An Introduction to HSpot

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What is HSpot?

- **HSpot is the tool for planning and preparing Herschel observations and submitting proposals**
- **Joint ESA/NASA development; adapted from Spitzer's Spot – originally SPOT (Spitzer Planning Observation Tool)**
- **HSpot consists of two layers**
  - **Core Spot**
    - **About 75%: the core functions of HSpot developed and maintained at IPAC.**
  - **Herschel Spot**
    - **About 25%: a layer of code and functions specific to Herschel and Herschel's instruments (largely spectroscopy).**
- **Approximately 20 man-years of effort have gone into developing HSpot.**
  - **About 15 man-years at IPAC**
  - **About 5 man-years at ESTEC**

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What is HSpot for?

- **HSpot can be used for all phases of planning a Herschel observation**
  - **Entering and visualising targets**
  - **Investigating the feasibility of potential observations**
    - **Target visibility**
    - **Target background**
    - **Possible confusion with other sources**
    - **Time required to carry out an observation, or programme of observations.**
  - **Designing and optimising your observations.**
  - **Submitting an observing proposal.**

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How does HSpot do it?

- Ten basic instrument configurations are defined.
  - Astronomical Observing Templates (AOTs)
- HSpot allows you to personalise an AOT to make it into the observation that you require.
  - An Astronomical Observing Request (AOR)
- AORs are the individual observations for Herschel.
  - AORs are later converted into the instructions that Herschel needs to carry out the observations.
    - These are transmitted to the satellite for execution.
    - Observing autonomously requires every observation to be specified in great detail.

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Hardware and Software requirements

- Written in JAVA language
  - JAVA 1.5 or later required (only an issue with Mac)
- Operating System configurations supported
  - UNIX: Solaris 2.8
  - Windows: NT, ME, 2000, XP
  - Linux: RedHat 7.x, 8.0, 9.0; Suse 9.0
  - Mac: OS 10.4
- Hardware configurations tested and supporting HSpot
  - Sun Workstations (Ultra1 and superior)
  - Windows PC (2000, NT, XP) with Pentium processors
  - Linux PC: Gnome and Fedora window managers
  - Mac PC
- In short: HSpot will run on almost any computer!!

But Beware of…

- HSpot does not work well on Sparc 1, 2, 5, 10 or 20.
- Some HSpot functions (particularly HIFI) crash on Linux with KDE core.
  - This is due to a bug in KDE, not to HSpot.
  - Do not use KDE with HIFI!!
  - Java does not work with fvwin2 window manager.
- HSpot has not *yet* been tested on Windows Vista.
  - We do not anticipate problems, but cannot *guarantee* that there will be none.
- HSpot is very memory hungry
  - It *will* work with only 256MB of memory, but 512MB is recommended and 1GB is better.

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Bugs and Updates

- **Like any highly sophisticated and complex system HSpot is not perfect.**
  - **It has been very extensively tested, but astronomers are a devious bunch and will always find ways of doing things that have never been imagined in testing.**
    - **Inevitably some previously unknown bugs will appear.**
    - **But, before reporting a bug, check first that it is not one that we do know about (the "Bug List" in the Web Page).**
- **Regular updates are made at pre-planned intervals that fix bugs and add functionality.**
  - **Enable "Automatic Updates" and the updates will be downloaded and installed for you as soon as they become available.**

Enough talk about it!
It's easy to use…

let's use HSpot!

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