

**The origin, history and role of water in the evolution of the inner Solar System**

Monday 1 February – Tuesday 2 February 2016 | The Royal Society at Chicheley Hall, Buckinghamshire

Organised by Professor Monica Grady CBE, Professor Chris Ballentine and Professor Sara Russell

| Monday 1 February 2016           |  |                            |   | Tuesday 2 February 2016 |  |                     |  |
|----------------------------------|--|----------------------------|---|-------------------------|--|---------------------|--|
| SESSION 1<br>Chair: Sara Russell |  | SESSION 2                  |   | SESSION 3               |  | SESSION 4           |  |
| 09.00                            | Welcome by the Royal Society and lead organiser  | Chair: Lindy Elkins-Tanton |   | Chair: Chris Ballentine |  | Chair: Monica Grady |  |
| 09.05                            | <b>Conel Alexander</b><br>The origin of inner Solar System water   | 13.30                      | <b>Sanjeev Gupta</b><br>What do recent orbital and rover observations tell us about the history of water flow and stability at the martian surface? | 09.00                   | <b>Rachel Klima</b><br>Remotely distinguishing and mapping endogenic water on the Moon   | 13.30               | <b>Lindy Elkins-Tanton</b><br>Born wet: how the Earth gained and lost water during formation   |
| 09.30                            | <b>Ian Wright</b><br>Evaluating the significance of comets in relation to the Earth's water budget – the perspective from the <i>Rosetta</i> space mission | 14.00                      | <b>John Bridges</b><br>Water on Mars: what we have learnt from the mineralogy of Martian meteorites and the Martian surface                         | 09.30                   | <b>Mahesh Anand</b><br>History of water and other volatiles in the Moon and implications for the evolution of the inner Solar System | 14.00               | <b>Chris Ballentine</b><br>Relating the record preserved by the terrestrial noble gases to the processes controlling the accretion of water to Earth |
| 10.00                            | Discussion   | 14.30                      | Discussion  | 10.00                   | Discussion   | 14.30               | Discussion   |
| 10.30                            | Coffee   | 15.00                      | Tea   | 10.30                   | Coffee   | 15.00               | Tea  |
| 11.00                            | <b>Michael Zolensky</b><br>The search for surviving direct samples of early Solar System water   | 15.30                      | <b>Alex Halliday FRS</b><br>Accretion processes and the implications for inner Solar System volatile budgets  | 11.00                   | <b>Lydia Hallis</b><br>Hydrogen isotope ratios in the inner Solar System   | 15.30               | <b>Barbara Sherwood Lollar</b><br>Water on Earth – extending our knowledge of the deep hydrosphere and implications for subsurface life              |
| 11.30                            | <b>Monica Grady</b>  | 16.00                      | <b>Erik Hauri</b><br>Origin and delivery of water to the forming inner solar system   | 11.30                   | <b>Jun Korenaga</b><br>Global water cycle and the coevolution of Earth's interior and surface environment                            | 16.00               | Panel discussion/Overview (future directions)  |
| 12.00                            | Discussion   | 16.30                      | Discussion  | 12.00                   | Discussion   |                     |  |
| 12.30                            | LUNCH  | 17.00                      | Poster session  | 12.30                   | LUNCH  | 17.00               | CLOSE  |
|                                  |  | 18.00                      | CLOSE   |                         |  |                     |  |