



VOSpec: A Tool to Handle VO Spectra

European Space Astronomy Centre (ESAC)

Archives Development Team



VOSpec history

- ❑ Proposal from Osuna/Salgado at IVOA meeting @ Strasbourg, October 2003, to add parameters into SSA to allow superimposition and unit handling for spectra
- ❑ ESAC Archive Development Team starts developing the tool (Isa Barbarisi, Jesus Salgado, Pedro Osuna)
- ❑ Already available version working with ISO and IUE SSA services plus VO-enabled local data for HST, XMM-Newton, etc.
- ❑ Being considered for its use in AVO Science Use Case “Asymptotic Giant Branch (AGB) to Planetary Nebula (PN)”
- ❑ To be presented at Pune in September 2004 and ADASS in October 2004



VOSpec fact sheet

❑ Using VO Standards:

- Ready to access the Registry as soon as available to get SSA servers information
- Use SIMBAD Web Service (easily integrated with rest of the tool)
- Display VOTable information from SSA
- Already working with available SSAP services: ISO (ESAC/ADT) and IUE (INES archive) plus SSA-modified local data for HST, XMM, etc.

❑ Handling spectra

- Get spectra from SSA servers
- Display and superimpose spectra
- Automatic unit conversion through dimensional analysis
- Multi-wavelength analysis
- Polynomial/Black body/Gaussian fitting and other utilities on the way

VOSpec: Interoperable Tool



SIMBAD Web Service

Target: S 10178-5958 RA: 154.8841667 Dec: -60.2250000 Size: 0.2 Go

Server Selector

- XMM - Newton Archive Interoperability System
- Infrared Space Observatory Archive Interoperability
 - <http://pma.iso.vilspa.esa.es:8080/aio/jsp/siap.jsp?imageType=spectrum>
- INES
 - <http://sdc.laeff.esa.es/ines/jsp/siap.jsp?>

Open Local Data

Select

Spectra Viewer

Registry Access

Wave Length micron

Server	Title	Ra	Dec	Format	Select	Status
Infrared Spa...	ISO SWS01 ...	154.885729...	-60.22473	spectrum/fts	<input checked="" type="checkbox"/>	complete
INES	IRAS 10178-...	154.8842	-60.225	spectrum/fts	<input checked="" type="checkbox"/>	complete
INES	IRAS 10178-...	154.8842	-60.225	spectrum/fts	<input type="checkbox"/>	ready
INES	IRAS 10178-...	154.8842	-60.225	spectrum/fts	<input checked="" type="checkbox"/>	complete
INES	IRAS 10178	154.8842	-60.225	spectrum/fts	<input type="checkbox"/>	ready

View All

Reset Display



Superimposition and Multiwavelength analysis

```

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<TD>41.27003</TD>
<TD>SWAAWAVE SWAAFLUX</TD>
<TD>um Jy</TD>
<TD>L MT-2</TD>
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```

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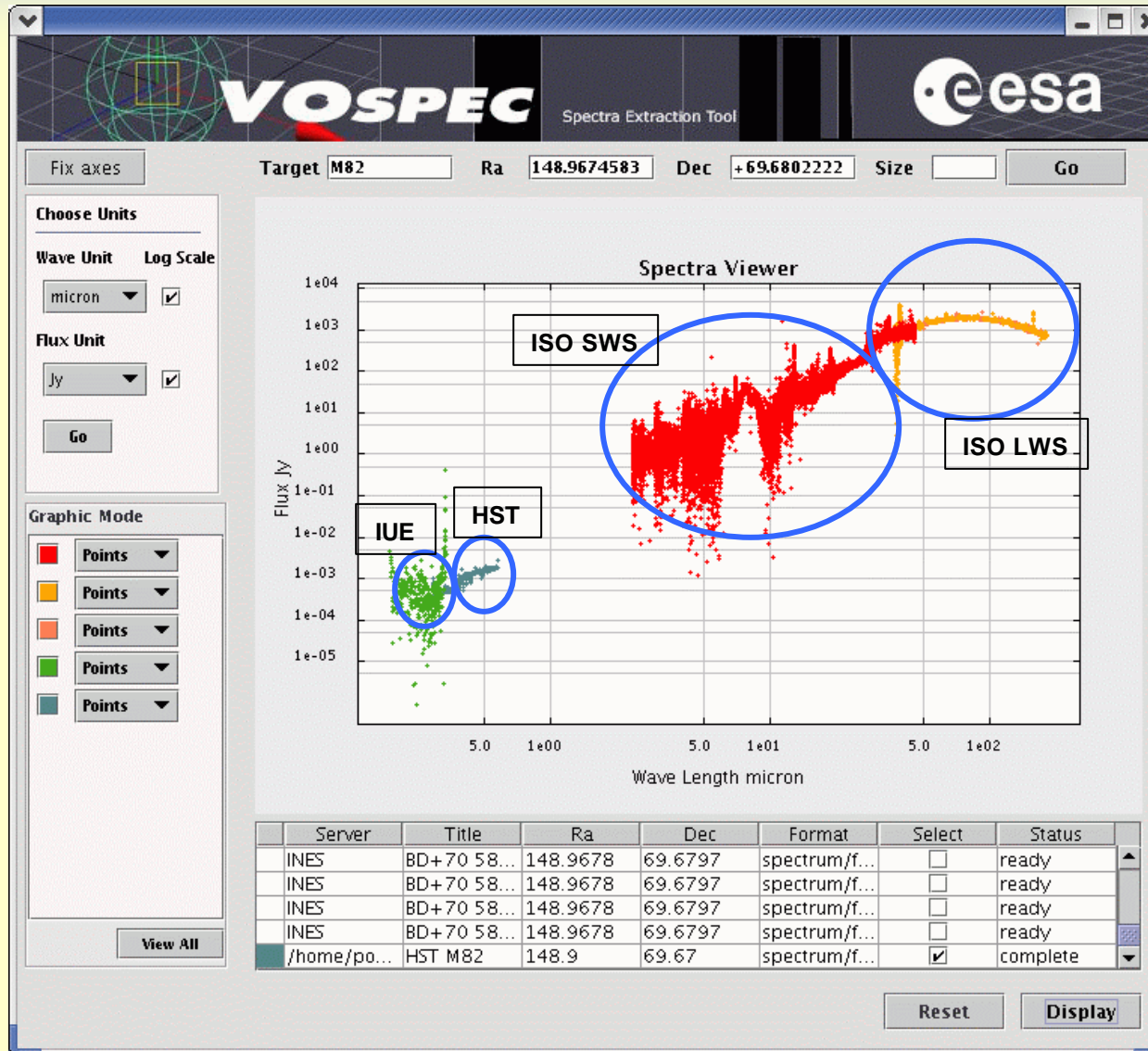
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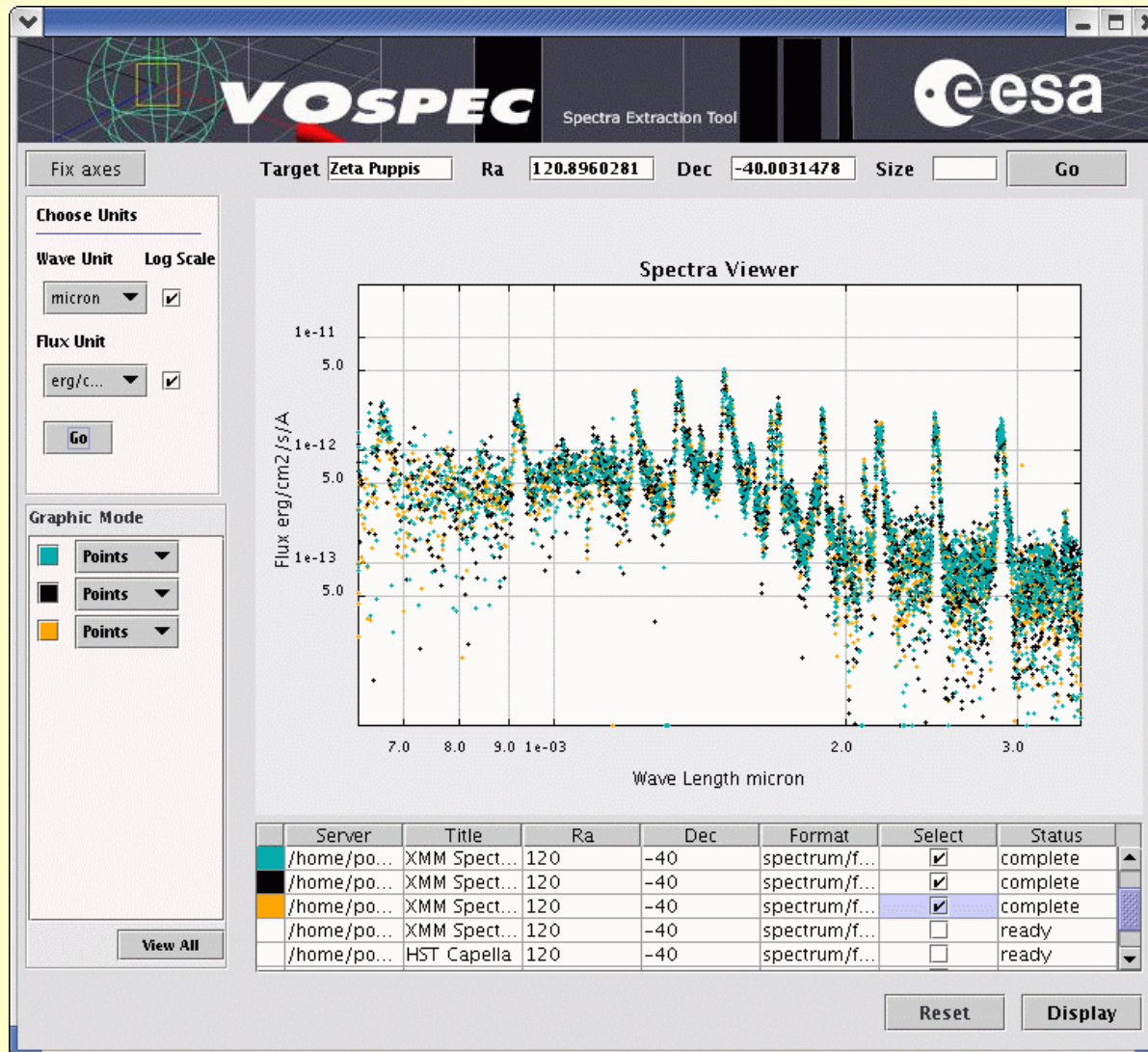
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DIMEQ= ML-1T-3

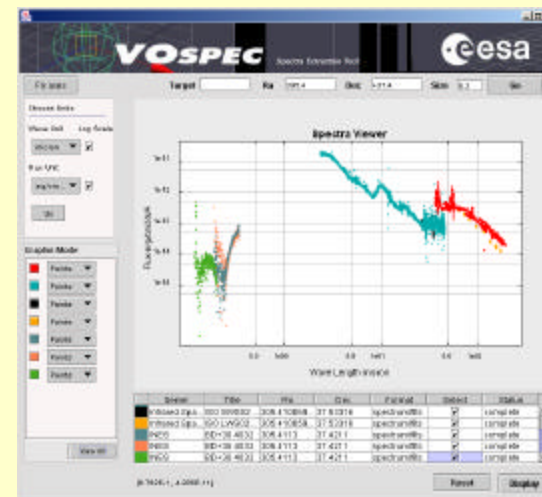
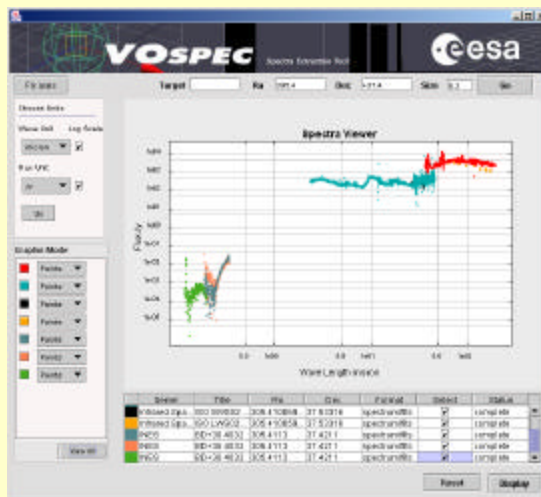
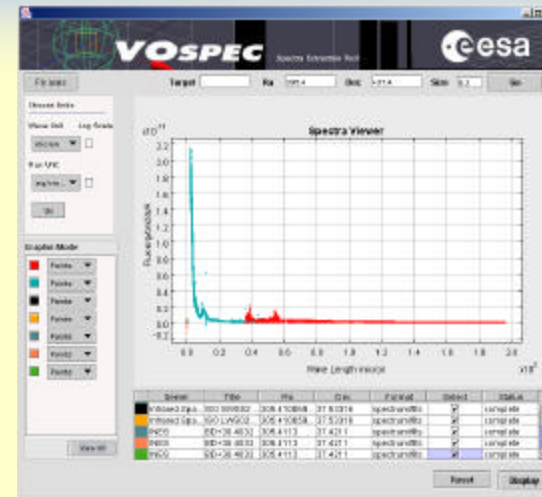
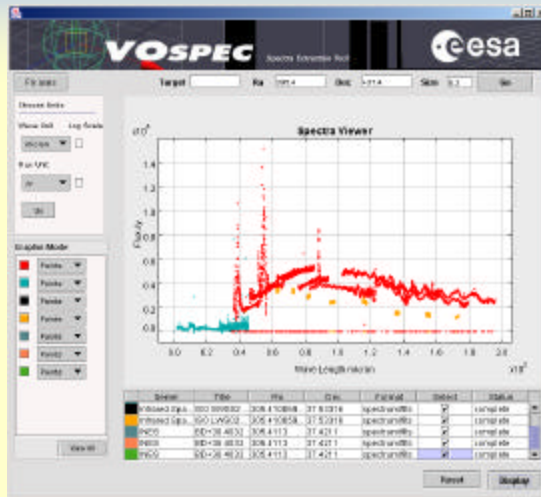
VOSpec: Multi-wavelength Analysis



VOSpec: Superimposition



VOSpec: Unit Conversion



VOSpec working example: Sampling AGBs

