

BNL evaluation report

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90-Zr evaluation

- **VII.0**

- RR adopted from the BROND-2 evaluation based on Mughabghab et.al. Neutron Cross Sections, 1981 and Boldeman et.al. EXFOR 30290.
- Negative resonance added to reproduce thermal capture of 77 mb in agreement with Atlas 2006

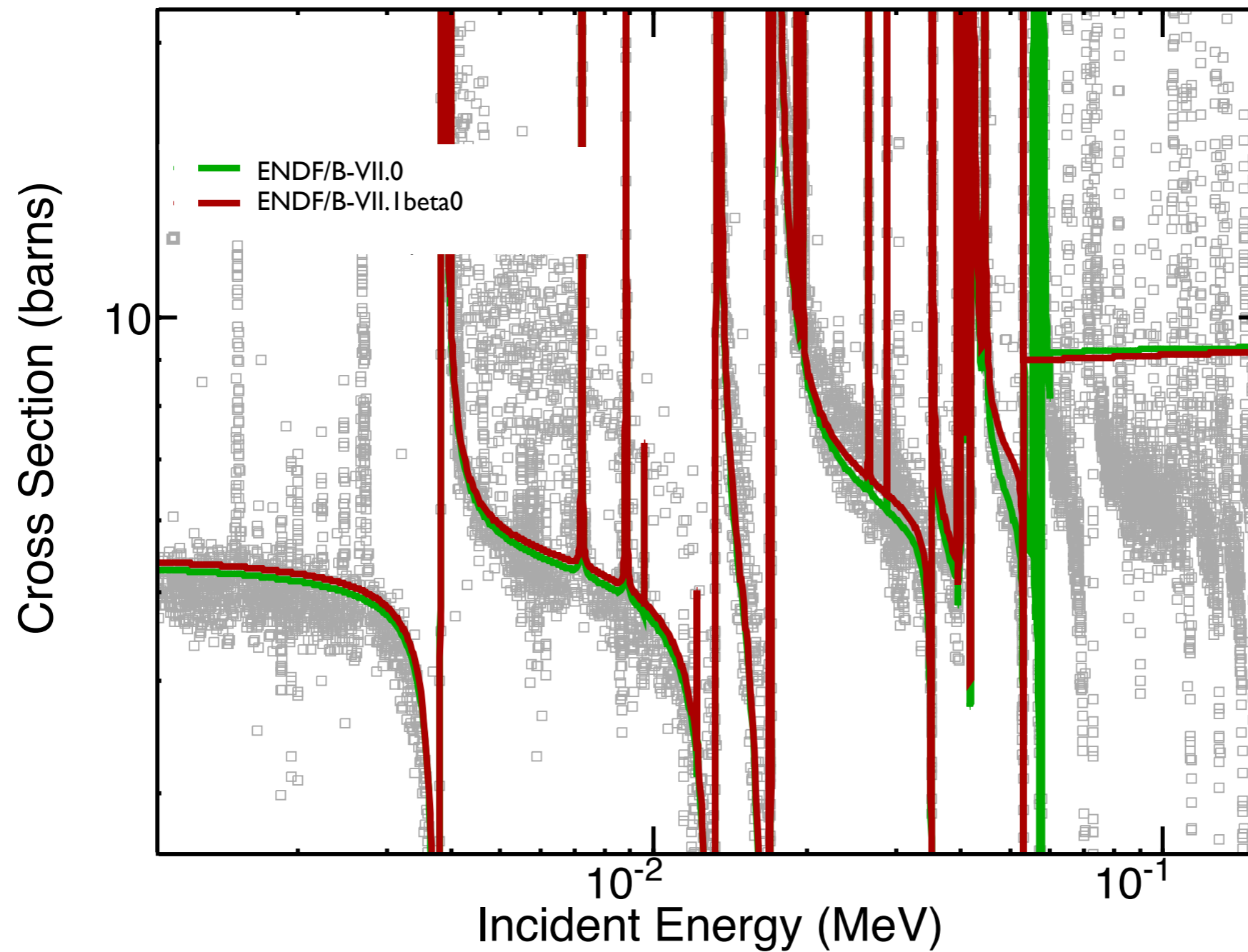
- **VII.1beta0**

- RR parameters adopted from the ATLAS 2006. The resolved resonance region truncated at 53.5 keV.
- The negative resonance needs to be removed in VII.1beta1. Thermal x-sec should become ~10 mb.

90-Zr total

New resonance parameters in VII.1beta0

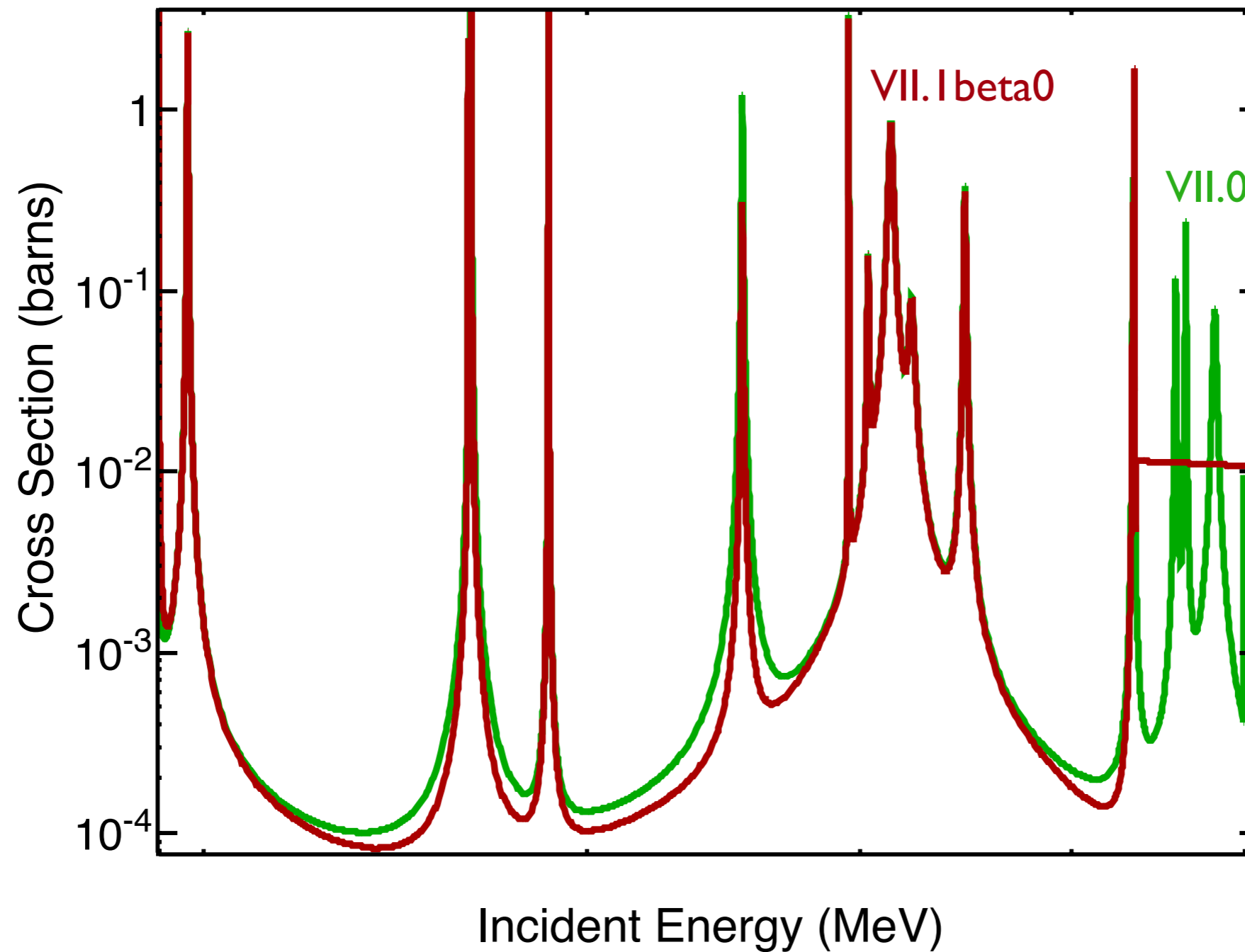
Cross sections



90-Zr capture

New resonance parameters in VII.1beta0

Cross sections



BNL plans for new evaluations

- The whole set of Zr isotopes was expected to be re-evaluated in spring 2010
 - Personnel problems (M. Pigni leaving for ORNL) may delay this effort (we'll try to maintain the promise)
 - 90-Zr thermal value will be corrected
 - Possibility of adopting JENDL-3.3 (4.0?) for 91-Zr, which worked well in Trkov's testing.
- 23-Na still needs to be completed - possibly before Marco leaves.
- Full set of AFCI covariances will be loaded into VII.1beta? in June 2011.