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| **Variable** | Content |
| xm | x coordinate of the marker |
| ym | y coordinate of the marker |
| sc | arclength coordinate |
| ux | x coordinate of u-velocity point |
| uy | y coordinate of u-velocity point |
| vx | x coordinate of v-velocity point |
| vy | y coordinate of v-velocity point |
| xc | x coordinate of cell center (pressure point) |
| yc | y coordinate of cell center (pressure point) |
| au, bu, cu | Lineer interpolation constants in the stencil defined for u-velocity |
| av, bv, cv | Lineer interpolation constants in the stencil defined for v-velocity |
| ap, bp, cp | Lineer interpolation constants in the stencil defined for pressure |
| invagu | Inverse of coefficient matrix for u-velocity |
| invagv | Inverse of coefficient matrix for v-velocity |
| invagp | Inverse of coefficient matrix for pressure |
| invaguin | Inverse of coefficient matrix for inactive u-velocity |
| invagvin | Inverse of coefficient matrix for inactive v-velocity |
| invagpin | Inverse of coefficient matrix for inactive pressure |
| ghu | x and y coordinates of the ghost cell for u-velocity |
| ghv | x and y coordinates of the ghost cell for v-velocity |
| ghp | x and y coordinates of the ghost cell for pressure |
| ghuin | x and y coordinates of the inactive cell for u-velocity |
| ghvin | x and y coordinates of the inactive cell for v-velocity |
| gFIu | ideces of inerpolation points for u in the ghost cell |
| gFIv | ideces of inerpolation points for v in the ghost cell |
| gFIp | ideces of inerpolation points for p in the ghost cell |
| gFIuin | ideces of inerpolation points for inactive u-velocity point |
| gFIvin | ideces of inerpolation points for inactive v-velocity point |
| indu | Indeces of ghost cell for u |
| indv | Indeces of ghost cell for v |
| indp | Indeces of ghost cell for p |
| ua | Active or inactive knowledge of the u-velocity point. It takes 1 value active point, 0 for inactive point. |
| va | Active or inactive knowledge of the v-velocity point. It takes 1 value active point, 0 for inactive point. |
| induin | indeces of inactive cell for u |
| indvin | indeces of inactive cell for v |
| uxb | Horizontal solid velocity at the immersed boundary point |
| uyb | Vertical solid velocity at the immersed boundary point |
| IMu | information of whether the imaginary of ghost pont is used for u (=1 for used case) |
| IMv | information of whether the imaginary of ghost pont is used for v (=1 for used case) |
| IMp | information of whether the imaginary of ghost pont is used for p (=1 for used case) |

**GLOBAL VARIABLES FOR IMMERSED BOUNDARY ALGORITHM**