Epoch July 0, 1847,	283° 56' 54.0"	m. noon Gr'h.
Perihelion point,	8 17 24.1	} m. eq. July 1.
Ascending node,	137 25 35.1	
Inclination,	15 2 56.1	
Angle of eccentricity,	13 49 20.0	
Mean distance,	0.4016899	
Siderial period,	4.004	

The following Ephemeris from Mr. Hinds' Elements, (corrected by Mr. Walker's observations,) will serve to point out the place of this new Asteroid in the heavens. The date is for mean noon Greenwich.

	Planet's Right Ascension.			Planet's South Declination.		
	16h.	54m.	21s.	7°	56'	24"
August 2,						
“ 5,	16	54	17	8	23	32
“ 8,	16	54	18	8	51	4
“ 11,	16	54	45	9	18	54

The Elements of Mr. Hinds were computed from Encke's observation of July 5th, and Mr. Hinds' of July 10th and 14th. They resemble those of the Asteroid Juno. Mr. Walker's corrections of the Ephemeris here applied, are a diminution of twenty seconds of time in right ascension, and an increase of fourteen minutes of arc in south declination.

Mr. Hencke is the only astronomer, except Olbers, who has had the good fortune to discover two planets.

Respectfully yours,

E. OTIS KENDALL.

New Comet.

M. Mauvais discovered, on Sunday night, about 11 o'clock, a new telescopic comet, between the constellation Cepheus and the Lesser Bear. It is composed of a nucleus tolerably distinct, announced by a nebulosity, extended on one side by a tail. The position of this comet was, on July 4, 1847, at 13h. 35m. 50s., average time, right ascension, 22h. 8m. 13s.; northern declension, 80° 26'. Galignani.

On the Use of a Mixture of Spirit of Wine and Camphine, as a Light for Optical Purposes. By JOHN GEORGE CHILDREN, Esq., F. R. S.

I have lately assisted a friend in getting up an apparatus for dissolving views, &c., on a scale too large for sufficient illumination by the best Argand lamp, and we considered condensed hydrogen gas as too dangerous an agent for a plaything; especially in private houses in the country, where much must be left in the preparation of the gases, &c., to servants unused to such duties. We set to work, therefore to find a substitute that might answer our purpose; and, after a few trials, we obtained a tolerable light, by throwing the flame of spirit of wine on a surface of quicklime, by a current of oxygen gas, something after the manner of Lieut. Drummond's original experi-

ment.* The illumination by the flame of spirit of wine alone, however, proved to be too feeble; but, by mixing a portion of camphine (spirit of turpentine) with it, (which readily dissolves in alcohol,) in the proportion, by measure, of one part of camphine to eight parts of spirit of wine, of the specific gravity of .841 at 60° F., (equivalent to the spirit of commerce at 60°,) we obtained a light amply sufficient, not only for my friend's dissolving views, but also for his microscope and physioscope, and perfectly free from all danger, or even possibility of explosion. My friend's screen is about 22 × 18 feet; and if it were twice as large, the light is quite capable of illuminating it brilliantly; and it shows a microscopic object, magnified from half an inch to thirty feet, or 720 times, linear, with great distinctness and beauty. I do not mean, that our toy can be compared to the almost solar intensity of the oxy-hydrogen light, also invented by the late Lieut. Drummond,† and now in common (too common?) use; but in a trial I made the other day, in Francis Street, with an apparatus hastily put together for the purpose, by Mr. Collins, I found its effect, measured by one of Wheatstone's photometer's, equal to that of seventy-six of Brecknell & Turner's best platted wick wax candles; and in several trials with our own apparatus, more carefully arranged, and with thoroughly well and recently burnt lime, (an essential caution,) we have found it quite equal to 108 of the same candles, and, on one occasion, to 120! The oxy-hydrogen light at Mr. Collins's, which was splendidly brilliant, being compared in the same manner, was found equal to 121 of the same candles.

In these experiments, no portion of the rays from either of the lights was intercepted; our object being to ascertain the comparative illuminating power of their entire surfaces, and not their comparative intensities only.‡

Were it not for the peculiar odor of the so-called naphtha, or coal-oil, which, to some persons, is highly offensive, even in its purest state, it might, when highly rectified, be advantageously substituted, in an economical point of view, for the spirit of wine. Four ounces of camphor, dissolved in a pint of that liquid, gives, under the same circumstances, nearly as brilliant a light as the spirit and camphine.

The light from camphine alone is, for a few seconds, intensely brilliant, but it is soon quenched in the enormous mass of unburnt carbon, which partly condenses on the lime, and partly escapes into the atmosphere, filling the whole apartment with a dense and almost suffocating cloud of floating black particles. A sufficient and well-regulated supply of oxygen gas might, perhaps, remedy this defect.

* Philosophical Transactions, 1826, p. 330. Drummond's object and ours were somewhat different. He wanted to get an intense but small sphere of light, "adapted to the nature of a (parabolic) reflector:" we also wanted as intense a light as we could obtain, but, as we could not advantageously use a reflector, one which should likewise extend over a much larger surface.

† Philosophical Transactions, 1830.

‡ Some attempts, indeed, were made in Francis Street, to compare the intensities alone; but the apparatus, from want of time to prepare a better, was too imperfect to allow me to place any confidence in the results. As far as they went, they were greatly in favor of the superior *intensity* of the oxy-hydrogen light. I hope to repeat the trials with a more refined apparatus.

Our apparatus consists of a copper lamp, with two tubes, lying close together, and each containing a wick formed of flat cotton, rolled up into a cylinder; and a cylinder of lime, about three-eighths of an inch long, and one-eighth of an inch in diameter, inclosed in a thin copper case. The pipe conveying the oxygen gas from the gasometer, terminates in a small jet, inclining upwards, which lies between the two wicks, slightly parted to receive it, and within rather less than one-eighth of an inch from the circular disc of lime, and about one-fourth of an inch above the lower edge of the copper case. We find that the common chalk of this neighborhood, furnishes a lime, which gives a better light than that from the Bristol, or any other limestone we have tried.*

Halstead Place, Feb. 13, 1847.

Lond. Edin. & Dub. Mag.

High Temperature of Mines. By ROBERT WERE FOX.

The temperature of some of the deeper parts of the United Mines† has long been observed to be remarkably high; and it has greatly increased with the increasing depth of the excavations.

Captain Youren, one of the agents of the mine, informs me, that near the eastern extremity of the deepest level, on the "*middle lode*," there is a spring or jet of water, discharging about 94 gallons a minute, at the temperature of $106\frac{1}{2}^{\circ}\pm$ Fahrenheit. This level is 250 fathoms below the surface, and about 200 fathoms under the level of the sea. The "*lode*" has an underlie or dip of about $2\frac{1}{2}$ feet in a fathom towards the north, and the water flows from its *northern* or *upper wall*; whilst from the opposite side, or *southern wall* of the lode, at the distance of only $3\frac{1}{2}$ feet, there is another spring, discharging 30 gallons of water in a minute, at the temperature of $97\frac{1}{2}^{\circ}$ Fahrenheit. The air near both these springs was found to be at $104\frac{1}{2}^{\circ}$ Fahrenheit: and "*killas*" is the only rock which has been seen within 30 fathoms of them. Granite occurs at a considerable distance westward of the place; and two "*elvan courses*" traverse the mine in nearly the same E. and W. direction as the lode.

I have found that $\frac{1}{4}$ of a pint of the water from the warmer spring, contained 15 grains of saline matter, consisting of muriate of lime and common salt—in about equal proportions, with a trace of sulphuric acid, probably combined with lime. In the same quantity of the cooler water, only $10\frac{1}{2}$ grains of muriate of lime and common salt were found, the latter in less proportion than the former,—and in this water also there was a slight trace of sulphuric acid. In both instances, the water was clear,—saline to the taste,—and without any metallic salt.

* Drummond also obtained the most brilliant light from chalk lime.

† This mine, (for it is one concern,) continues to produce abundance of copper ore. It is situated in the parish of Gwennap, about eight miles to the northward, or almost N. N. W. of Falmouth, and is several miles from the sea.

‡ The thermometer employed has been carefully compared with a standard one, and found to be $\frac{1}{4}$ of a degree too high; so that this small amount must be deducted from the results, making them $106\cdot08^{\circ}$, $97\cdot50^{\circ}$, and 104° , respectively.