

NUEVOS MÉTODOS PARA EL ESTUDIO DEL CAOS CUÁNTICO

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Diagrama de correlación

Autoenergías *vs.* constante de Planck

$$H = -\frac{\hbar^2}{2m} \nabla^2 + V$$



diagonalización

$$E_n(\hbar)$$

Diagrama de correlación

Sistema molecular Li-CN

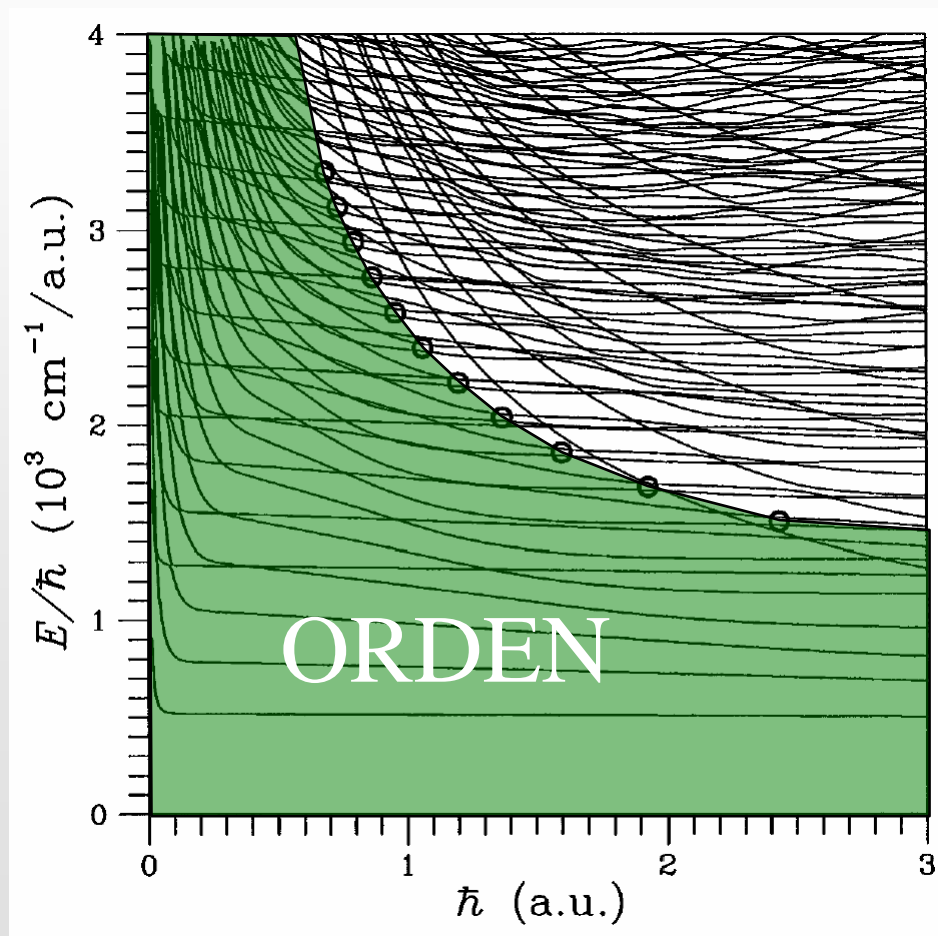


Diagrama de correlación

Sistema molecular Li-CN

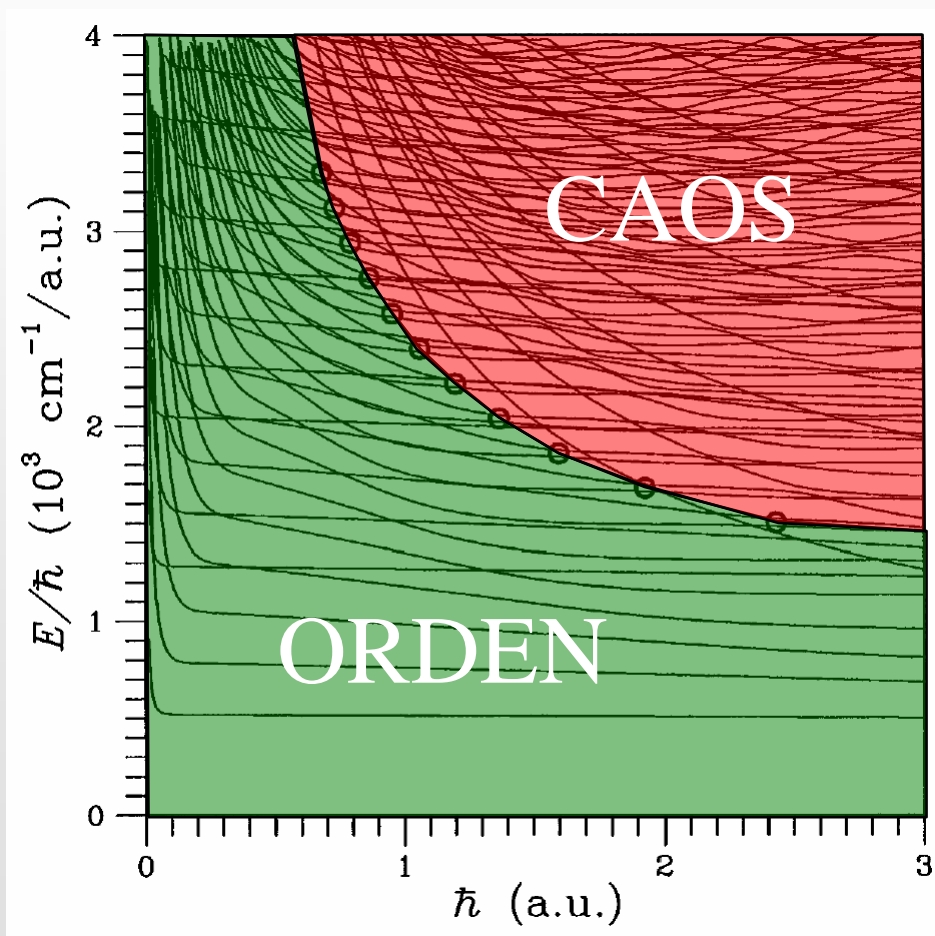
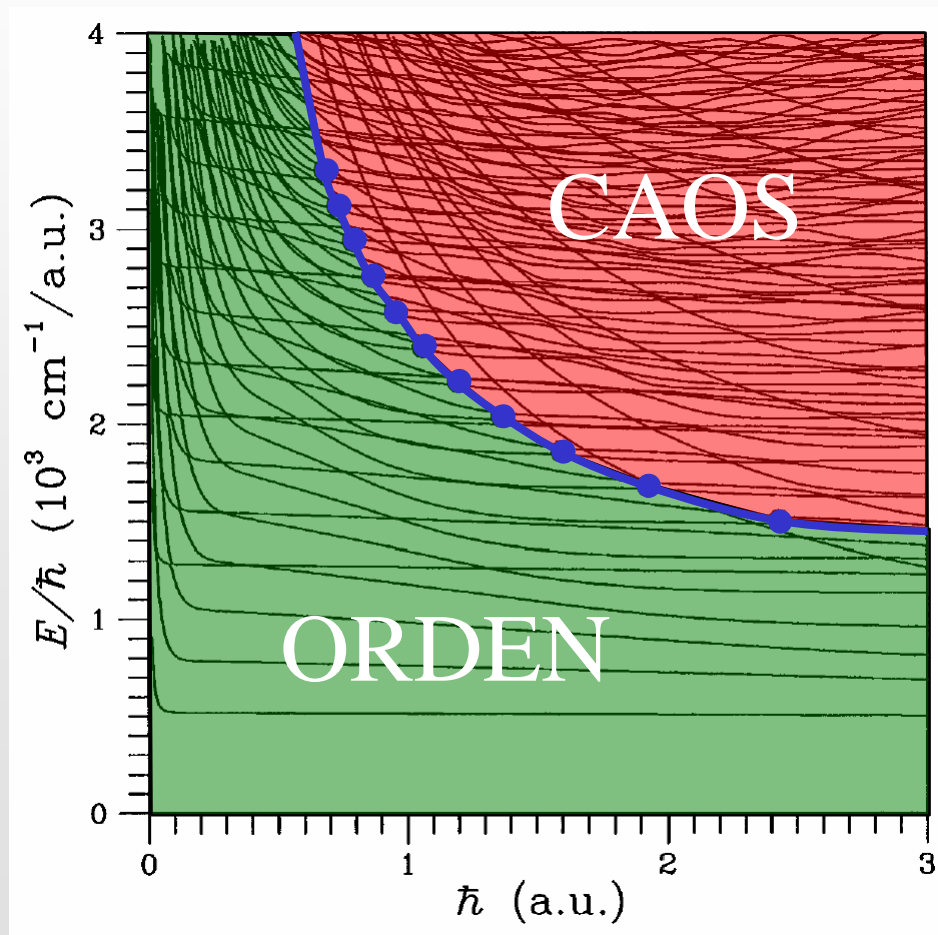


Diagrama de correlación

Sistema molecular Li-CN



frontera de cicatrices

Diagrama de correlación

Parámetro de Brody (Li-CN)

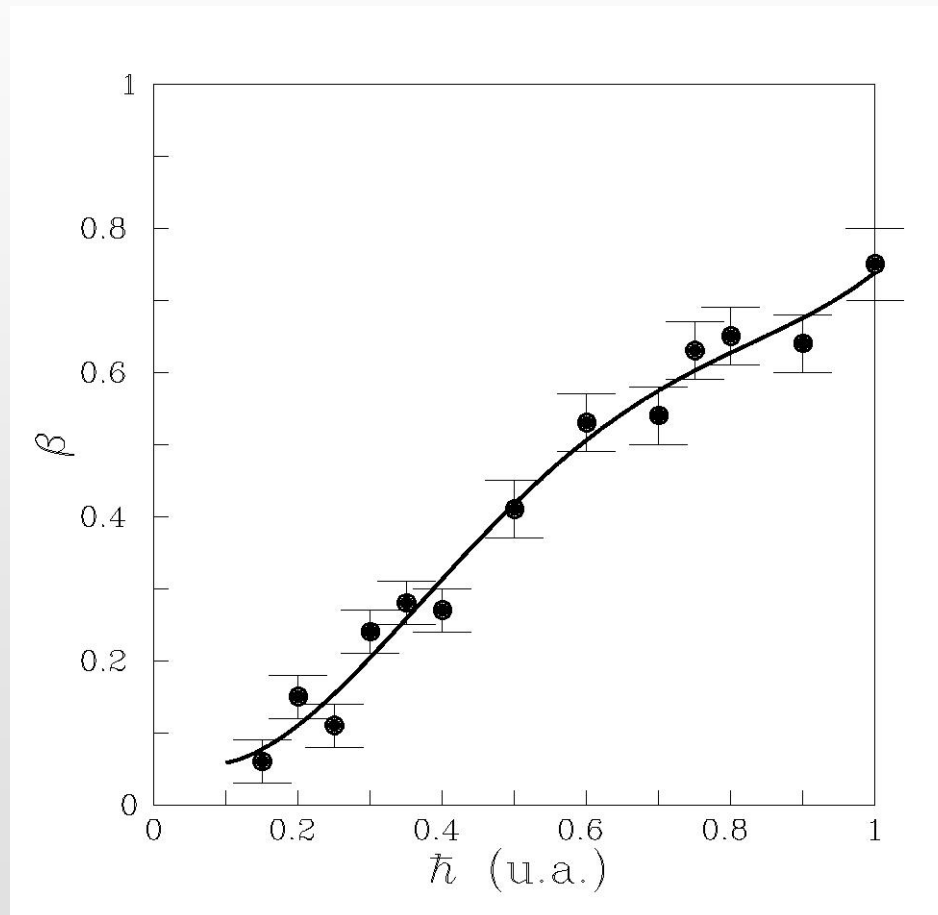


Diagrama de correlación

Series de resonancias cuánticas (Li-CN)

Estados implicados:

$$(0,6 + 2k) \pm (1,2k)$$

Orden de resonancia:

1:6

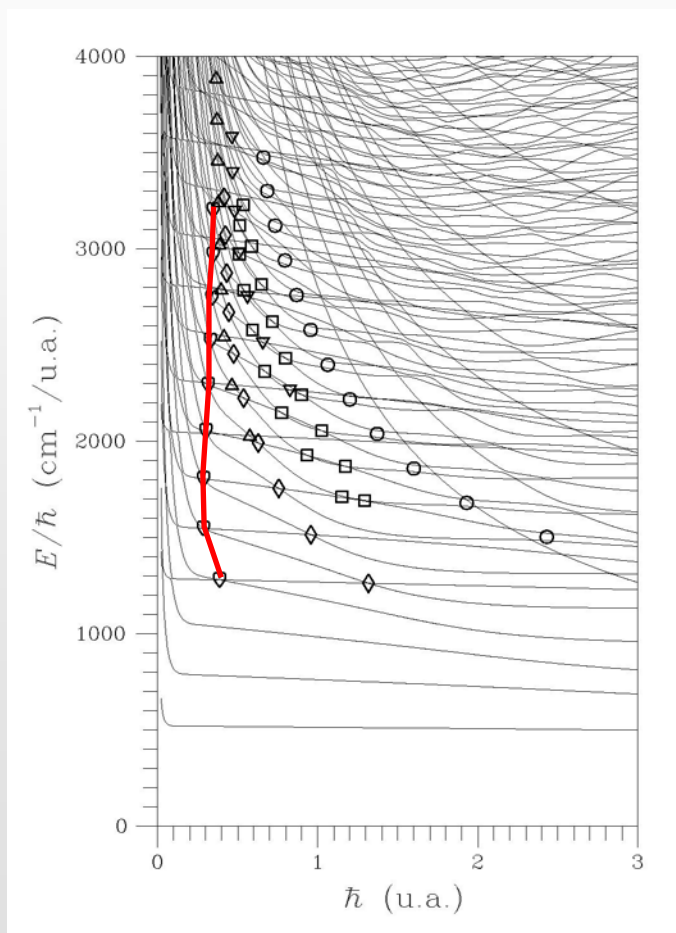


Diagrama de correlación

Series de resonancias cuánticas (Li-CN)

Estados implicados:

$$(0,14 + 2k) \pm (2,2k)$$

Orden de resonancia:

2 : 14

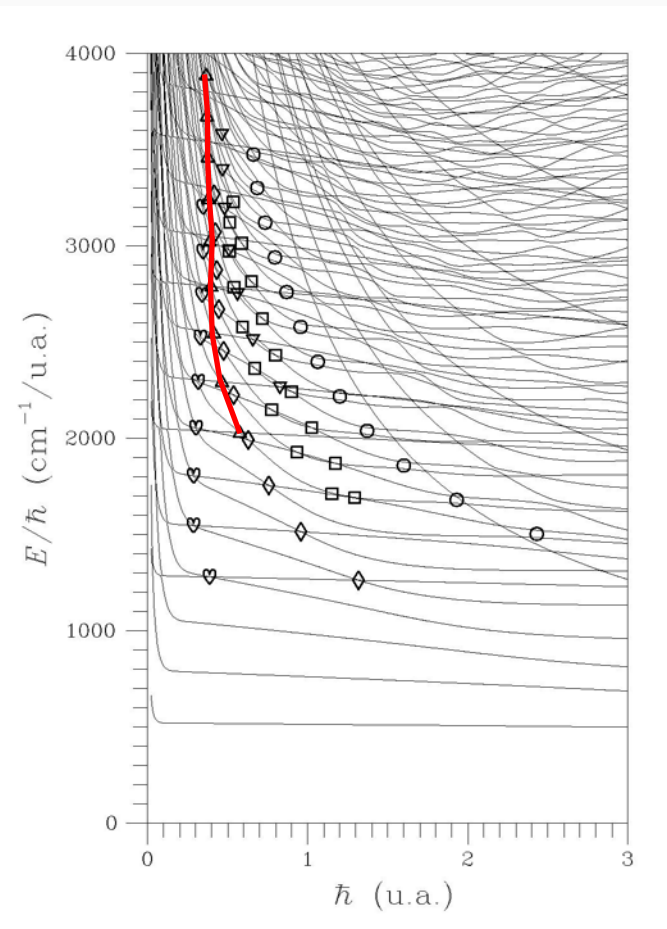


Diagrama de correlación

Series de resonancias cuánticas (Li-CN)

Estados implicados:

$$(0,8 + 2k) \pm (1,2k)$$

Orden de resonancia:

1:8

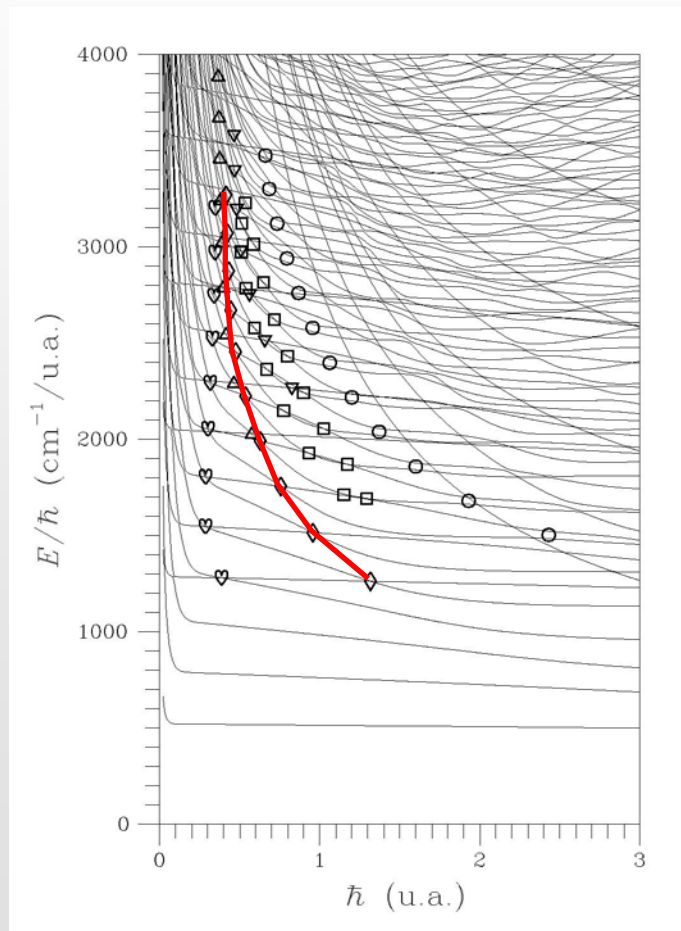


Diagrama de correlación

Series de resonancias cuánticas (Li-CN)

Estados implicados:

$$(0,18 + 2k) \pm (2,2k)$$

Orden de resonancia:

2 : 18

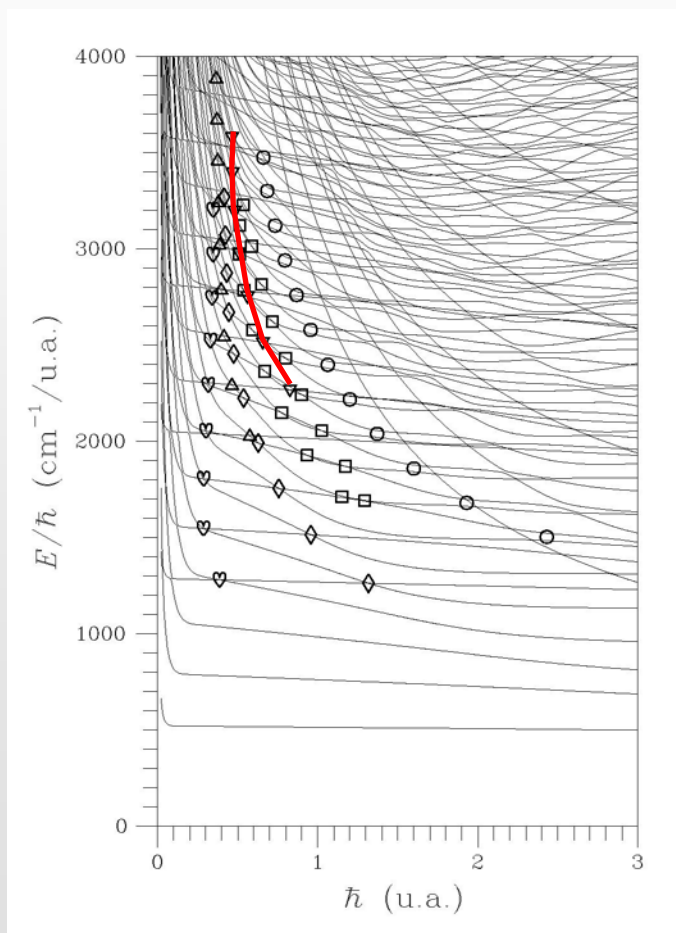


Diagrama de correlación

Series de resonancias cuánticas (Li-CN)

Estados implicados:

$$(0,10 + 2k) \pm (1,2k)$$

Orden de resonancia:

1:10

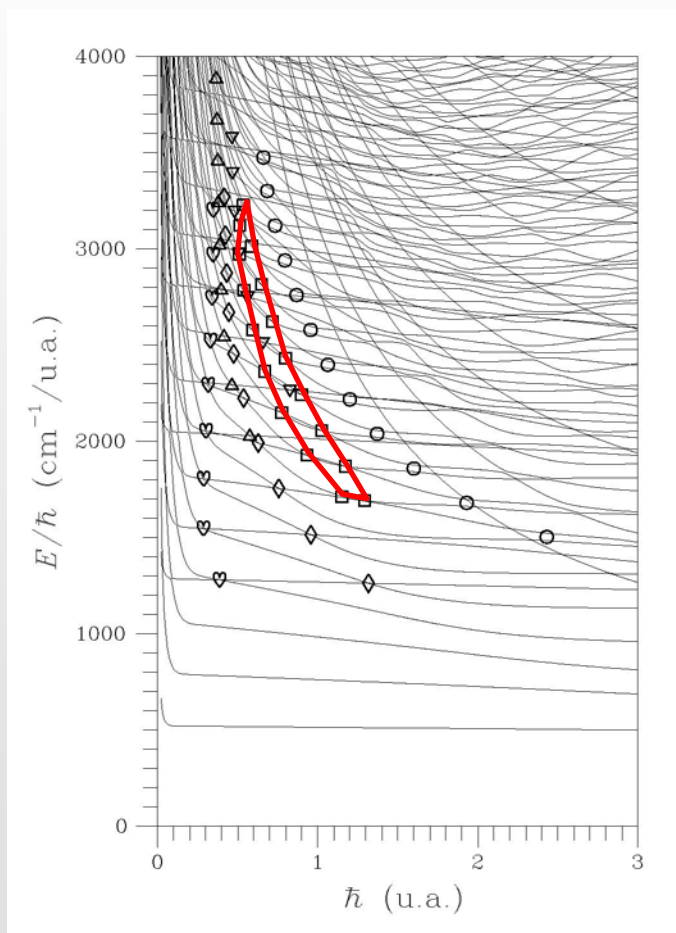


Diagrama de correlación

Series de resonancias cuánticas (Li-CN)

Estados implicados:

$$(0,8 + 2k) \pm (1,2k)$$

Orden de resonancia:

1:8

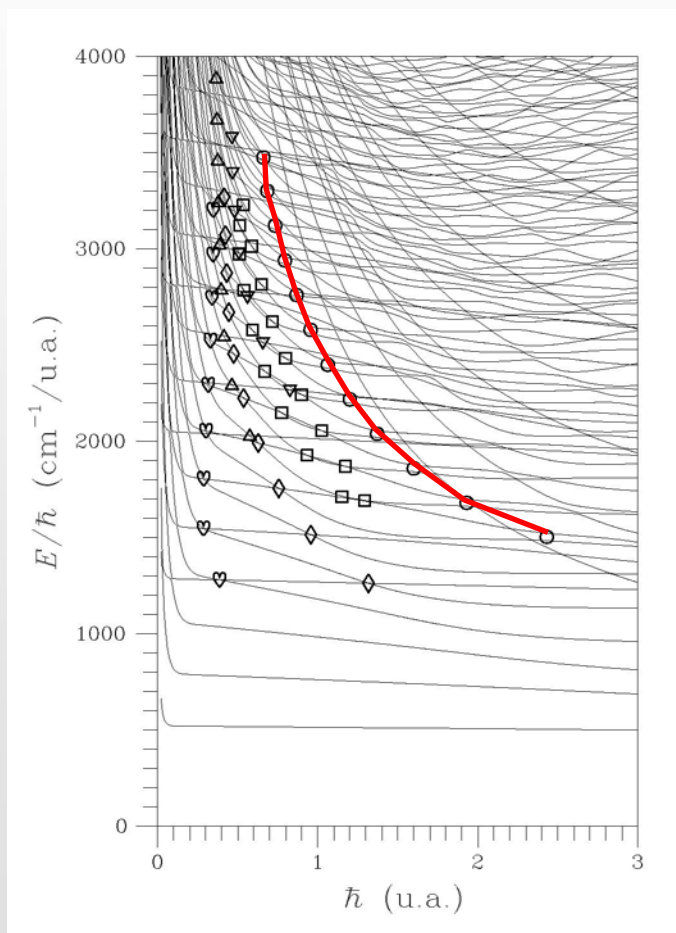
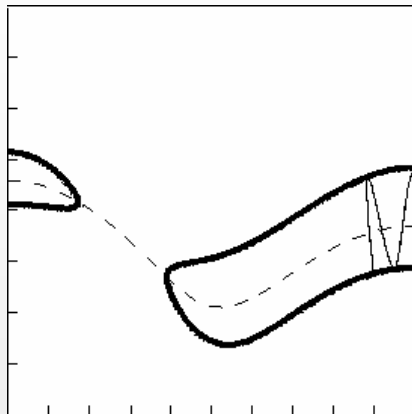


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:6

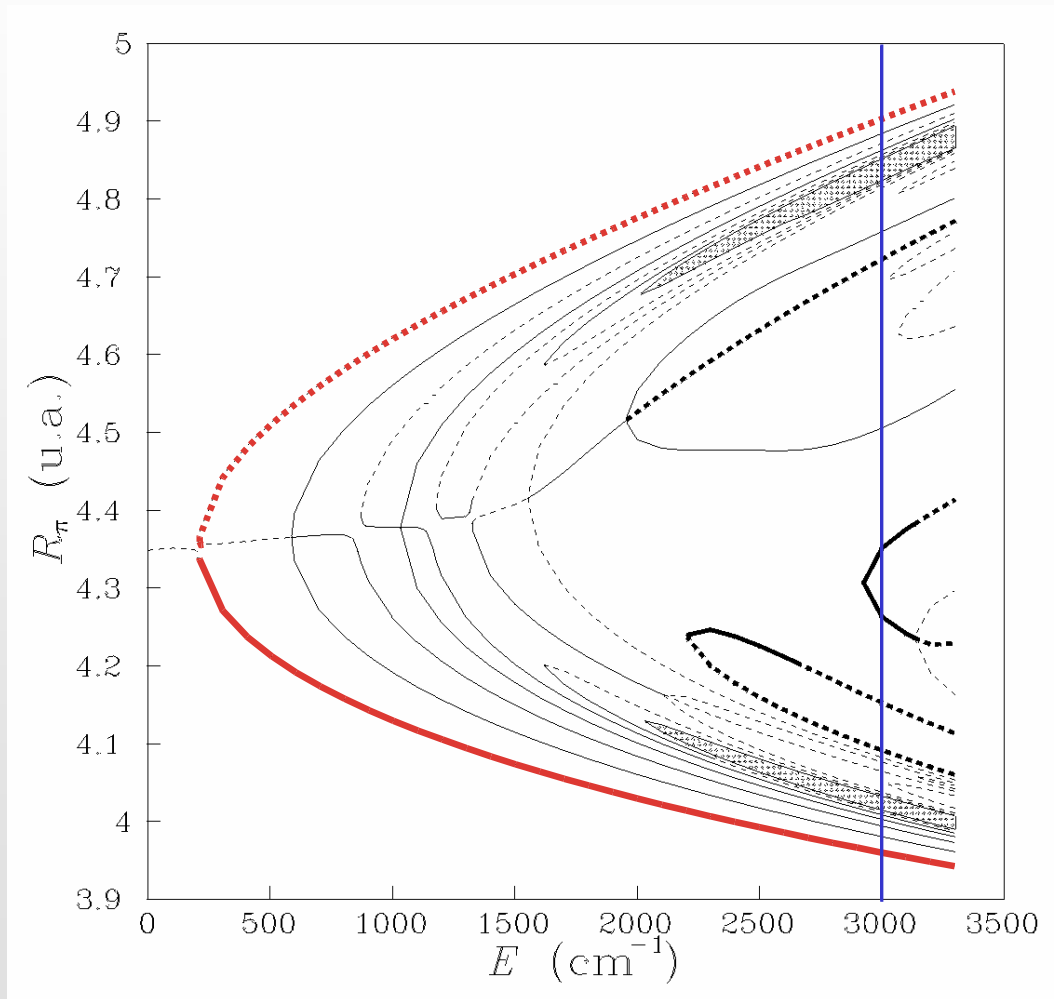
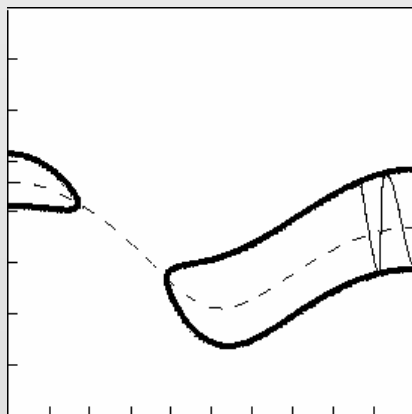
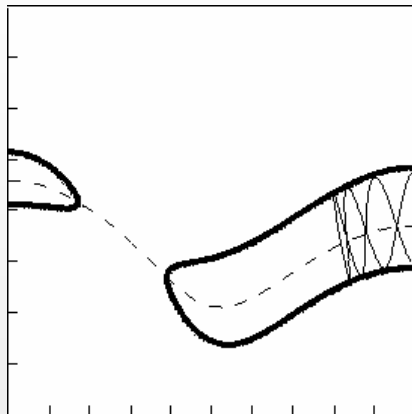


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:7

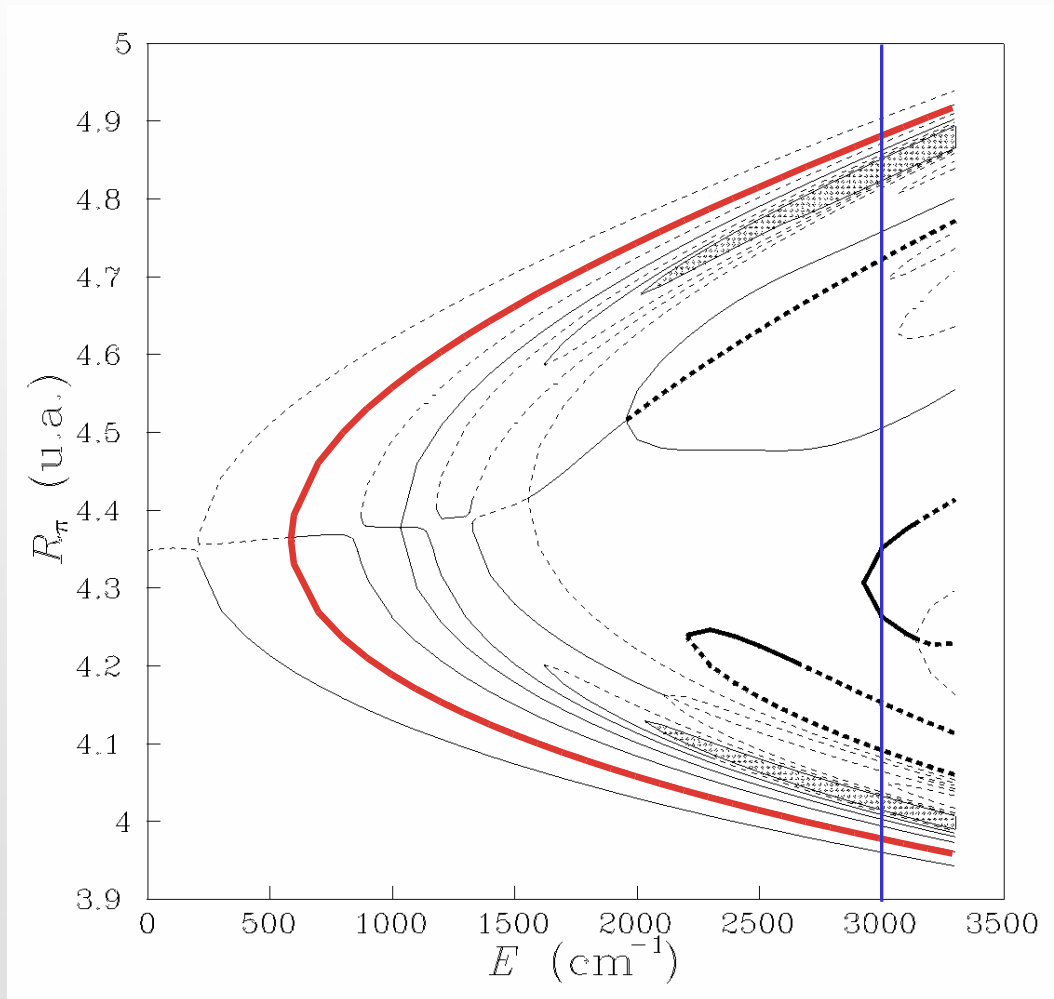
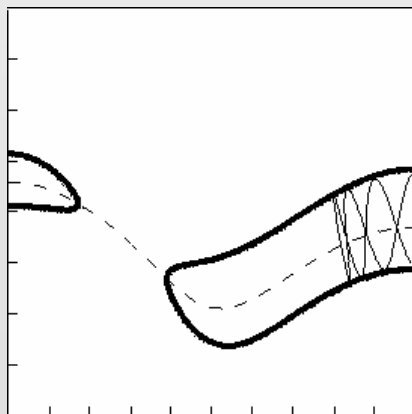
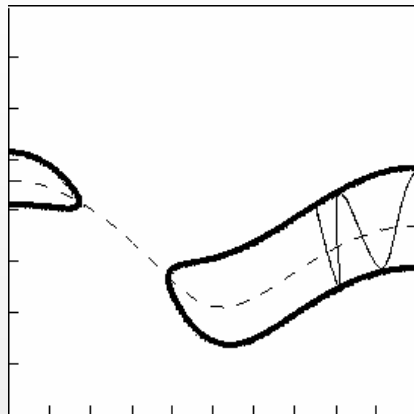


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:8

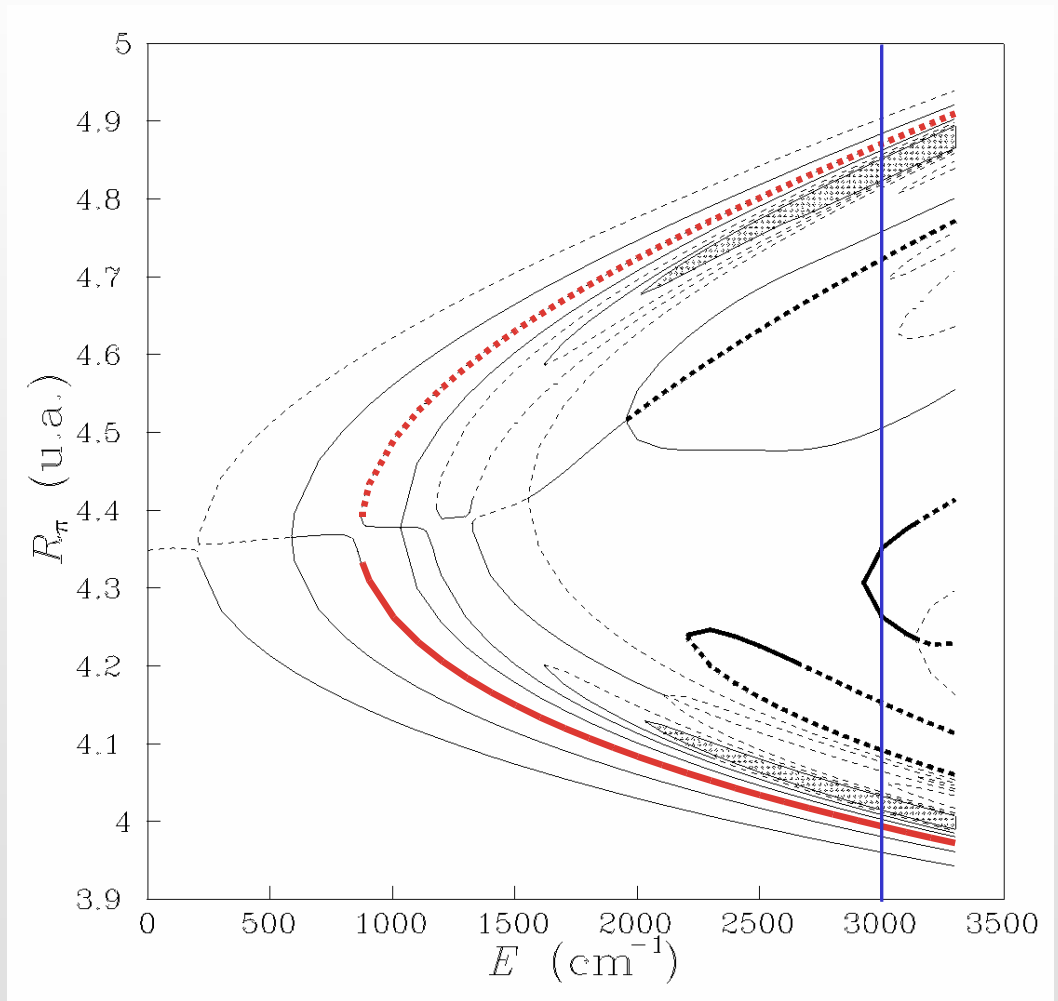
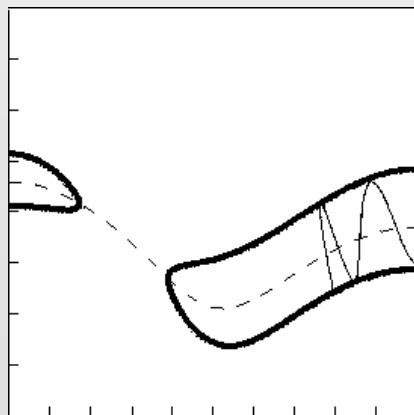
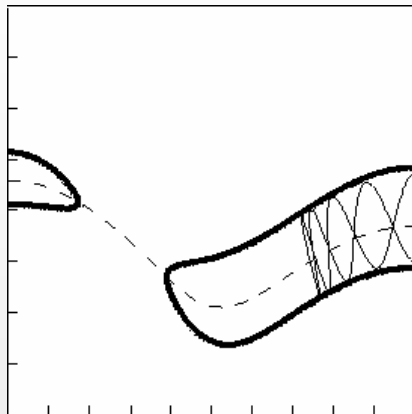


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:9

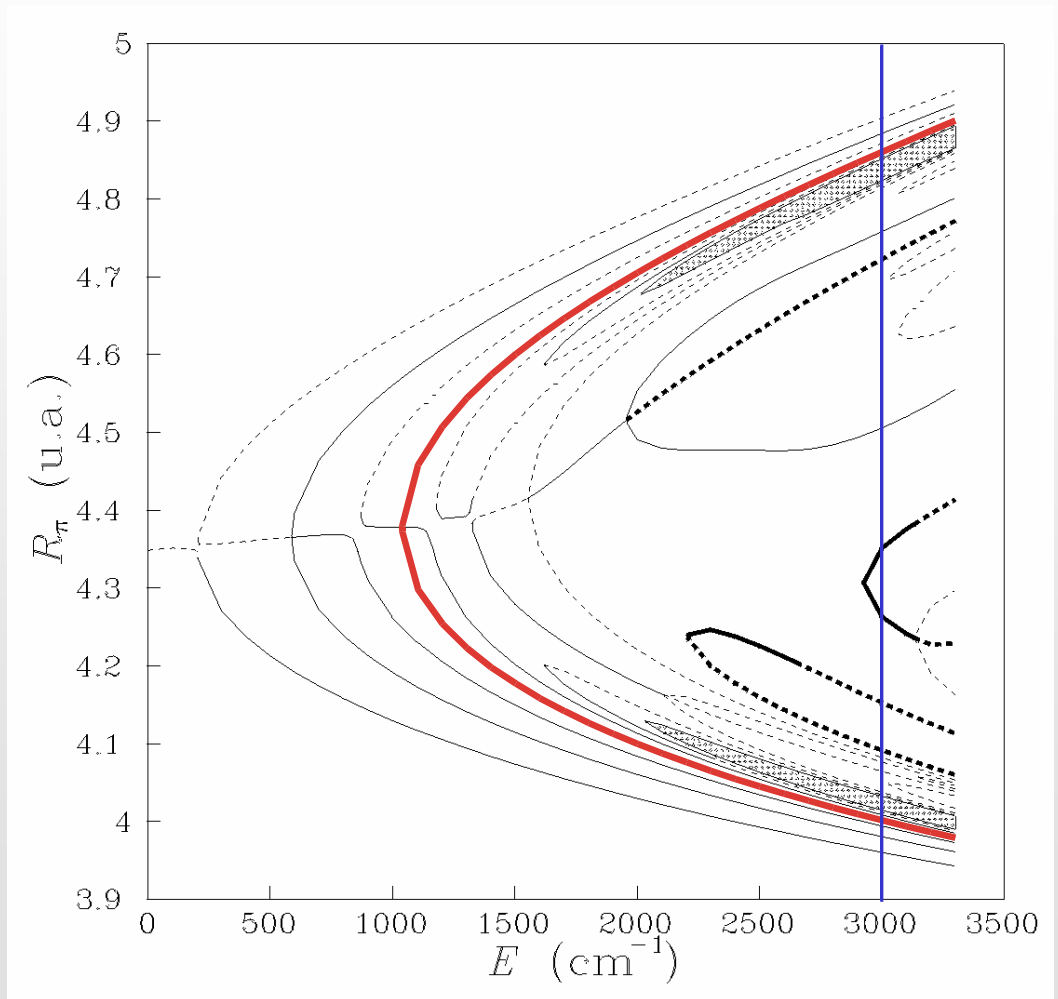
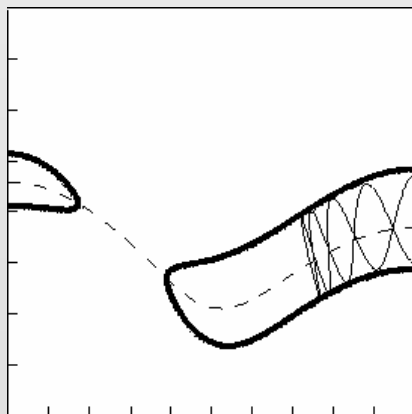
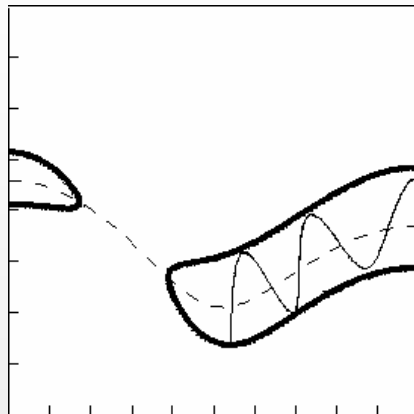


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:10

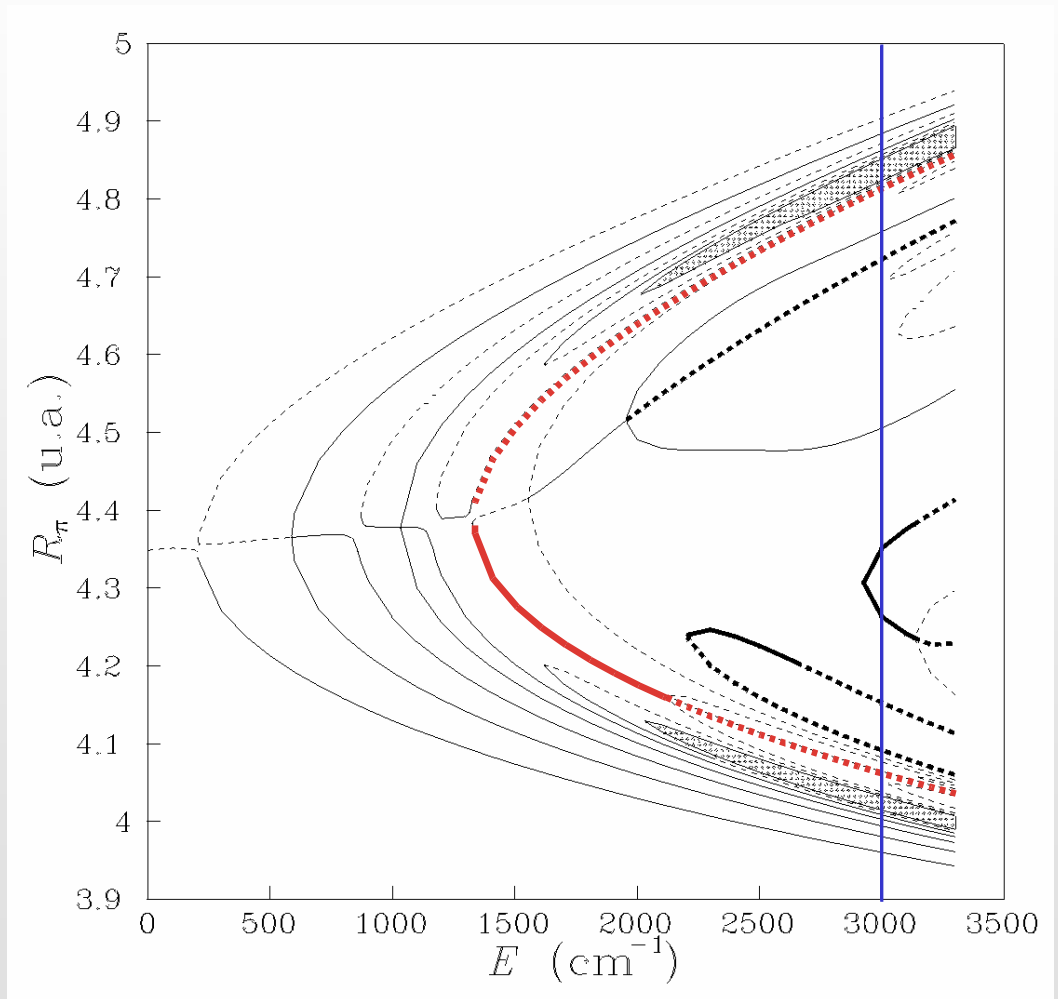
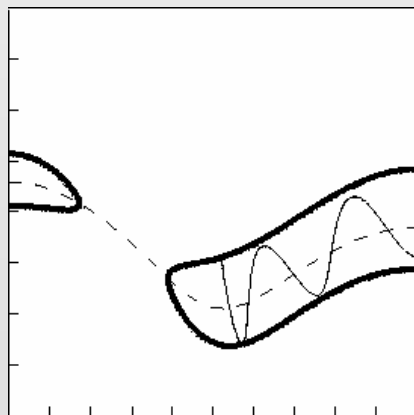
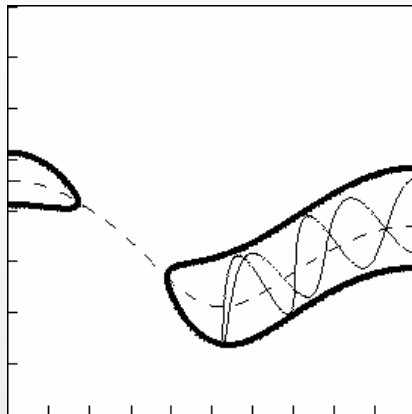


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:9

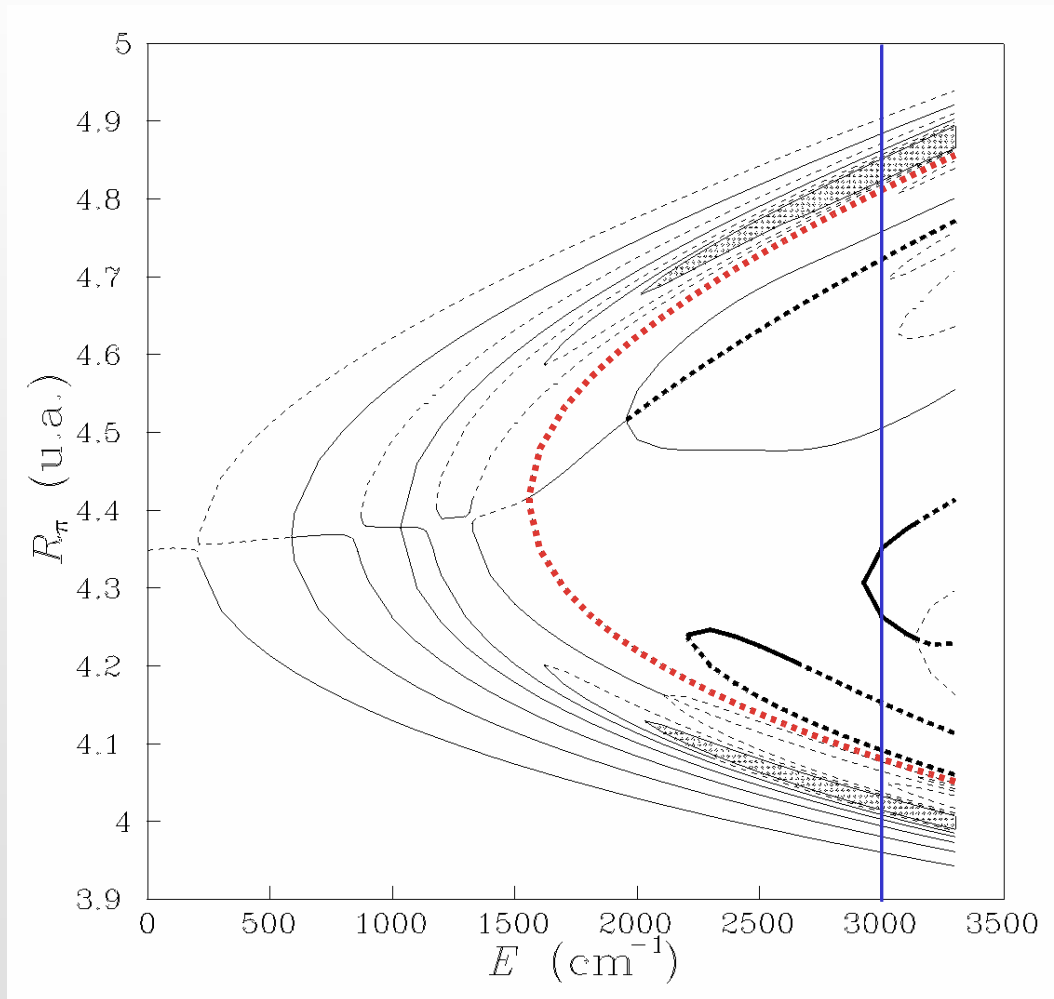
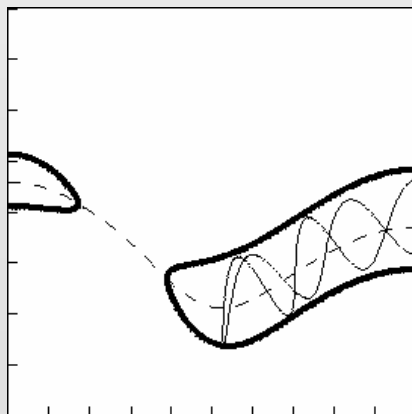
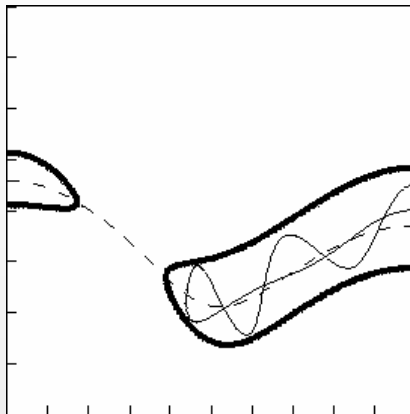


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:8

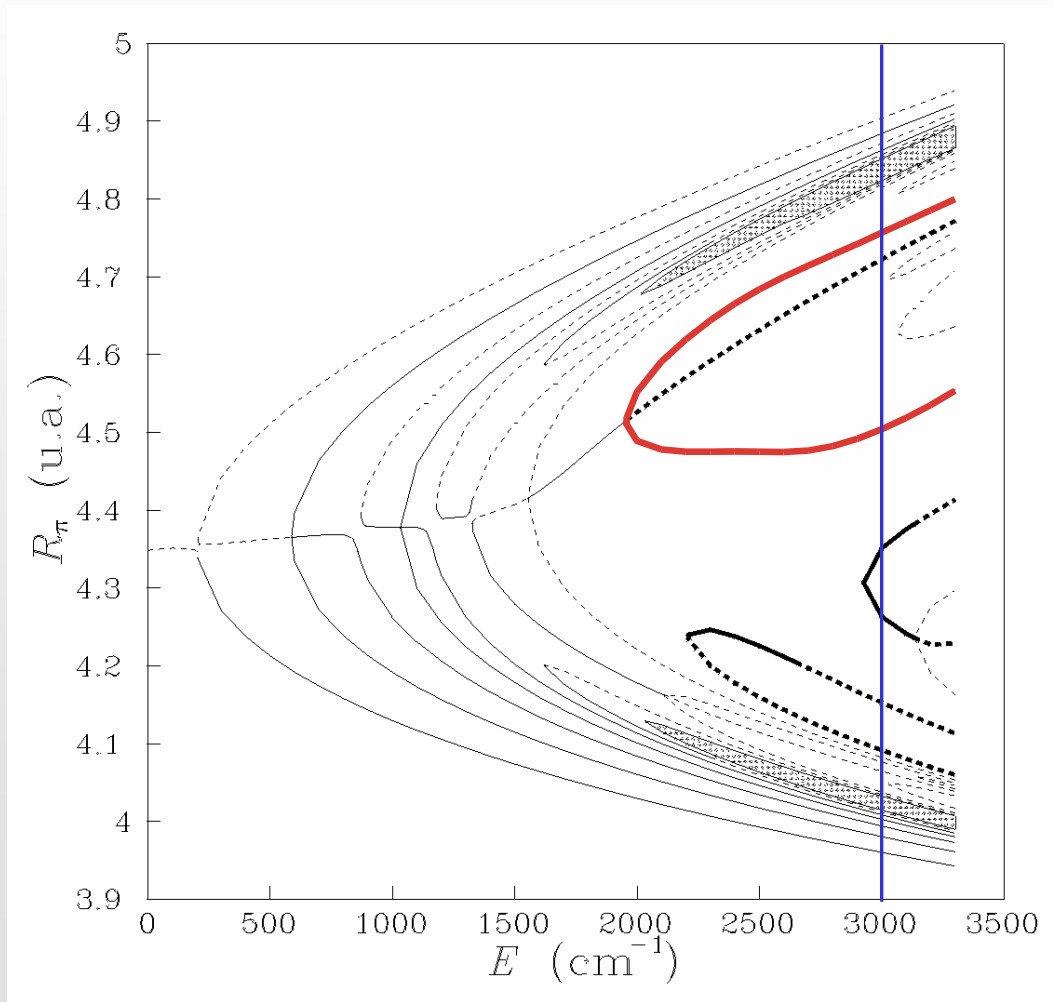
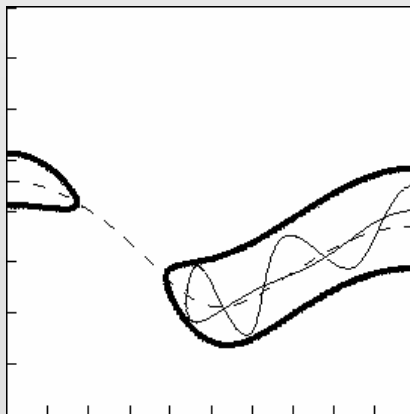
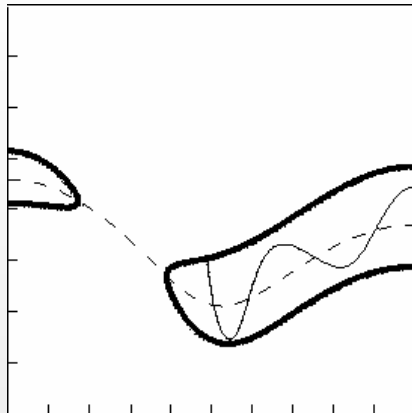


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:8

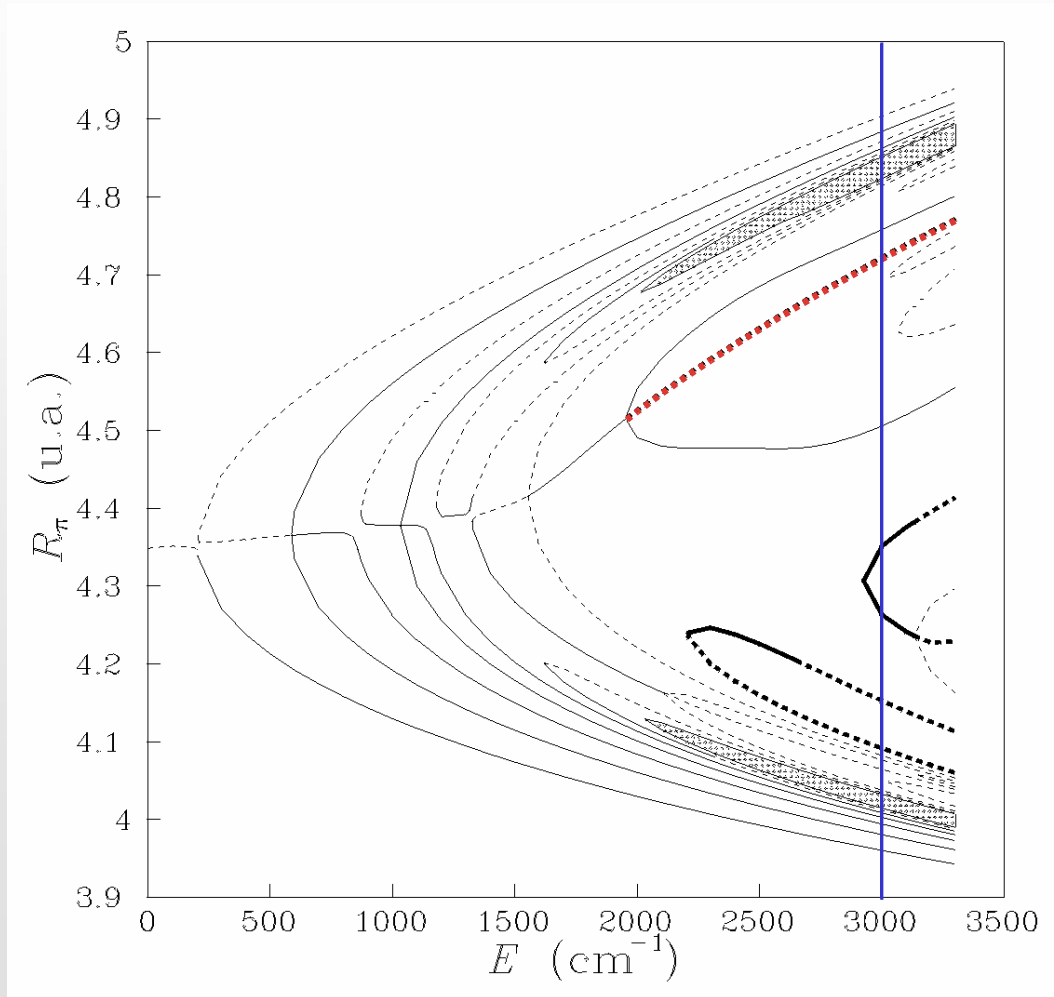
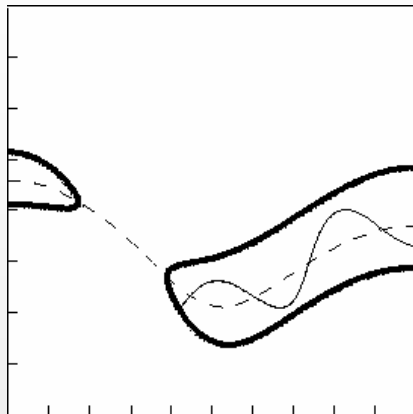


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:8

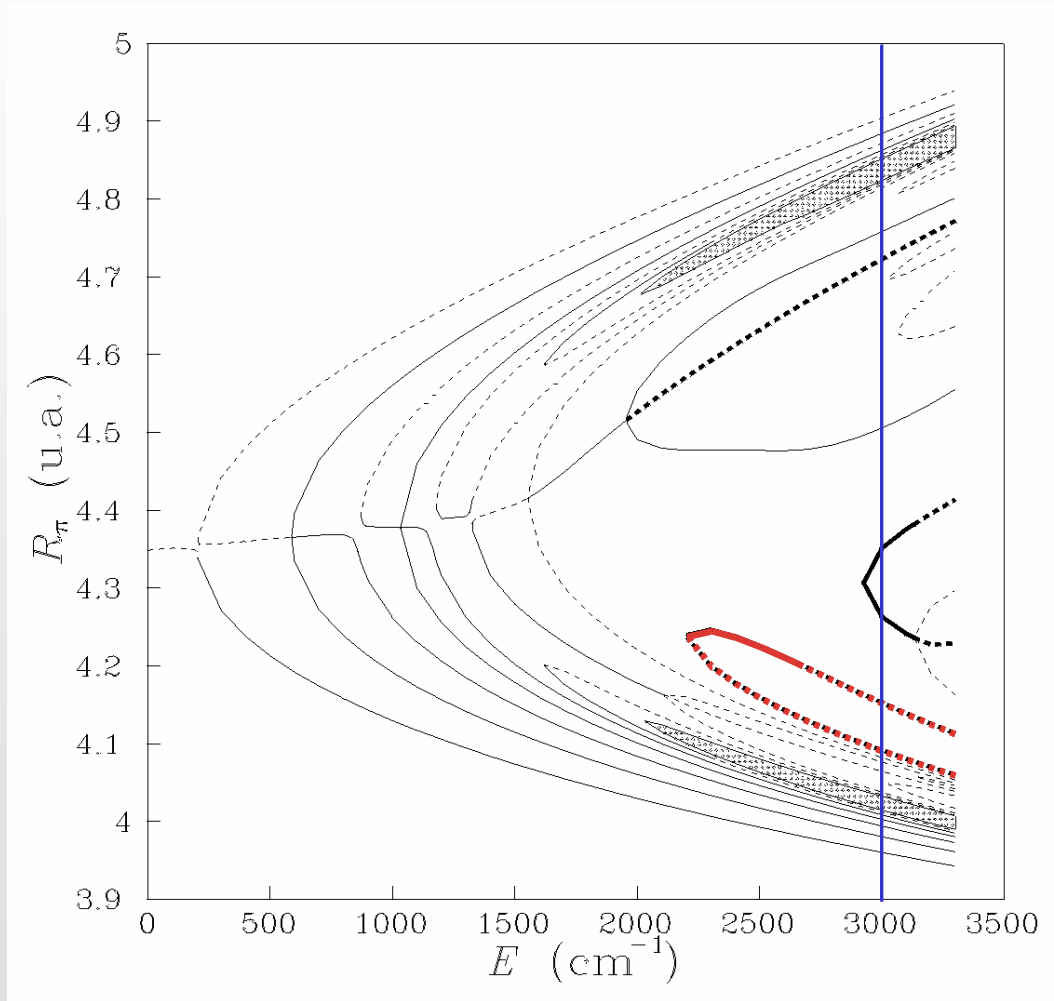
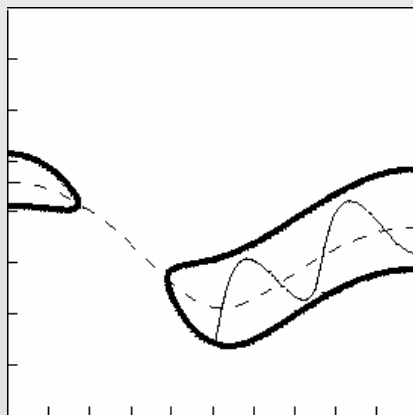
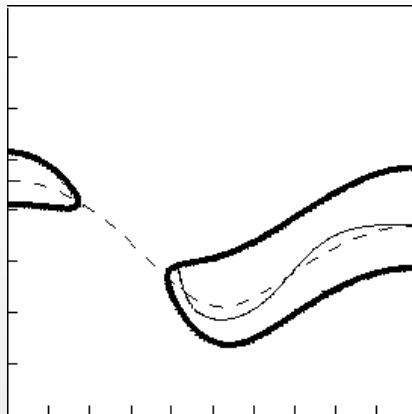


Diagrama de correlación

Resonancias clásicas (Li-CN)



1:6 / 1:4

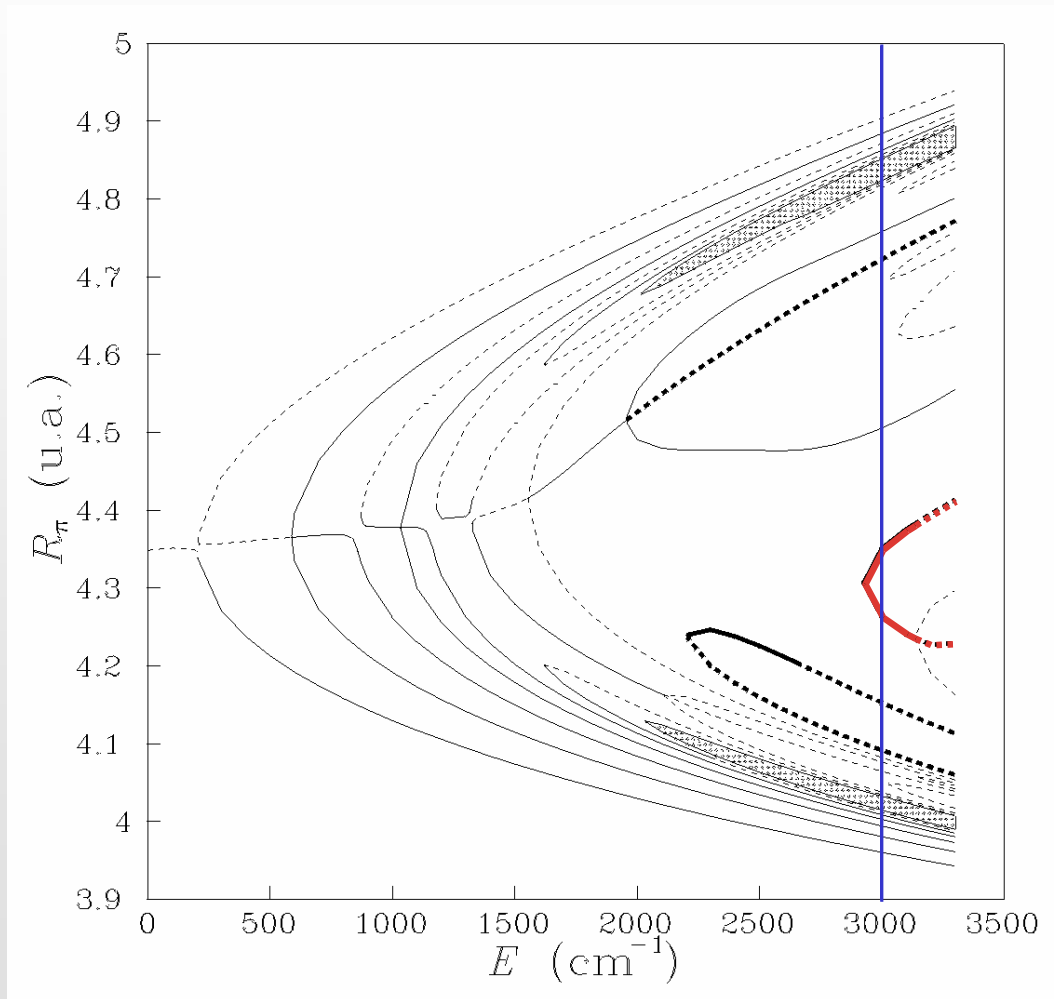
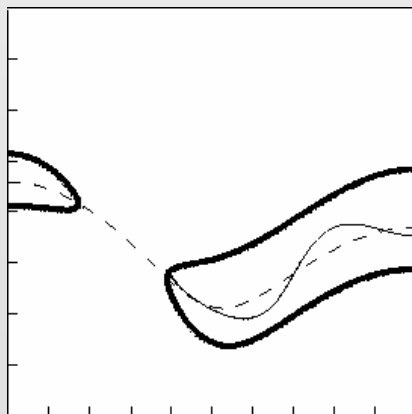


Diagrama de correlación

Correspondencia clásica-cuántica (Li-CN)

resonancias cuánticas (cruces evitados):

1:6 2:14 1:8 2:18 1:10 1:10 **1:8**



Energía

resonancias clásicas (órbitas periódicas):

1:6 1:7 1:8 1:9 1:10 1:10 **1:8**

Representación de estados coherentes

$|\mathbf{x}\rangle$
posiciones

$|\mathbf{p}\rangle$
momentos

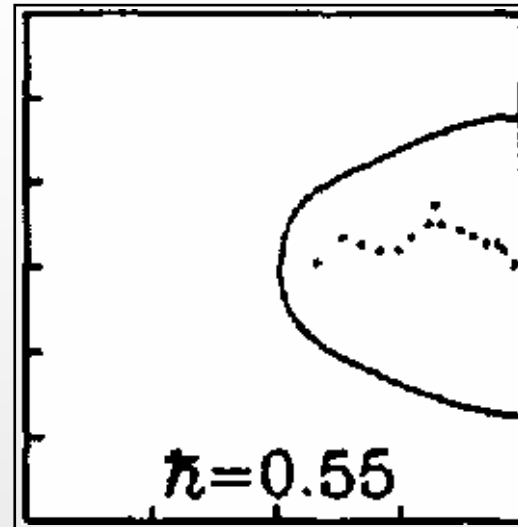
$|\overline{\mathbf{xp}}\rangle$
*valores medios de
 posiciones y momentos*

$$K(\overline{\mathbf{x}}, \overline{\mathbf{p}}) = \frac{1}{(2\pi\hbar)^N} \left| \langle \overline{\mathbf{xp}} | \psi \rangle \right|^2$$

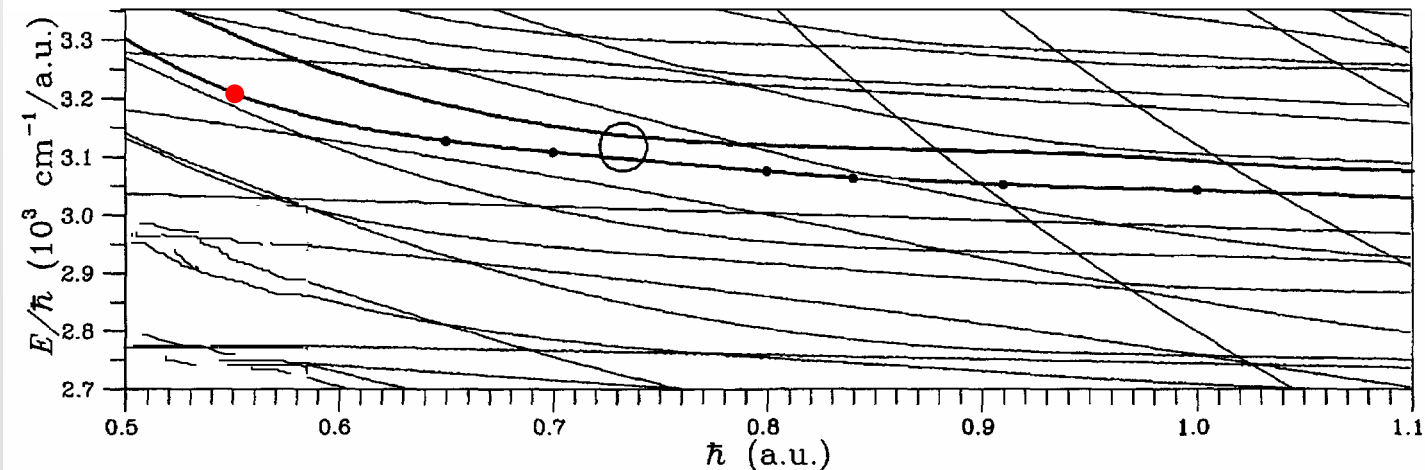
Superficie de sección cuántica

$$K_S(x_1, p_1) = K(x_1, x_2 = x_S, p_1, p_2 = p_2^\pm(x_1, x_2 = x_S, p_1, E))$$

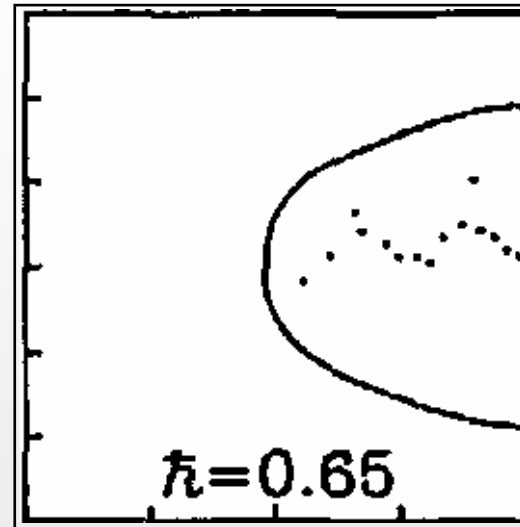
Ceros de la función de Husimi



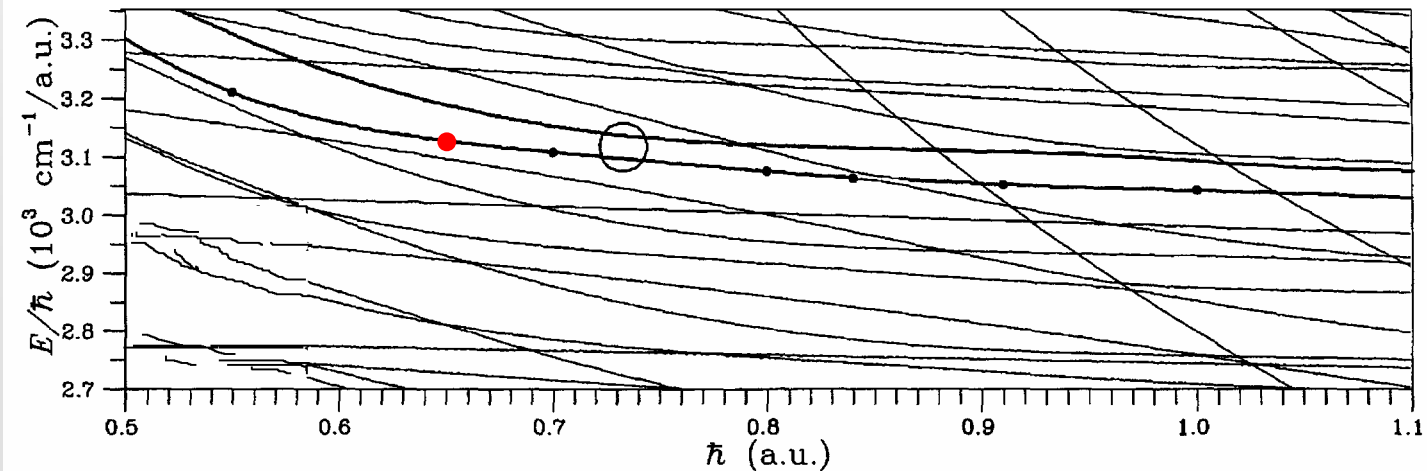
$$(n_{\perp}, n_{\parallel}) = (0, 15)$$



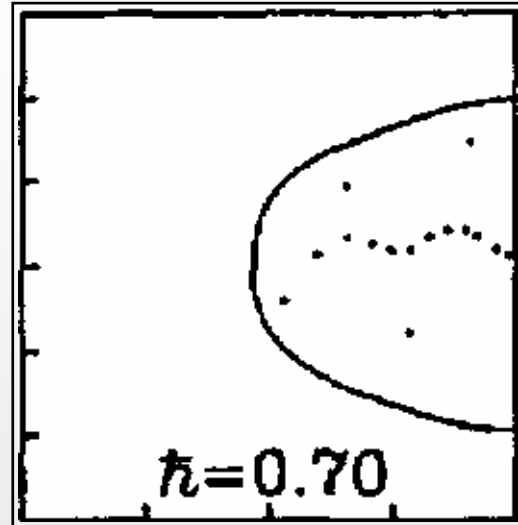
Ceros de la función de Husimi



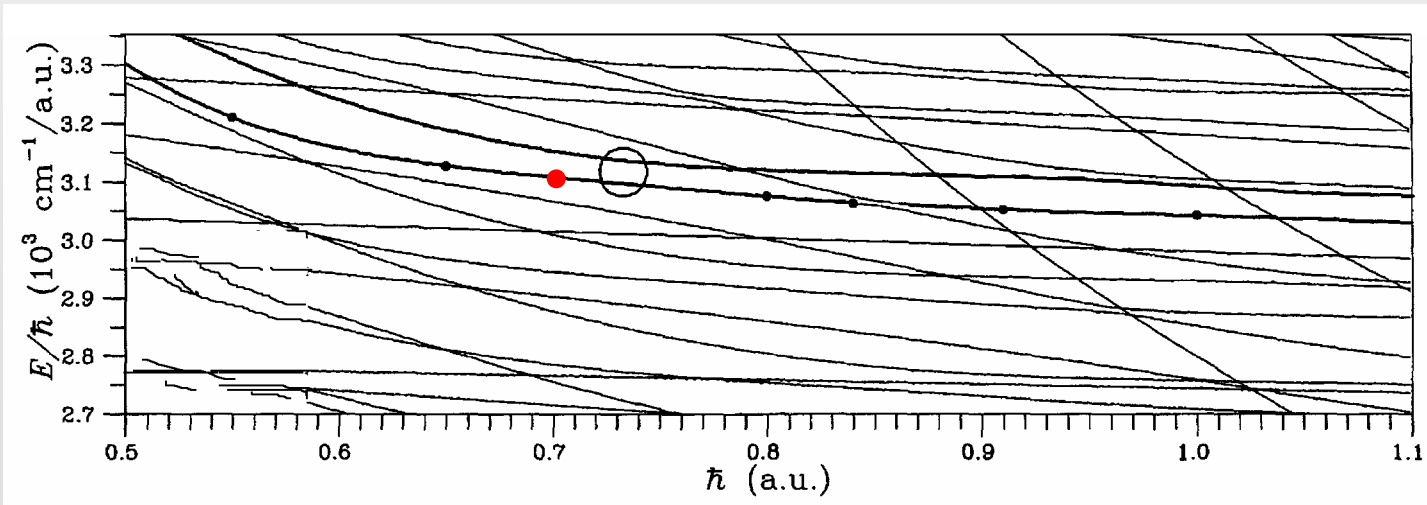
$$(n_{\perp}, n_{\parallel}) = (0, 15)$$



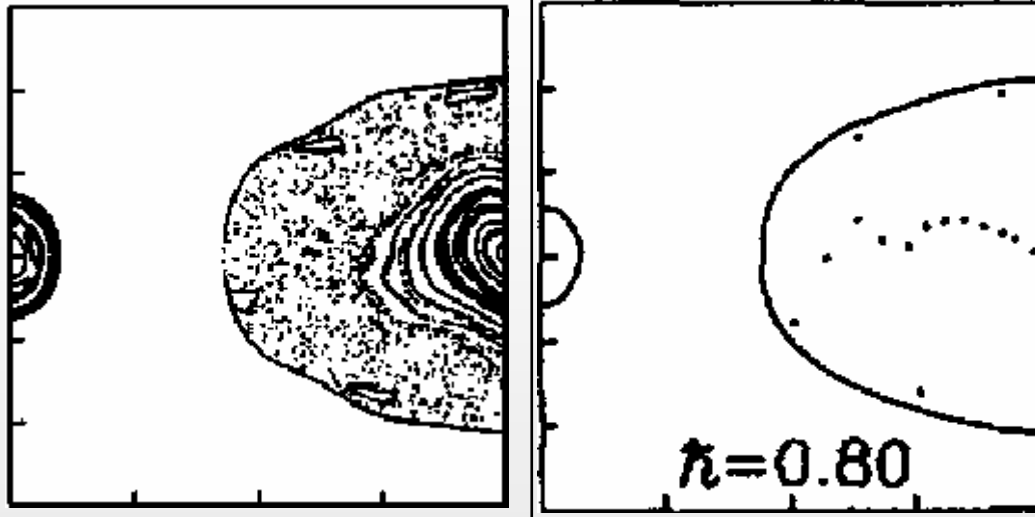
Ceros de la función de Husimi



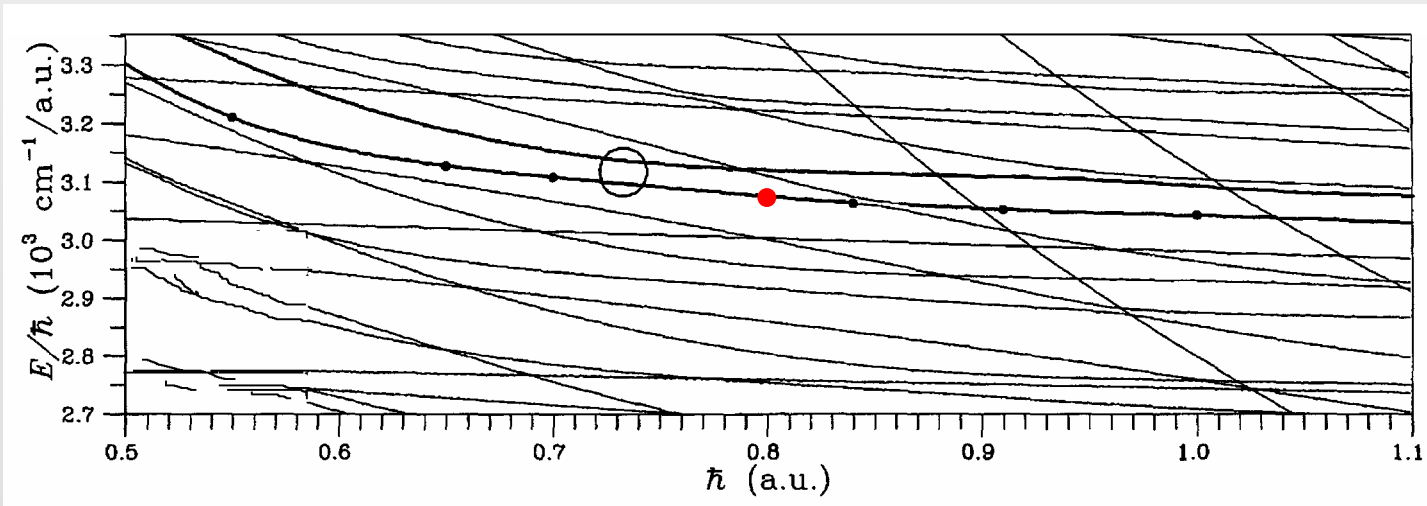
$$(n_{\perp}, n_{\parallel}) = (0, 15)$$



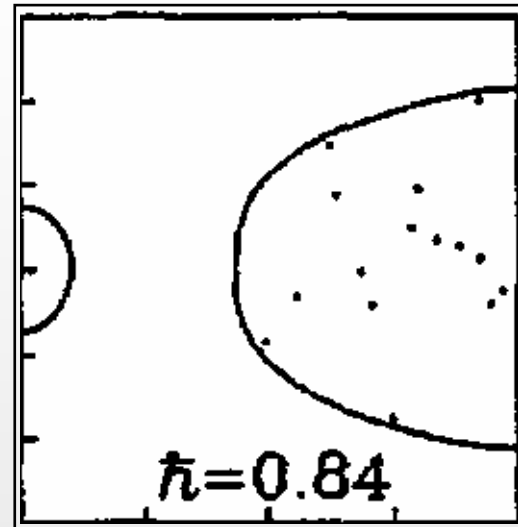
Ceros de la función de Husimi



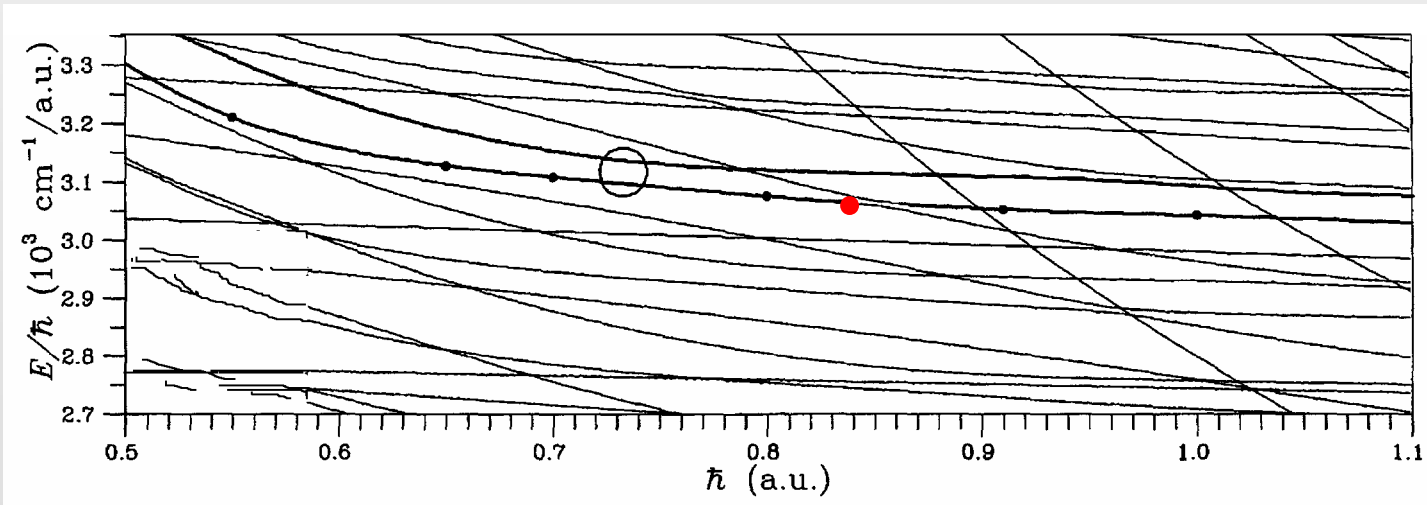
$$(n_{\perp}, n_{\parallel}) = (0, 15)$$



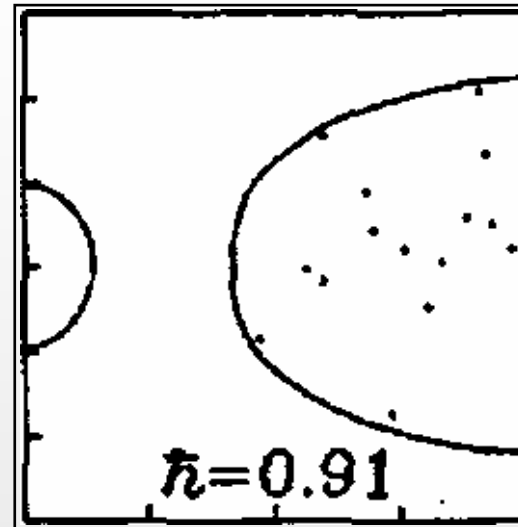
Ceros de la función de Husimi



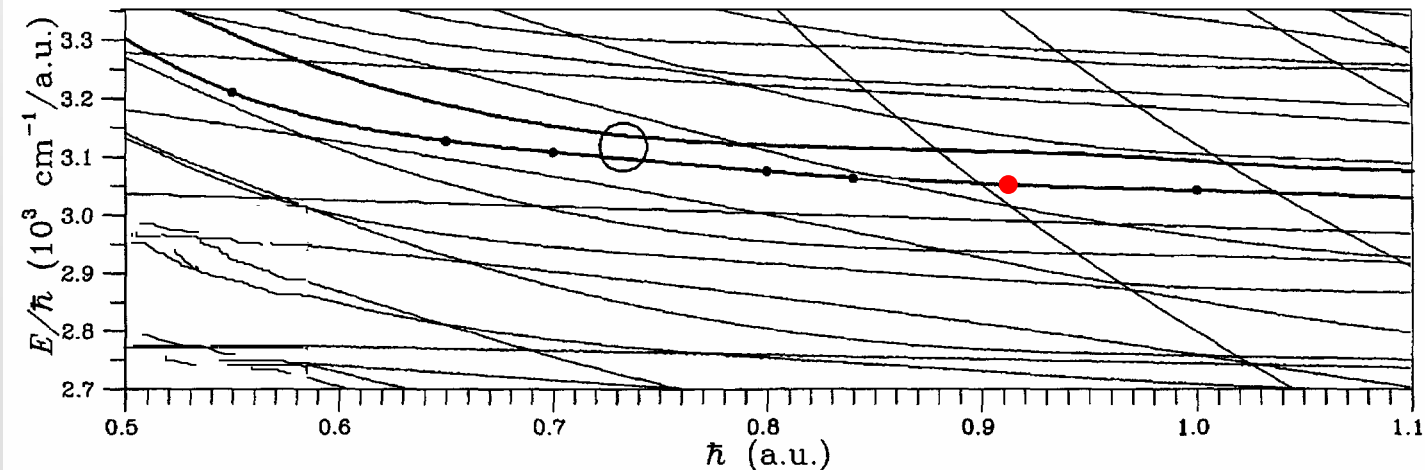
$$(n_{\perp}, n_{\parallel}) = (0, 15)$$



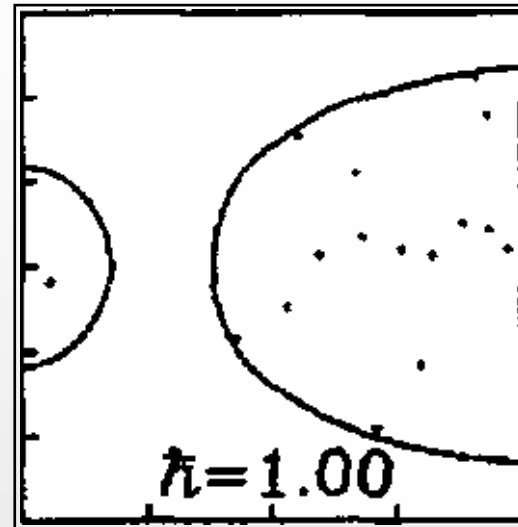
Ceros de la función de Husimi



$$(n_{\perp}, n_{\parallel}) = (0, 15)$$



Ceros de la función de Husimi



$$(n_{\perp}, n_{\parallel}) = (0, 15)$$

