

| Systematics                     | Parameter  | Correlations |            |            |
|---------------------------------|------------|--------------|------------|------------|
|                                 |            | $y_{CP}$     | $\Delta x$ | $\Delta y$ |
| Reconstruction and selection    | $x_{CP}$   | 0.14         | 0.02       | 0.02       |
|                                 | $y_{CP}$   |              | -0.02      | -0.08      |
|                                 | $\Delta x$ |              |            | -0.01      |
| Detection asymmetry             | $x_{CP}$   | 0.33         | -0.02      | -0.06      |
|                                 | $y_{CP}$   |              | -0.15      | -0.15      |
|                                 | $\Delta x$ |              |            | 0.52       |
| Mass-fit model                  | $x_{CP}$   | 0.17         | 0.00       | 0.01       |
|                                 | $y_{CP}$   |              | 0.04       | -0.03      |
|                                 | $\Delta x$ |              |            | 0.10       |
| Unrelated $D^0\mu$ combinations | $x_{CP}$   | 0.02         | -0.05      | 0.02       |
|                                 | $y_{CP}$   |              | -0.11      | -0.10      |
|                                 | $\Delta x$ |              |            | 0.13       |
| Secondary charm decays          | $x_{CP}$   | 0.14         | -0.01      | 0.00       |
|                                 | $y_{CP}$   |              | -0.03      | -0.01      |
|                                 | $\Delta x$ |              |            | 0.09       |