

Review of developments and future plans

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Current ADAS organisation



Offline ADAS

A set of codes designed to run non-interactively:

- ► ADAS7#1: Collection of scripts for AUTOSTRUCTURE DR, RR, PI and PE calculations.
- ADAS8#1: Automation of Cowan code for iso-nuclear calculations
- ► ADAS8#2: Iso-nuclear automation of collisional-radiative model
- ► ADAS8#3: Automation of *R*-matrix calculations.

Generally run from scripts:

- Usually requires expert tuning for specific machine architectures and compilers so is not distributed as standard with ADAS.
- ▶ Do not make use of IDL (core language is Perl driving Fortran codes).

Should these be distributed as a matter of course?

Extended-ADAS

- Very much tied to specific experimental analysis rather than applied atomic physics in the more general sense.
- Maintained and co-developed by the ADAS Project but not considered part of the core interactive ADAS series of programs.



CXFIT and UTC have proved to be successful and useful.

- ▶ The next code to pass the *local atomic boundary* is CHEAP.
- Again this will be a multi-laboratory collaboration.

New codes in next release — ADAS315, ADAS316, ADAS416

The impact of heavier species on charge exchange spectroscopy is of interest to current machines and for ITER diagnostic evaluation.

ADAS315 — extract adf01 data from universal scaled CX data:

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Adam Foster

Based on *run_adas315.pro*

ADAS316 — bundle-n CX emissivity generation

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ADAS416 — Repartition adf11 and emissivity datasets

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	ecd89_ar_02.dat	
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Callable ADAS: A simple example

Why all the 'Based on *run_adasXXX.pro* footnotes? Consider,



plot_oi, te, frac.ion[*,0], xtitle = 'Temperature / eV'

for i = 1, 10 do oplot, te, frac.ion[*,i]

Bugs!!!

To preempt the general discussion a little.

- ▶ We realise that some bugs take forever to be squashed.
- ► To date the reporting and filing of bugs was chaotic (at best!).
- We will introduce a bug tracking system so that we will at least know about the problems.
- Please continue to communicate/email (even the most trivial) of bugs to us: bugs@adas.phys.strath.ac.uk.