.Location.Value	time.epoch		Midpoint of exposure on MJD scale
Char.TimeAxis.Coverage.Bounds.Extent	time.duration		Total exposure time
Char.TimeAxis.Coverage.Bounds.Start	time.start;obs.exposure		Start time
Char.TimeAxis.Coverage.Bounds.Stop	time.end;obs.exposure		Stop time
Char.TimeAxis.Coverage.Support.Extent	time.duration;obs.exposure		Effective exposure time
Char.TimeAxis.SamplingPrecision.SampleExtent	time.interval		Time bin size

Char.TimeAxis.SamplingPrecision.FillFactor	stat.filling;time		Time sampling filling factor
Char.TimeAxis.Accuracy.BinSize	time.interval		Time bin size
Char.TimeAxis.Accuracy.StatError	stat.error;time		Time coord statistical error
Char.TimeAxis.Accuracy.SysError	stat.error.sys;time		Time coord systematic error
Char.TimeAxis.Calibration	meta.code.qual;time	meta.code.qual	Type of coord calibration
Char.TimeAxis.Resolution	time.resolution;stat.fwhm	time.resolution	Temporal resolution FWHM
Char.FluxAxis			**Flux Axis Characterization**
Char.FluxAxis.Name			Name for flux
Char.FluxAxis.Ucd	meta.ucd		UCD for flux
Char.FluxAxis.Unit	meta.unit		Unit for flux
Char.FluxAxis.Accuracy.StatError	stat.error;phot.flux	stat.error;phot.flux.density;em	Flux statistical error
Char.FluxAxis.Accuracy.SysError	stat.error.sys;phot.flux	stat.error.sys;phot.flux.density;em	Flux systematic error
Char.FluxAxis.Calibration	meta.code.qual;phot.flux		Type of flux calibration