diffusion coefficients along the (001) direction of olivine at $f_{O_2} = 10^{-11}$ bars is described by $D_{(Ni\text{-}Fe)} = 1.4^{+2.0}_{-0.8} \times 10^{-5}$ cm²/s × exp[−198 ± 10 kJ/mol/(R × T)]. Preliminary results indicate that diffusion rates may be a strong function of O fugacity, and experiments are in progress to characterize this dependence. Because only a small fraction of the total Ni content of a clast is contained as a trace element in olivine, the system is ideally suited for the application of the closure function model of Dodson [4]. For this preliminary modeling we have used data obtained at an f_{O_2} of 10^{-11} bar and ignored the orientation dependence of diffusion rates as well as the effect of noncentral sectioning of the olivine crystals—these will be incorporated in future work using more complete diffusion data. Results obtained so far indicate quite clearly that cooling rates decreased with decreasing temperature. Such an exponential cooling function is consistent, for example, with a model of conductive cooling in a small parent body rather than due to disruption of the parent body by impact. Work is in progress to study in detail the thermal history of Dar al Gani 013, focusing in particular on the differences in cooling history of various clasts. This information, in combination with petrologic data, will allow us to obtain a consistent picture of the evolution of the Rumuruti parent body.

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THE VALUE OF PUBLICITY—THE WOLD COTTAGE CHONDRITE, EDWARD TOPHAM, AND THE FOUNDATION OF METEORITICS. C. T. Pillinger and J. M. Pillinger, PlanetarySciences Research Institute, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK.

The foundation of meteoritics is generally accepted to be in the late eighteenth century [1,2], key events being the publication by Ernst Chladni [3] of his treatise concerning the growing number of objects apparently falling from the sky and the chemical data acquired for a collection of both stones and irons by Edward Howard [4]. What has not been realized previously is the special role played by the Wold Cottage ordinary chondrite, in particular the promotion of the subject by the man on whose estate it fell in Yorkshire, England, Edward Topham. The public display of what is still Britain's largest meteorite was undoubtedly a factor in Sir Joseph Banks' accumulating the specimens for Howard's work.

For too long now Edward Topham has been just a name in the catalogs of meteoriticists, identified as one of the select few who have been privileged to be a witness to the fall or discovery of a meteorite. In reality he was a larger-than-life character who followed a colorful career, from Eton to Cambridge and then as a soldier, caricaturist, dramatist, newspaper proprietor, sportsman, and litigant, and was never out of the public eye. A combination of the latter four activities led to his being at "The Wold Cottage" in the first place, allowing him to make his important contribution to meteoritics. Topham positively basked in publicity, to the point of notoriety, but he was also known as a very honest and factual reporter. As a magistrate he probably was a good judge of when the average peasant was being economical with the truth or exaggerating. Thus when the Wold Cottage meteorite was displayed in London, the sworn statements he took from his laborers and others who witnessed the fall were generally accepted. In contrast, the testimony of the nobleman Frederick Augustus Hervey, Earl of Bristol, Bishop of Derry, who provided Banks with a sample of Siena on the grounds that it was thrown from Vesuvius by an eruption, was referred to by the President of the Royal Society as "the odd Bishop, teller of tall stories."

Topham's exhibition certainly provoked several authors, King, Bingley, and Southey [2], to commit their own experiences concerning meteorite finds and falls to print. The display must have been popular since after being held near (not at, as frequently reported) the Gloucester Coffee House, Piccadilly, it was repeated at the King and Queen Public House on Oxford Street. Perhaps the publicity attached to the meteorite, which many must have seen, was also responsible for attracting the much larger than average audience to the Royal Society in February 1802 to hear Howard present his results. Topham was not among them; he was racing his greyhounds, the most famous of which was a black dog eccentrically called Snowball. Eventually Topham, because he wanted to maximize the opportunity for public viewing, transferred the Wold Cottage stone to James Sowerby's private museum for the sum of 10 pounds. Sowerby was by no means as magnanimous; once he had the stone he used pieces for exchange to enhance his collections and steadfastly refused to loan the main mass for educational purposes. It was not until the meteorite passed into the hands of the British Museum, for 25 times the original purchase price, that it was truly in the general public domain.

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CARBON AND Ar RELEASE FROM PRESOLAR DIAMONDS BY PYROLYSIS IN THE ATMOSPHERE OF H. C. T. Pillinger and A. B. Verchovsky, Planetary Sciences Research Institute, The Open University, Walton Hall, Milton Keynes MK7 6AA, UK.

Recently we started to investigate an influence of the surface-absorbed H on the release pattern of C, noble gases, and N from presolar diamonds [1] in order to understand the nature of the P3 noble gas carrier. In the first experiments we treated samples off line with H prior to pyrolysis. We expected to reduce, to some extent, a putative surface-absorbed O that is responsible for a CO_2 release in conjunction with P3 noble gases at low temperatures up to 700°C [2]. Contrary to our expectations, we found that the low-temperature release of P3 Ar was not practically affected, although noticeable decreases in the release temperature of the other components, e.g.,

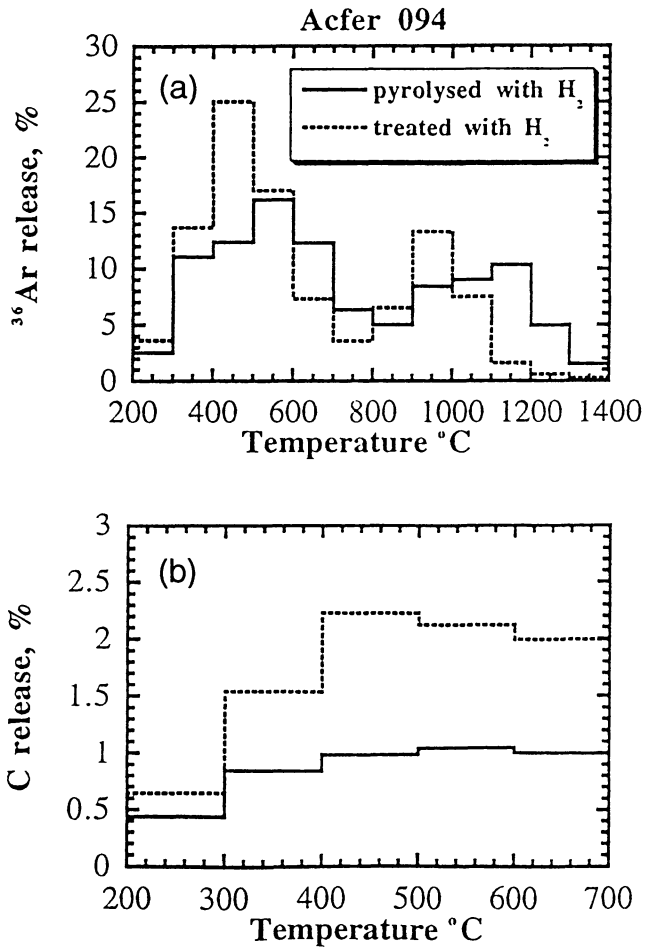

Fig. 1.