

|  |
|--|
| <b>BOAT</b>                              |
| Name <b>ZUUL</b><br>Sail Nr <b>38012</b> |

|              |
|--------------|
| <b>GPH</b>   |
| <b>562.2</b> |

|             |                    |   |
|-------------|--------------------|---|
| <b>HULL</b> | Length Overall     | <b>11.552m</b>  |
|             | Maximum Beam       | <b>3.987m</b>   |
|             | Displacement       | <b>5,478kg</b>  |
|             | Draft              | <b>2.401m</b>   |
|             | Plan Review        |   |
|             | IMS Reg. Division  | <b>Cruiser/Racer</b>  |
|             | Dynamic Allowance  | <b>0.026%</b>   |
|             | Hull Construction  | <b>Cored</b>  |
|             | Carbon Rudder      | <b>Yes</b>  |
|             | Crew Arm Extension | <b>0.00</b>   |
|             | IMSL               | <b>10.787m</b> VCGD <b>-0.076m</b> Sink <b>21.65kg/mm</b>       |
|             | RL                 | <b>10.083m</b> VCGM <b>-0.095m</b> WS <b>28.31m<sup>2</sup></b> |
|             | LSM0               | <b>10.712m</b> Displacement/Length ratio <b>4.4567</b>          |



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|   |
|---|
| <b>GENERAL</b>                                    |
| Class <b>AERODYNE 38</b>                          |
| Designer <b>Roger Martin</b>                      |
| Builder <b>Aerodyne Yachts</b>                    |
| Series <b>01/1999</b>                             |
| Age <b>01/2001</b>                                |
| Age Allowance <b>0.487%</b>                       |
| Offset File <b>A38a.off - 02/05/2018 16:39:54</b> |
| Measurement by - <b>23/05/2018</b>                |

**Rating Office**

Offshore  
Racing  
Congress

|                        |                                |               |               |                           |               |               |
|------------------------|--------------------------------|---------------|---------------|---------------------------|---------------|---------------|
| <b>SCORING OPTIONS</b> |                                |               |               |                           |               |               |
|                        | <b>COASTAL / LONG DISTANCE</b> |               |               | <b>WINDWARD / LEEWARD</b> |               |               |
| Time on Distance       | <b>549.7</b>                   |               |               | <b>621.6</b>              |               |               |
| Time on Time           | <b>1.0915</b>                  |               |               | <b>1.0859</b>             |               |               |
| Triple Number          | Low                            | Medium        | High          | Low                       | Medium        | High          |
| Time on Distance       | <b>634.9</b>                   | <b>501.2</b>  | <b>447.4</b>  | <b>826.7</b>              | <b>621.1</b>  | <b>550.5</b>  |
| Time on Time           | <b>1.0631</b>                  | <b>1.3469</b> | <b>1.5086</b> | <b>0.8165</b>             | <b>1.0868</b> | <b>1.2262</b> |



|                        |              |              |              |              |              |              |              |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>TIME ALLOWANCES</b> |              |              |              |              |              |              |              |
| Wind Velocity          | 6 kt         | 8 kt         | 10 kt        | 12 kt        | 14 kt        | 16 kt        | 20 kt        |
| Beat VMG               | <b>953.4</b> | <b>784.3</b> | <b>696.6</b> | <b>665.0</b> | <b>652.9</b> | <b>646.6</b> | <b>635.2</b> |
| 52°                    | <b>624.8</b> | <b>526.2</b> | <b>484.7</b> | <b>470.3</b> | <b>464.5</b> | <b>461.5</b> | <b>453.2</b> |
| 60°                    | <b>590.1</b> | <b>505.8</b> | <b>472.5</b> | <b>457.3</b> | <b>450.1</b> | <b>446.0</b> | <b>437.3</b> |
| 75°                    | <b>540.9</b> | <b>478.4</b> | <b>458.7</b> | <b>443.1</b> | <b>427.3</b> | <b>418.4</b> | <b>410.6</b> |
| 90°                    | <b>522.6</b> | <b>466.2</b> | <b>440.0</b> | <b>422.2</b> | <b>409.4</b> | <b>398.8</b> | <b>378.7</b> |
| 110°                   | <b>539.2</b> | <b>472.0</b> | <b>440.0</b> | <b>410.5</b> | <b>384.7</b> | <b>364.7</b> | <b>339.8</b> |
| 120°                   | <b>564.8</b> | <b>477.1</b> | <b>441.2</b> | <b>409.4</b> | <b>387.0</b> | <b>364.0</b> | <b>320.0</b> |
| 135°                   | <b>635.7</b> | <b>508.3</b> | <b>460.1</b> | <b>427.4</b> | <b>395.0</b> | <b>362.9</b> | <b>307.0</b> |
| 150°                   | <b>754.6</b> | <b>604.1</b> | <b>510.8</b> | <b>463.4</b> | <b>439.1</b> | <b>412.1</b> | <b>350.7</b> |
| Run VMG                | <b>871.4</b> | <b>697.6</b> | <b>589.8</b> | <b>534.8</b> | <b>507.1</b> | <b>475.9</b> | <b>405.0</b> |

|                               |
|-------------------------------|
| <b>Certificate</b>            |
| Number <b>US6294</b>          |
| ORC Ref <b>03410000QU6</b>    |
| Issued On <b>25/09/2020</b>   |
| VPP Ver. <b>2020 1.02</b>     |
| Valid until <b>31/12/2020</b> |

|                         |              |              |              |              |              |              |              |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Selected Courses</b> |              |              |              |              |              |              |              |
| Windward / Leeward      | <b>912.4</b> | <b>741.0</b> | <b>643.2</b> | <b>599.9</b> | <b>580.0</b> | <b>561.3</b> | <b>520.1</b> |
| Circular Random         | <b>765.3</b> | <b>621.9</b> | <b>546.2</b> | <b>502.6</b> | <b>475.1</b> | <b>455.5</b> | <b>425.0</b> |
| Coastal / Long Distance | <b>908.3</b> | <b>695.4</b> | <b>581.4</b> | <b>521.4</b> | <b>490.1</b> | <b>460.5</b> | <b>404.2</b> |
| Non Spinnaker           | <b>850.6</b> | <b>681.9</b> | <b>590.4</b> | <b>536.6</b> | <b>502.7</b> | <b>479.8</b> | <b>448.8</b> |

|                                 |              |
|---------------------------------|--------------|
| <b>Crew Weight</b>              |              |
| Default                         | <b>759kg</b> |
| Maximum                         | <b>759kg</b> |
| Minimum*                        | <b>569kg</b> |
| *when applied by the NoR and SI |              |
| Non Manual Pwr                  | <b>No</b>    |

|                        |              |               |
|------------------------|--------------|---------------|
| <b>Special Scoring</b> |              |               |
| ToD                    | ToT          |               |
| Non Spin GPH           | <b>609.2</b> | <b>0.9849</b> |
| Non Spin OSN           | <b>592.8</b> | <b>1.0121</b> |

|  |               |               |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Velocity Prediction in Knots for True Wind Speeds</b> |               |               |               |               |               |               |               |
| Wind Velocity  | 6 kt          | 8 kt          | 10 kt         | 12 kt         | 14 kt         | 16 kt         | 20 kt         |
| Beat Angles  | <b>42.8°</b>  | <b>41.3°</b>  | <b>39.8°</b>  | <b>38.3°</b>  | <b>37.7°</b>  | <b>37.9°</b>  | <b>37.9°</b>  |
| Beat VMG   | <b>3.78</b>   | <b>4.59</b>   | <b>5.17</b>   | <b>5.41</b>   | <b>5.51</b>   | <b>5.57</b>   | <b>5.67</b>   |
| 52°  | <b>5.76</b>   | <b>6.84</b>   | <b>7.43</b>   | <b>7.65</b>   | <b>7.75</b>   | <b>7.80</b>   | <b>7.94</b>   |
| 60°  | <b>6.10</b>   | <b>7.12</b>   | <b>7.62</b>   | <b>7.87</b>   | <b>8.00</b>   | <b>8.07</b>   | <b>8.23</b>   |
| 75°  | <b>6.66</b>   | <b>7.52</b>   | <b>7.85</b>   | <b>8.13</b>   | <b>8.42</b>   | <b>8.60</b>   | <b>8.77</b>   |
| 90°  | <b>6.89</b>   | <b>7.72</b>   | <b>8.18</b>   | <b>8.53</b>   | <b>8.79</b>   | <b>9.03</b>   | <b>9.51</b>   |
| 110°   | <b>6.68</b>   | <b>7.63</b>   | <b>8.18</b>   | <b>8.77</b>   | <b>9.36</b>   | <b>9.87</b>   | <b>10.60</b>  |
| 120°   | <b>6.37</b>   | <b>7.55</b>   | <b>8.16</b>   | <b>8.79</b>   | <b>9.30</b>   | <b>9.89</b>   | <b>11.25</b>  |
| 135°   | <b>5.66</b>   | <b>7.08</b>   | <b>7.83</b>   | <b>8.42</b>   | <b>9.11</b>   | <b>9.92</b>   | <b>11.73</b>  |
| 150°   | <b>4.77</b>   | <b>5.96</b>   | <b>7.05</b>   | <b>7.77</b>   | <b>8.20</b>   | <b>8.74</b>   | <b>10.26</b>  |
| Run VMG  | <b>4.13</b>   | <b>5.16</b>   | <b>6.10</b>   | <b>6.73</b>   | <b>7.10</b>   | <b>7.57</b>   | <b>8.89</b>   |
| Gybe Angles  | <b>143.0°</b> | <b>146.0°</b> | <b>148.5°</b> | <b>151.5°</b> | <b>149.0°</b> | <b>146.5°</b> | <b>143.0°</b> |

|                          |            |
|--------------------------|------------|
| <b>Sails Limitations</b> |            |
| Headsails                | Spinnakers |
| <b>6</b>                 | <b>4</b>   |

|                              |
|------------------------------|
| <b>Class Division Length</b> |
| <b>CDL = 10.431</b>          |

|                          |              |
|--------------------------|--------------|
| <b>Storm Sails Areas</b> |              |
| Heavy Weather Jib        | <b>32.98</b> |
| Storm Jib (JL=10.16)     | <b>12.22</b> |
| Storm Trysail            | <b>13.79</b> |

**Owner**

|                    |                                 |
|--------------------|---------------------------------|
| <b>BOAT</b>        |                                 |
| Name <b>ZUUL</b>   | Sail Nr <b>38012</b>            |
| File <b>US6294</b> | Data in <b>meters/kilograms</b> |

|                                |                             |
|--------------------------------|-----------------------------|
| <b>RIG</b>                     |                             |
| Forestay Tension <b>Aft</b>    | Spreaders <b>2</b>          |
| Inner Stay <b>None Fitted</b>  | Runners/Checkstays <b>0</b> |
| Carbon Mast <b>Yes</b>         | Jib Furler <b>No</b>        |
| Fiber Rigging <b>No</b>        | Main Furler <b>No</b>       |
| Non-Circular Rigging <b>No</b> |                             |
| Articulated Bowsprit <b>No</b> |                             |

|                   |                  |                   |                   |
|-------------------|------------------|-------------------|-------------------|
| P <b>15.758</b>   | E <b>4.999</b>   | MDT1 <b>0.128</b> | MW <b>0.178</b>   |
| IG <b>15.529</b>  | J <b>4.496</b>   | MDL1 <b>0.198</b> | GO <b>0.207</b>   |
| ISP <b>17.458</b> | SFJ <b>0.270</b> | MDT2 <b>0.100</b> | BD <b>0.165</b>   |
| BAS <b>1.468</b>  | SPL <b>0.000</b> | MDL2 <b>0.122</b> | MWT <b>175.00</b> |
| FSD <b>0.030</b>  | TPS <b>6.556</b> | TL <b>1.745</b>   | MCG <b>5.825</b>  |

|  |                       |                    |
|--|-----------------------|--------------------|
| <b>INCLINING TEST AND FREEBOARDS</b>     |                       |                    |
| Inclining Test <b>Boom Inclining</b>     | LCFD                  |                    |
| Flotation date <b>23/05/2018</b>         | SG <b>1.0030</b>      |                    |
| FFM <b>1.449</b>                         | FF <b>1.463</b>       | SFFP <b>0.069</b>  |
| FAM <b>1.020</b>                         | FA <b>1.021</b>       | SAFP <b>11.164</b> |
| W1 <b>123.2</b>                          | PD1 <b>286.4</b>      | WD <b>5.036</b>    |
| W2 <b>123.2</b>                          | PD2 <b>291.0</b>      | GSA <b>1.0</b>     |
| W3 <b>123.2</b>                          | PD3 <b>293.9</b>      | RSA <b>1.0</b>     |
| W4 <b>123.2</b>                          | PD4 <b>282.1</b>      | PLM <b>9000.0</b>  |
| LCF from stem on CL / on sheer           | <b>6.363 / 6.653</b>  |                    |
| Maximum beam station from stem           | <b>7.474</b>          |                    |
| RM Measured                              | <b>169.5kg-m</b>      |                    |
| RM Default                               | <b>158.8kg-m</b>      |                    |
| Limit of positive stability / Stab.Index | <b>118.9° / 115.4</b> |                    |
| Freeboard at mast at 4.766               | <b>1.182</b>          |                    |



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|                             |  |
|-----------------------------|--|
| <b>MIZZEN RIG AND SAILS</b> |  |
| N/A                         |  |

|                              |                    |  |
|------------------------------|--------------------|--|
| <b>PROPELLER</b>             |                    |  |
| Installation <b>Strut</b>    | PRD <b>0.413</b>   |  |
| Type <b>Folding 2 blades</b> | PBW <b>0.105</b>   |  |
| Twin Screw <b>No</b>         | PIPA <b>0.0035</b> |  |
| ST1 <b>0.041</b>             | ST3 <b>0.180</b>   |  |
| ST2 <b>0.180</b>             | ST4 <b>0.112</b>   |  |
|                              | ST5 <b>0.265</b>   |  |
|                              | EDL <b>0.885</b>   |  |

|                               |  |
|-------------------------------|--|
| <b>Certificate</b>            |  |
| Number <b>US6294</b>          |  |
| ORC Ref <b>03410000QU6</b>    |  |
| Issued On <b>25/09/2020</b>   |  |
| VPP Ver. <b>2020 1.02</b>     |  |
| Valid until <b>31/12/2020</b> |  |

|                 |  |
|-----------------|--|
| <b>COMMENTS</b> |  |
|                 |  |

|                        |  |
|------------------------|--|
| <b>MOVABLE BALLAST</b> |  |
| N/A                    |  |

|                    |  |
|--------------------|--|
| <b>CENTERBOARD</b> |  |
| N/A                |  |



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|                              |       |       |       |       |       |        |                        |  |  |
|------------------------------|-------|-------|-------|-------|-------|--------|------------------------|--|--|
| <b>SAILS (Maximum Areas)</b> |       |       |       |       |       |        |                        |  |  |
| Mainsail                     | MHB   | MUW   | MTW   | MHW   | MQW   | Area   | Area (r)               | Formula  |  |
|                              | 0.30  | 1.35  | 2.29  | 3.52  | 4.30  | 50.37  | 51.60                  | P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB) |  |
| Symmetric<br>Not Available   |       |       |       |       |       |        |                        |  |  |
| Asymmetric<br>on centerline  | SLU   | SLE   | SL    | SHW   | SFL   | Area   | Formula                |  |  |
|                              | 19.79 | 16.83 | 18.31 | 11.09 | 10.81 | 168.36 | AS · (SFL + 4·SHW) / 6 |  |  |

|   |      |      |      |      |      |       |       |     |            |           |          |                         |
|---|------|------|------|------|------|-------|-------|-----|------------|-----------|----------|-------------------------|
| <b>HEADSAILS</b>  |      |      |      |      |      |       |       |     |            |           |          |                         |
| Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB) |      |      |      |      |      |       |       |     |            |           |          |                         |
| HHB   | HUW  | HTW  | HHW  | HQW  | HLP  | HLU   | Area  | Btn | Flying     | Meas.Date | Material | Comment                 |
| 0.08  | 0.70 | 1.32 | 2.45 | 3.56 | 4.67 | 15.60 | 37.71 | No  |            |           |          | 2019 LIGHT-MED HEADSAIL |
| 0.08  | 0.65 | 1.23 | 2.27 | 3.32 | 4.42 | 15.57 | 35.21 | No  | 12/02/2019 | Unknow    |          |                         |

|                              |        |                    |                              |                 |
|------------------------------|--------|--------------------|------------------------------|-----------------|
| <b>MEASUREMENT INVENTORY</b> |        |                    |                              |                 |
| Measurer                     | Date   | Comment            | Internal Ballast total = 0.0 |                 |
| Id                           | Item   | Weight             | Distance                     | VCG Description |
| a                            | Anchor | 0.0                | 0.00                         |                 |
| Id                           | Item   | Weight Description |                              |                 |

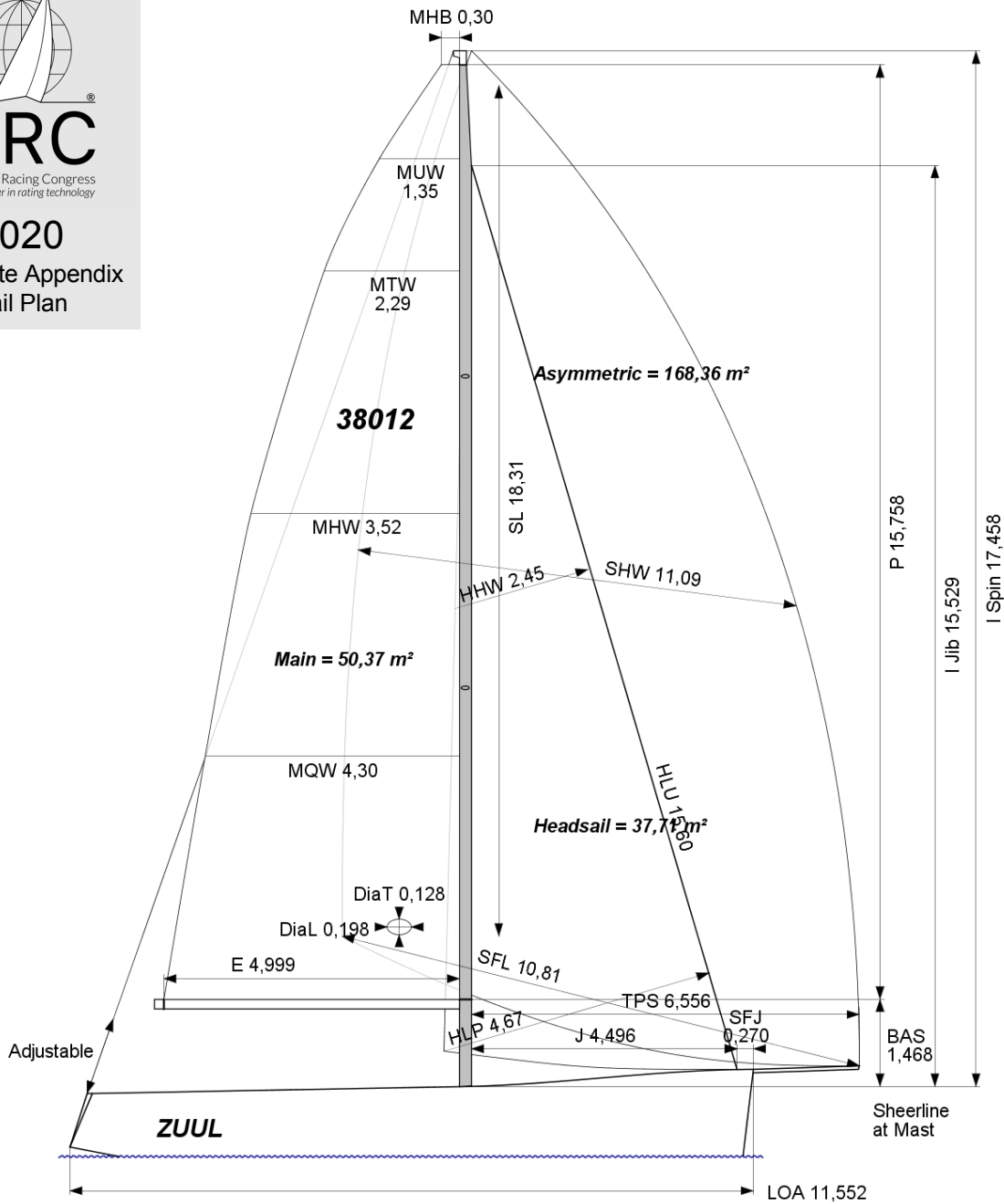
|                              |      |        |          |                 |        |       |      |        |             |
|------------------------------|------|--------|----------|-----------------|--------|-------|------|--------|-------------|
| <b>MEASUREMENT INVENTORY</b> |      |        |          |                 |        |       |      |        |             |
| Id                           | Item | Tank   | Use      | Tank Type       | Capcty | Dist. | VCG  | Condtn | Description |
|                              | Tank |        |          |                 |        | 0.00  | 0.00 | 20.0   |             |
| Id                           | Item | Weight | Distance | VCG Description |        |       |      |        |             |



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Sail Plan



**SAILS INVENTORY**

**MAINSAIL (1)**

| Id      | MHB  | MUW  | MTW  | MHW  | MQW  | Area  | Measurer | Meas.Date | Manufacture | Material | Comment     |
|---------|------|------|------|------|------|-------|----------|-----------|-------------|----------|-------------|
| 2381696 | 0.30 | 1.35 | 2.29 | 3.52 | 4.30 | 50.38 |          |           | RIDGELY     |          | 2019 RE-CUT |

**HEADSAILS (2)**

| Id      | HHB  | HUW  | HTW  | HHW  | HQW  | HLP  | HLU   | Ovrlp | Area  | Btn | Flying | Measurer | Meas.Date  | Manufacture | Material | Comment        |
|---------|------|------|------|------|------|------|-------|-------|-------|-----|--------|----------|------------|-------------|----------|----------------|
| 2381715 | 0.08 | 0.70 | 1.32 | 2.45 | 3.56 | 4.67 | 15.60 | 104%  | 37.71 | No  |        |          |            | ROBERT      |          | 2019 LIGHT-MED |
| J2      | 0.08 | 0.65 | 1.23 | 2.27 | 3.32 | 4.42 | 15.57 | 98%   | 35.21 | No  |        |          | 12/02/2019 | NORTH       | Unknow   |                |

**SYMMETRIC SPINNAKERS (0)**

| Id | SLU | SLE | SL | SHW | SFL | Area | Measurer | Meas.Date | Manufacture | Material | Comment |
|----|-----|-----|----|-----|-----|------|----------|-----------|-------------|----------|---------|
|----|-----|-----|----|-----|-----|------|----------|-----------|-------------|----------|---------|

**ASYMMETRIC SPINNAKERS (4)**

| Id      | SLU   | SLE   | SL    | SHW   | SFL   | Area   | Kind  | Measurer | Meas.Date  | Manufacture | Material | Comment       |
|---------|-------|-------|-------|-------|-------|--------|-------|----------|------------|-------------|----------|---------------|
| 2381727 | 19.79 | 16.83 | 18.31 | 11.09 | 10.81 | 168.37 | asym  |          |            | NORTH       | SRI      | 2019 A2       |
| A1      | 19.18 | 16.88 | 18.03 | 9.98  | 10.50 | 151.52 | asym  |          | 30/11/2019 | NORTH       | Unknown  | OUS136831-001 |
| A3      | 19.18 | 16.26 | 17.72 | 9.57  | 9.49  | 141.09 | asym  |          | 23/11/2019 | NORTH       | Unknown  |               |
| C0      | 17.80 | 16.49 | 17.15 | 6.37  | 8.44  | 96.93  | asy76 |          | 18/08/2020 | NORTH       | Unknown  |               |