

packab

Packs and unpacks Beltrami field solution vector.

[called by: [dforce](#), [ma02aa](#) and [mp00ac](#).]

contents

1	packab	1
1.1	construction of “vector” of independent degrees of freedom	1

1.1 construction of “vector” of independent degrees of freedom

- 1. Numerical routines for solving linear equations typically require the unknown, independent degrees of freedom to be “packed” into a vector, **x**.
- 2. The magnetic field is defined by the independent degrees of freedom in the Chebyshev-Fourier representation of the vector potential,  $A_{\theta,e,i,l}$  and  $A_{\zeta,e,i,l}$ ; and the non-stellarator-symmetric terms if relevant,  $A_{\theta,o,i,l}$  and  $A_{\zeta,o,i,l}$ ; and the Lagrange multipliers,  $a_i$ ,  $b_i$ ,  $c_i$ ,  $d_i$ ,  $e_i$ , etc. as required to enforce the constraints:

$$\mathbf{x} \equiv \{A_{\theta,e,i,l}, A_{\zeta,e,i,l}, A_{\theta,o,i,l}, A_{\zeta,o,i,l}, a_i, b_i, c_i, d_i, e_i, f_i, g_1, h_1\}.$$

(1)

- 3. The “packing” index is assigned in [preset](#).