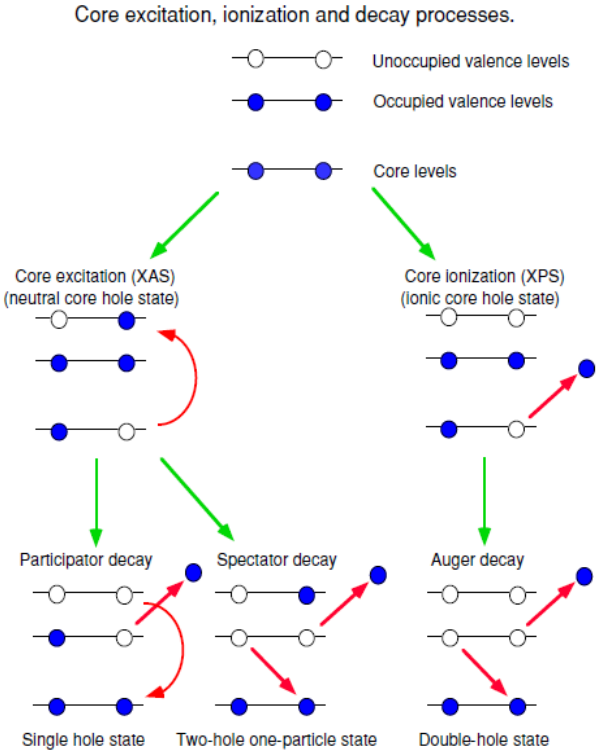
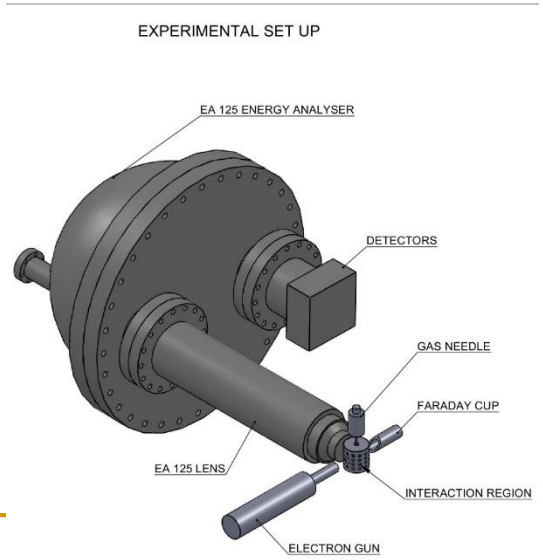
Electron spectrometer OHRHA (Omicron high resolution hemispherical analyser)

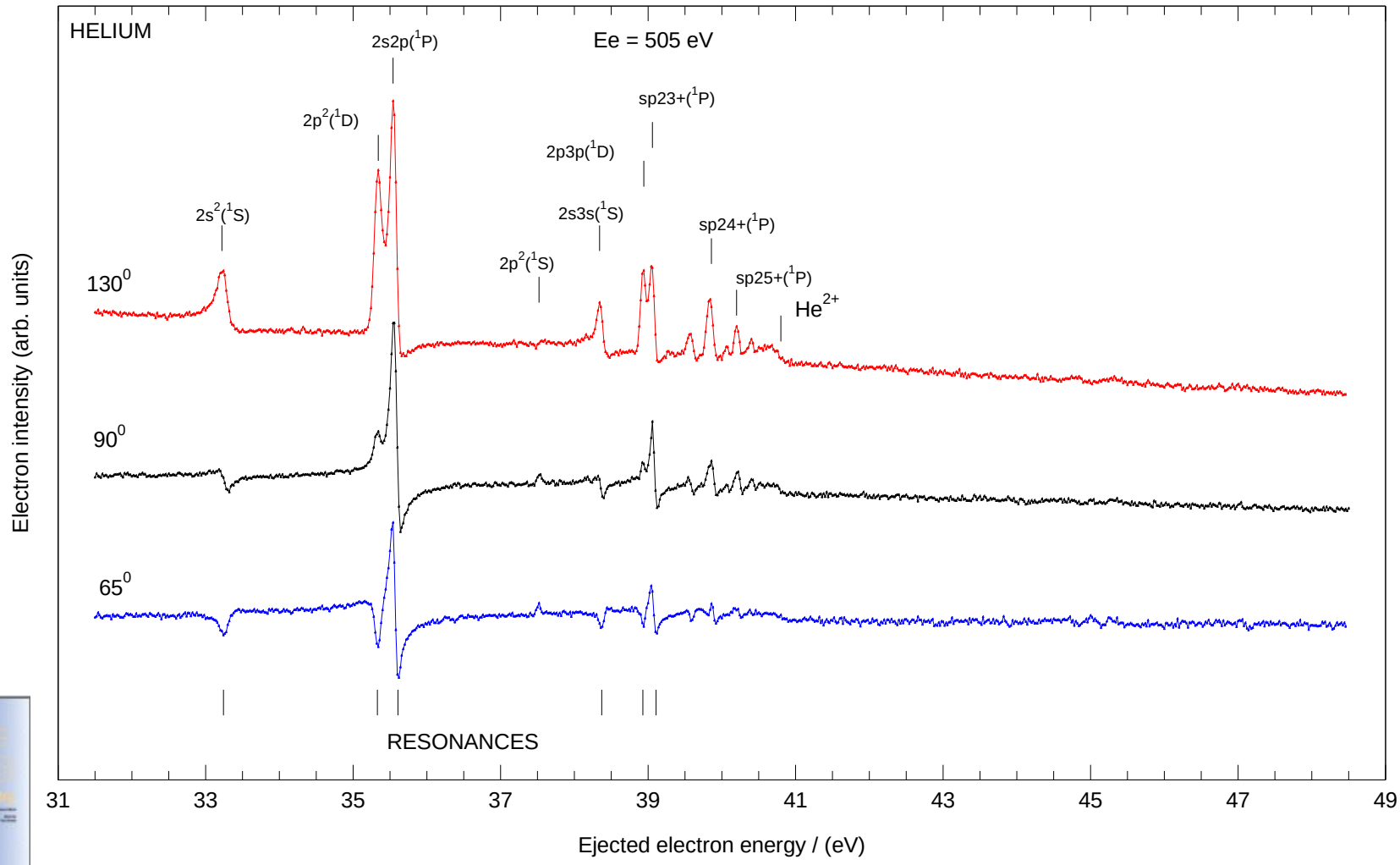
http://mail.ipb.ac.rs/~centar3/text/Publ_OHRHA.html

- Autojonizacioni procesi usled udara elektrona i analiza izbačenih elektrona po energijama i uglovima.
- Kompjuterizovani sistem detekcije izbačenih energija nakon prolaska kroz hemisferni analizator.
- Mlaz elektrona: 10 eV – 2.5 keV; 1 -15 μA





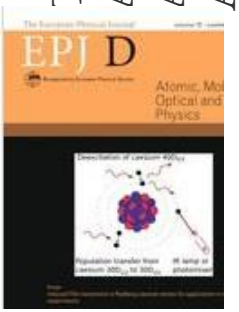
e/He

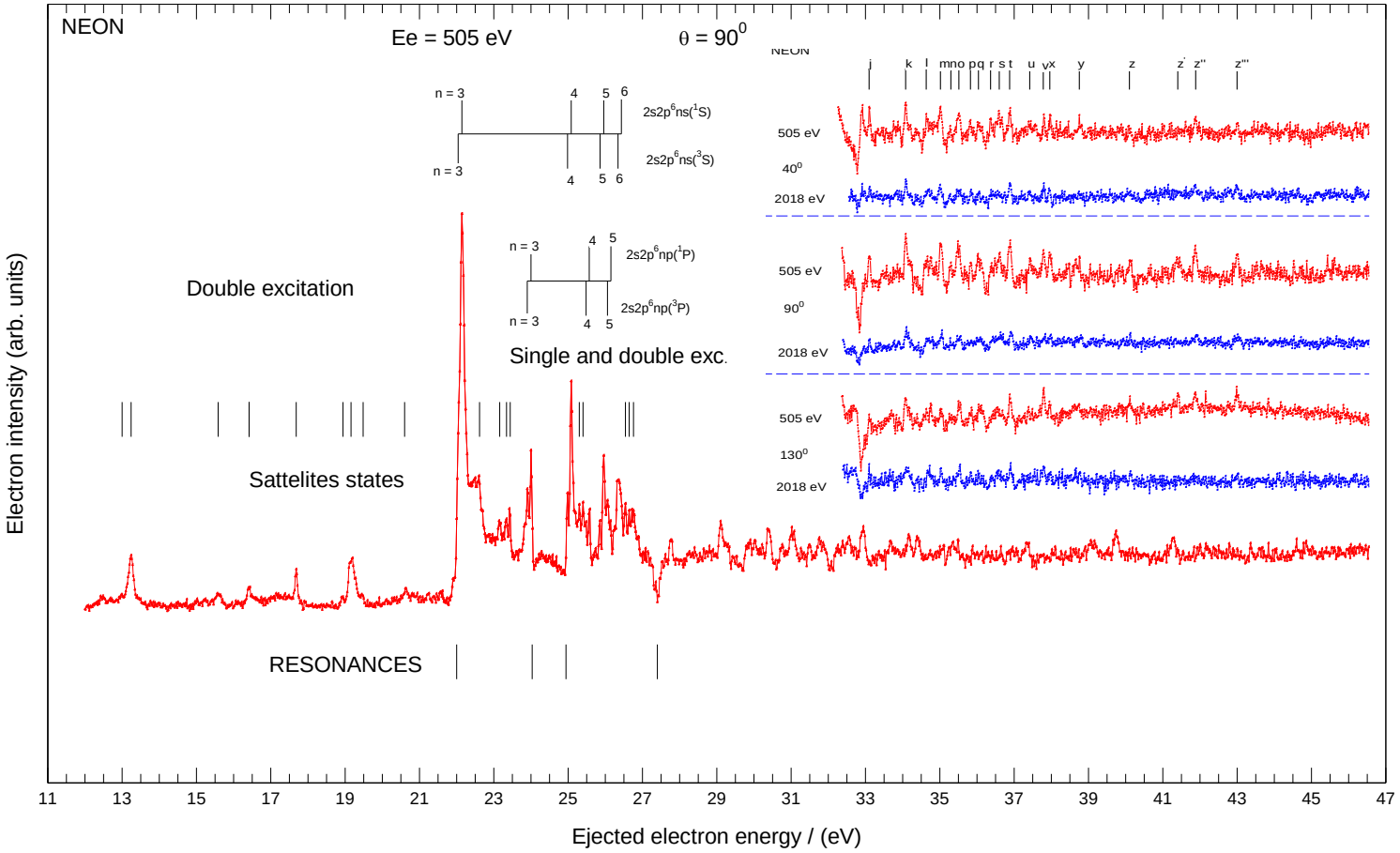


Jureta *et al*. “High energy electron impact study on autoionizing region in helium by detection of ejected electrons”, *IJMS* **365-366**, 114-120 (2014) doi: 10.1016/j.ijms.2014.03.002

e/Ne

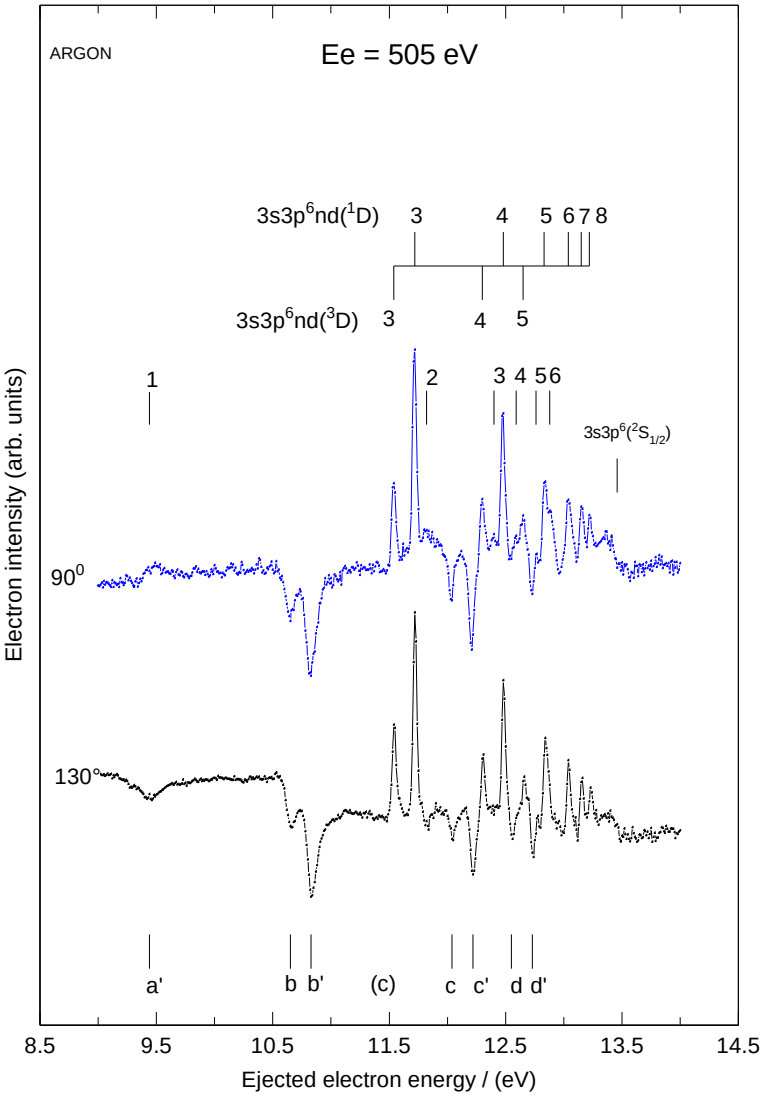
Topical issue: Elementary Processes with Atoms and Molecules in Isolated and Aggregated States. Guest editors: Friedrich Aumayr, Bratislav Marinkovic, Stefan Matejcik, John Tanis and Kurt H. Becker
ISSN:1434-6060 (Print) 1434-6079 (Online)



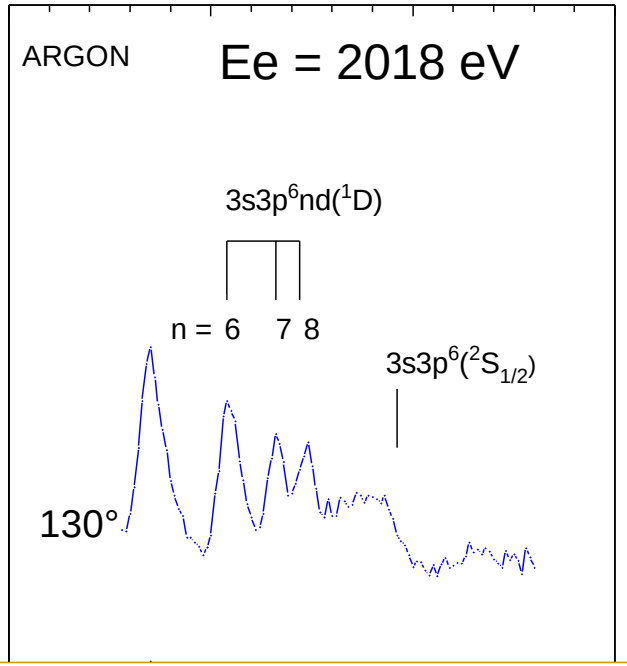


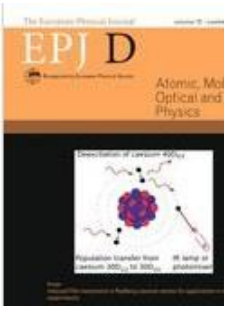
Jureta *et al*. “Singly and doubly excited states in ejected electron spectra of neon at high incident electron energies”, *EPJD* **69**, 74 (2015). [10pp] doi: 10.1140/epjd/e2015-50780-9

e/Ar



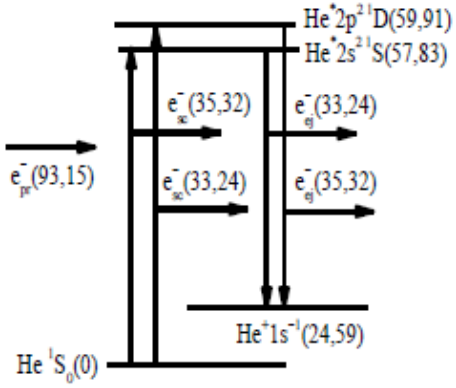
The change in the cross section as the cusp like form at 29.22 eV, which corresponds to the ionization of 3*s* electron, the M_1 edge.
I.P. $3s3p^6(^2S_{1/2})$= (13.48) 29.24 eV

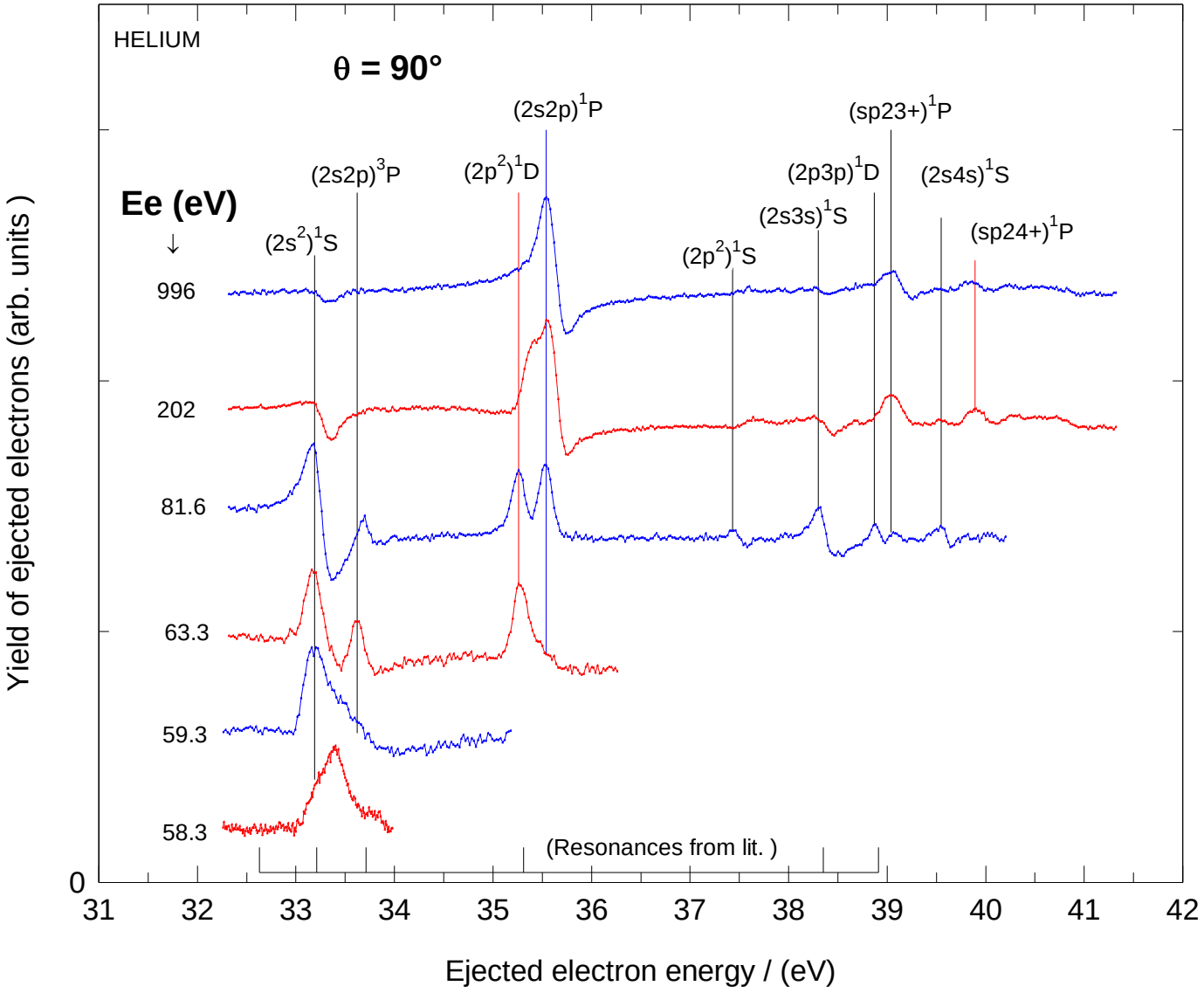




Jureta *et al*."Energy and angular analysis of ejected electrons (6–26 eV) from the AI regions of argon at incident electron energies 505 and 2018 eV"*EPJD* **70**, 199 (2016). doi: 10.1140/epjd/e2016-70226-2

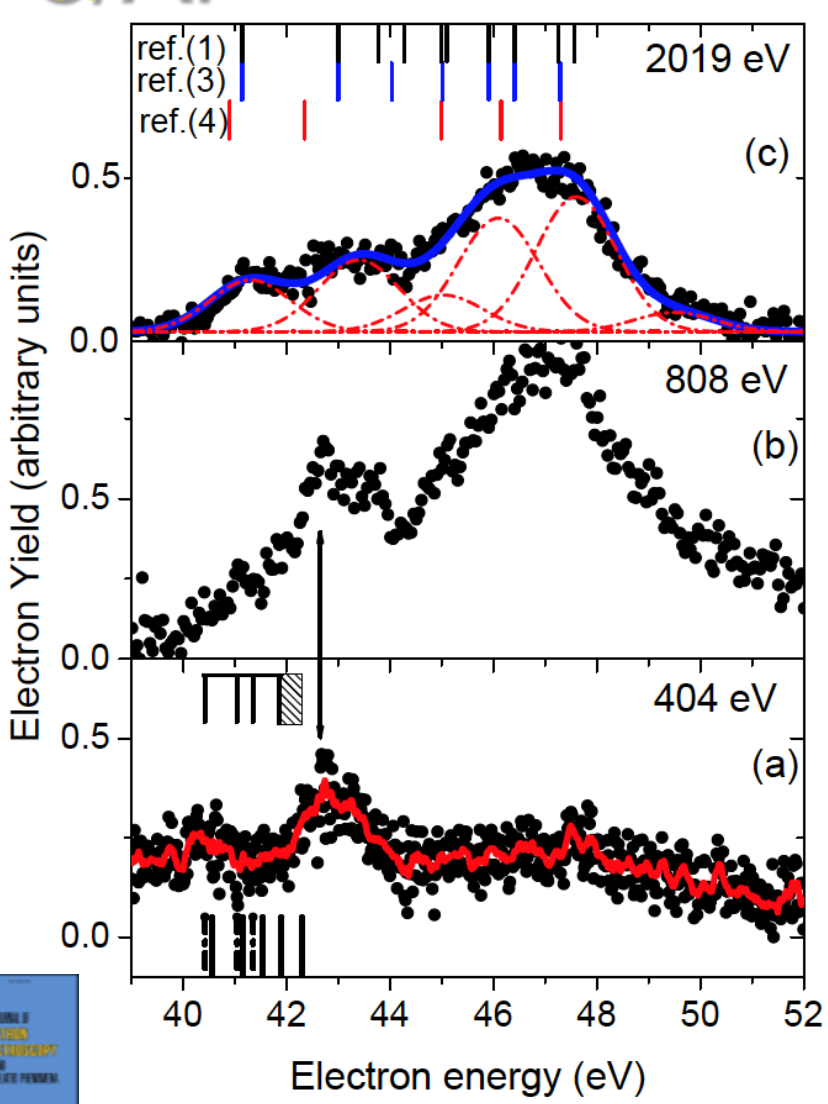
e/He

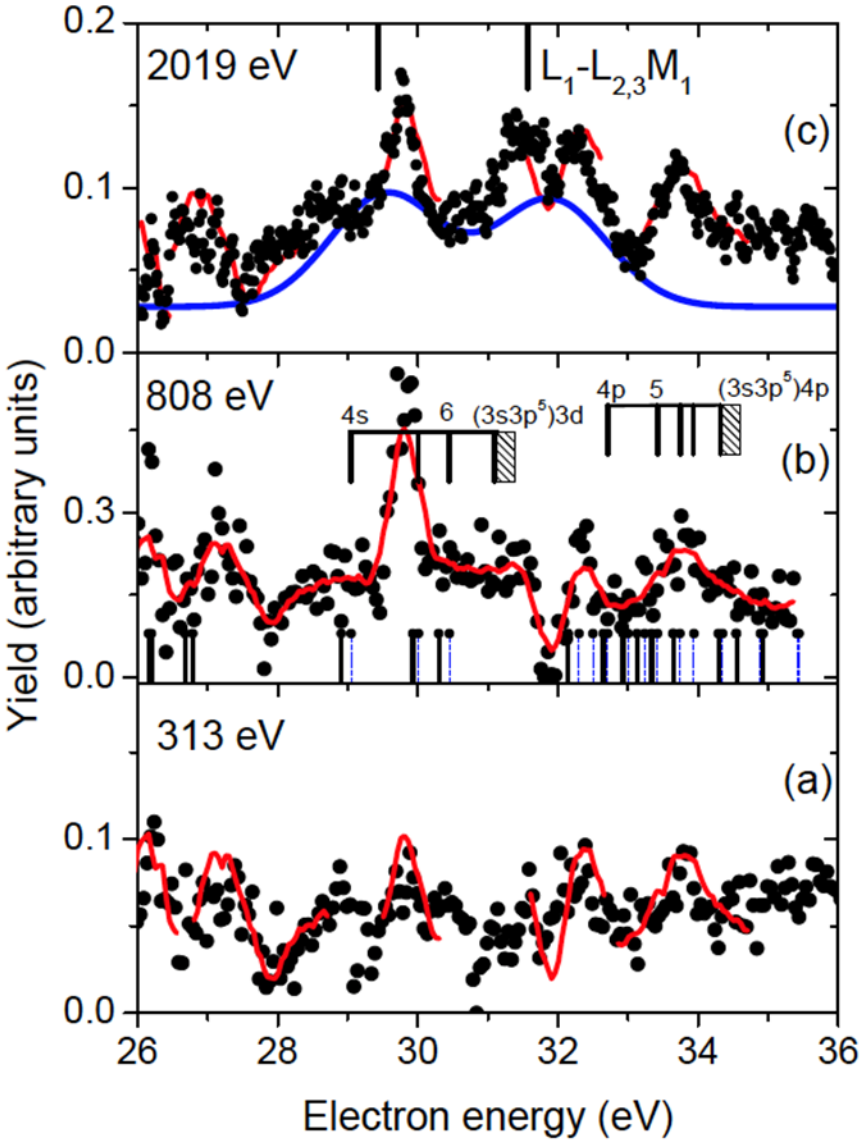




Paripás *et al*. “High resolution study of the autoionizing states of He in their exchange interference energy region”, *J.El.Spectr.* **225**, 10-15 (2018) doi: 10.1016/j.elspec.2018.01.007

e/Ar

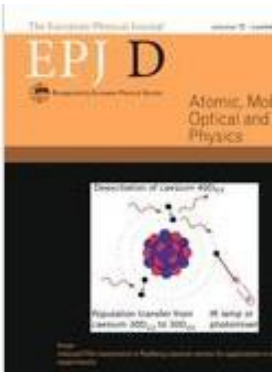




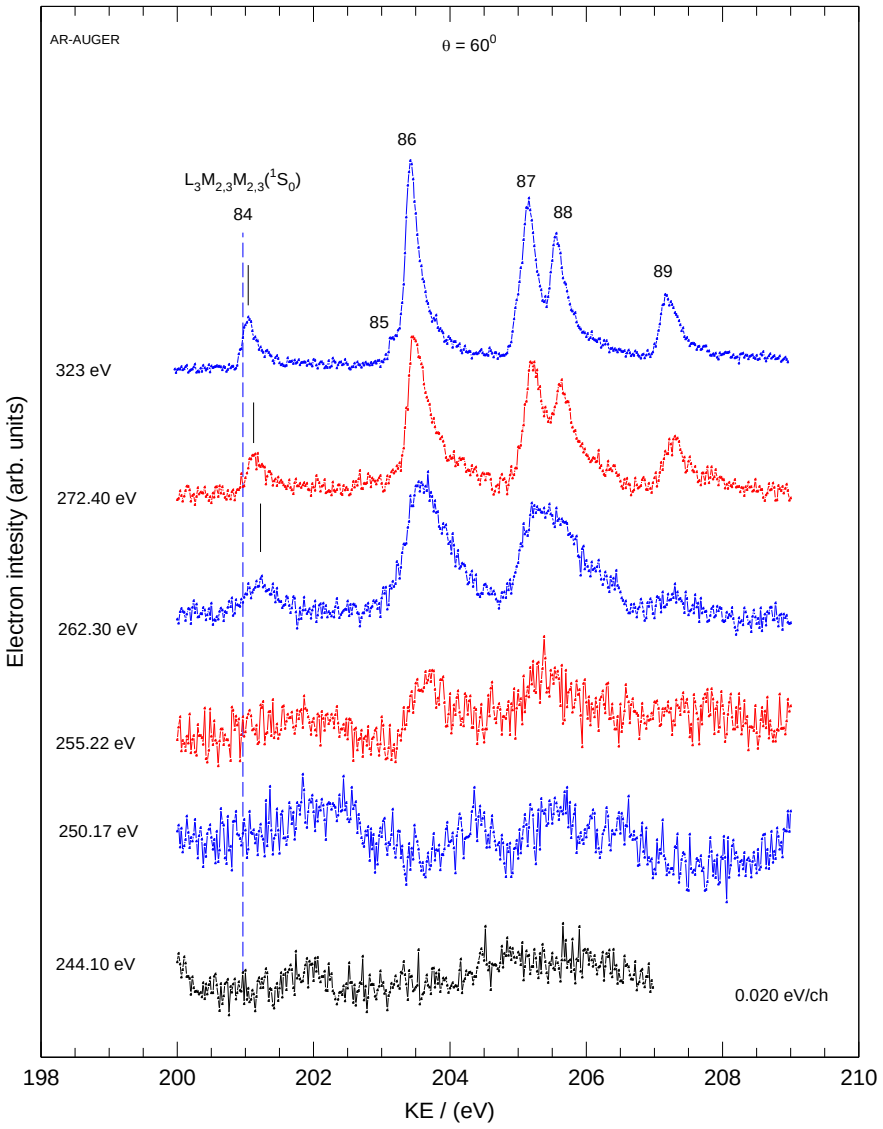
Avaldi *et al*. "Energy analysis of ejected electrons in the region of the Ar L_1-$L_{2,3}M$ Coster-Kronig transitions (25-56 eV) induced by electron impact",*jes* **237**(2019)doi: 10.1016/j.elspec.2019.146898

e/Ar

84	**200.96**	**1.00**	**L_3 -$M_{2,3}M_{2,3}(^1S_0)$ [7, 10, 13, 21]: 72 [19]: Peak D**
85	203.09		L_2 -$M_{2,3}M_{2,3}(^1S_0)$ [7, 10, 13, 21]: 73
86	203.35	4.09	L_3 -$M_{2,3}M_{2,3}(^1D_2)$ [7, 10, 13, 21]: 74 [19]: Peak C
87	205.09	3.23	L_3 -$M_{2,3}M_{2,3}(^3P_{0,1,2})$ [7, 10, 13, 21]: 75, 75 a,b,c [19]: Peak B
88	205.51	2.40	L_2 -$M_{2,3}M_{2,3}(^1D_2)$ [7, 10, 13, 21]: 76
89	207.11	1.39	L_2 -$M_{2,3}M_{2,3}(^3P_{0,1,2})$ [7, 10, 13, 21]:78, 78 a,b,c [19]: Peak A
90	207.87		
91	208.39		[20]: $2p^4(^1S_0) \rightarrow 2p^5 3s^1 3p^5$, n=39 (calc.)
92	208.71		



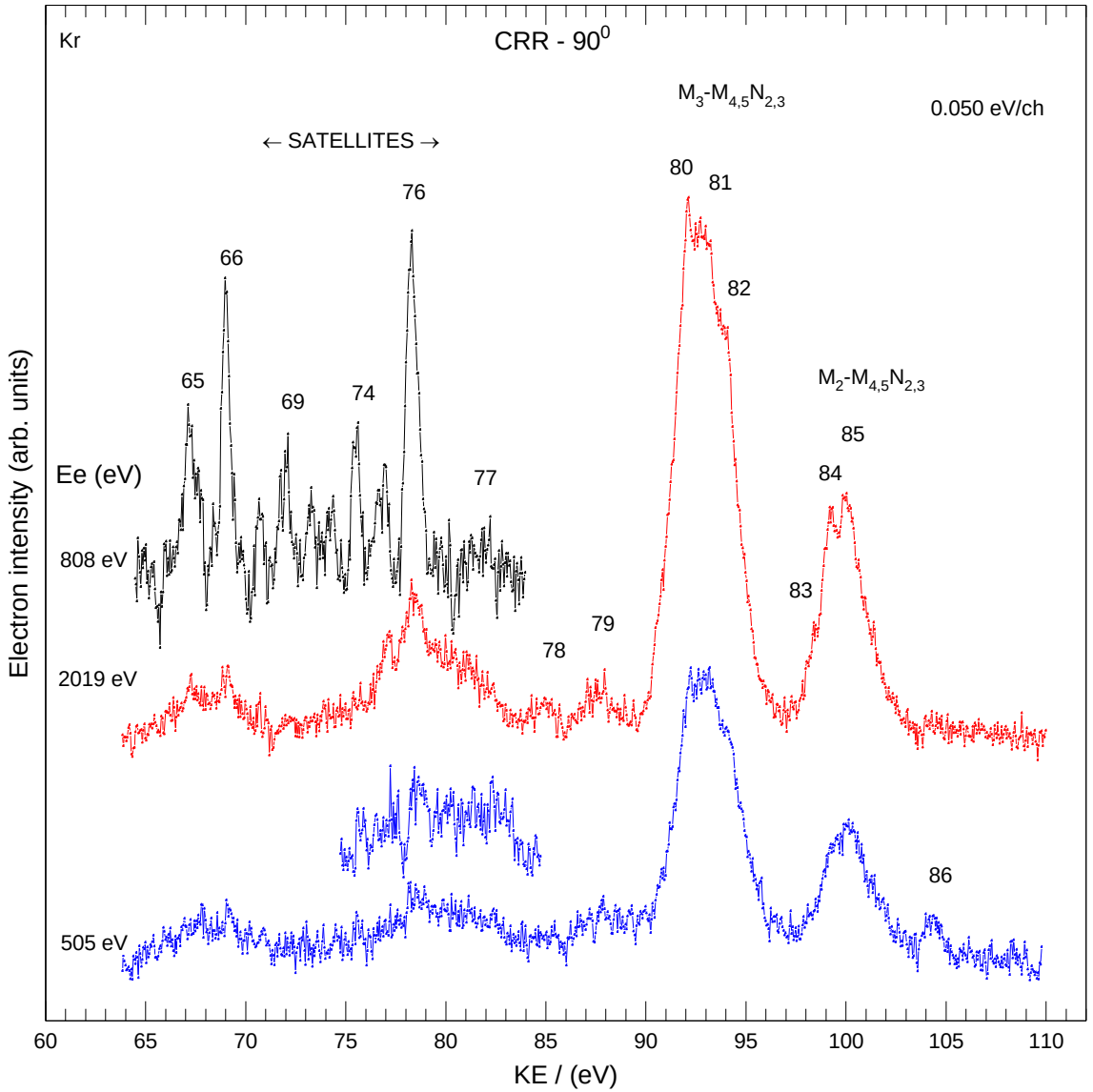
The $L_{2,3}$-$M_{2,3}M_{2,3}$ Auger kinetic energy region (200 - 209) eV at impact energies from 244.1 to 323 eV measured at 60º ejection angle with an energy step of 0.020 eV



Jureta *et al*. "The Auger spectra in argon induced by electron impact – new measurements with high resolution", *EPJD* **74**, 12 (2020) [12pp] doi: 10.1140/epjd/e2019-100541-5

e/Kr

The $M_{2,3}$-$M_{4,5}N_1$ and $M_{2,3}$-$M_{4,5}N_{2,3}$ Coster-Kronig spectra obtained in kinetic energy region 64 to 110 eV with energy step of 0.050 eV. The incident energies are 505 and 2019 eV. The third spectrum at 808 eV shows part of the satellite spectrum with better resolution.



Jureta *et al*. "The $M_{4,5}$-NN Auger and $M_{2,3}$-$M_{4,5}$N Coster-Kronig spectra of krypton induced by electron impact", *JQSRT* (2021) doi: 10.1016/j.jqsrt.2021.107638