

ORION

FROM PAGE 4

THE PLANETS

Jupiter rises in the east at dawn in April, then rises higher and higher each month. In June, Jupiter is the brightest thing in the sky at dawn. Look for it high in the southeast.

Mars is near the Beehive Star Cluster (Cancer) April 16-18. By the end of April it will set in the west after 2:30 am. It's high up in the south and moving steadily west and down as the month proceeds. In May, Mars moves backwards (east) against the stars from Cancer toward Leo and Regulus. In June, Mars has a conjunction (close encounter) with Regulus in Leo. On June 3, the orange-gold Mars is straight above the blue-white Regulus in the western sky after sunset to the upper-left of Venus. Pull out your binoculars to see the color contrast even more. In this conjunction the two protagonists are exactly one degree apart, so this is a perfect opportunity to learn what a degree is out there in the sky. Fully outstretch your arm and place your finger (two fingers?) between Mars and Regulus. You now know what a degree is! When a commentator or newspaper reports two degree between some planet and some star, you will know exactly how close that is. If someone says go five degrees to something you can count it off easily. You've got a fine new tool to find things in the sky!

Saturn, in April, is high in the southeast after dark. That's Spica to the left and Regulus to the right of it; Mars further right and equally bright. Further on to the right or west is the very bright Venus at sunset. They all are along the ecliptic, which is the path of the sun, moon and planets around the earth. And this is a perfect time to get a complete image of that unseen path. All May Saturn slows down against the stars, comes to a stop and begins moving easterly by month's end, joining the movement of the other planets (that is, opposite the movement of the stars). Saturn is to the upper left of Mars in the southwest dusk of June.

Mercury is best seen during the first ten days of April; in fact, this is the best view of Mercury we will get during 2010. Quite dim, it lies to the right of Venus and lower in the sunset sky. It will be closest to Venus on the April 8. That's it for Mercury, as he falls into the sun and obscurity till September.

Venus is quite bright and low in the west-northwest at sunset in April. It will slowly rise in the sunset against the flow of setting stars. Incidentally, that's why the Greek definition of "planets" is "the wanderers": They go their own way against the more predictable pattern of stars behind them. Venus is very close to the Pleiades on April 24-5. Venus will hold her position low in the sunset till September, while several stars and constellations pass

behind her. In June, Venus gets to its highest and makes a line with Castor and Pollux, the Gemini Twins. It'll be just to the left of them at sunset on the 11th, and many days before and after that. Watch for a crescent moon to join the group on the 14th. Now here's an opportunity to see how far the moon moves each night. Come out at sunset on the 13th; you'll see the moon on the horizon below Pollux and Castor. Come out at the same time on the 14th, and it's right below Venus. On the 15th, it's off to the left. Put up your fist and arm at full length each night and you'll notice that the moon has moved by approximately a fist plus since the previous night. Figure it out for yourself, and from then on you'll be able to predict the next night's moon position!

OF SPECIAL NOTE

Moons: April's full moon on the 27th is called the Egg, Grass, Easter or Paschal Moon. In May the moon is also full on the 27th, and is named the Milk or Planting Moon. For June we find the moon full on the 25th; it's called the Flower, Rose or Strawberry Moon. Sounds like summer doesn't it? On April 16th a beautiful sliver moon is above Venus and below the Pleiades at sunset. The crescent moon of May in the dusk is below Venus on the 15th and above on the 16th. That's Betelgeuse, Orion's shoulder, to the lower left.

Meteor showers: Lyrid meteor showers of April are modest (but sometimes strong) and best seen just before dawn on 23rd but they are active from 16th - 25th. The radiant (the spot they seem to come from) is from the bright Vega in Lyra, the westerly star of the summer triangle, up high before dawn.

Solstice: The Summer Solstice is Monday, June 21, the seemingly longest day of the year. This is actually the farthest north the sun gets. However, the earliest sunrise is actually on the 14th so you might "feel" this as the longest day. The latest sunset is June 28; after that the sun sets get earlier, i.e. the days get shorter. Since we mostly see sunsets, but not sunrises, June 28 may "feel" as if it is the longest day. Until 1975 the solstice was on the 22nd or 21st, and in 2012 it will fall on the 20th. As you can see the universe doesn't correspond to our perfectionist mathematical tendencies, but has a "mind" of its own. But we nail it down, name it and date it as if it obeyed us. Good try, humans.

From off the grid on Carberry Creek, with incredible dark night skies,

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CLIMATE

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people often referred to as "lukewarmers" in the label-happy zeitgeist of the climate discussion. Definitions vary, but I use the term to mean that group of people (including myself) which—regardless of their widely ranging views on the science of climate - support a particular paradigm on climate policy: one of pragmatism, political realism and risk-management, as opposed to absolutist, quixotic outlooks willing to wager the world's economy on the precautionary principle.

Many of these lukewarmers see the decline of trust in both extreme camps—particularly that of the alarmist extreme—as an opportunity to reframe the climate change policy discussion as a policy debate (as they have long argued is crucial), as opposed to the present situation, where those arguing for or against a specific regulatory action tend to hinge their arguments on the latest climate paper or recently discovered inaccuracy in previously published work.

This hope was put forth most recently by Dan Sarewitz of ASU in the March 3 issue of *Nature*. An important argument in his piece is that the current state of climate science, despite some advocates' insistence that the "science is settled," has far too much uncertainty left in it for the policy debate to be decided in any direction solely through scientific evidence; that the incomplete science "gives the competing sides plenty of support for their pre-existing political preferences — as well as plenty to hide behind in claiming that those preferences are supported by science." Instead, for a beginning climate policy to be politically possible in the near future, it must first focus on "[matching] short-term costs with the real potential of short-term gains," such as useful energy innovation or improvements in efficiency.

A reframing of the climate policy debate into the policy realm could provide immediate benefits for the practice and reception of climate science by taking some of the massive political pressure off its practitioners and their work. Many active in the policy sphere also see it as a promising opportunity to finally argue against cap-and-trade without being labeled a "climate denier." For too long, there's been an acerbically argued stance from the overloud alarmist extreme that cap-and-trade is the best and only climate policy politically possible, and that if one does anything to argue against or undermine it, he's supporting the extremists on the other side. Nothing could be further from the truth. It would be a great step forward for the discussion if some out there recognized and admitted that "the science" doesn't, in fact, prescribe one specific policy approach to the exclusion of all others, and that a with-or-against-us, all-or-nothing approach to things is neither honest, nor politically effective.

Cap-and-trade has been attempted before: under Kyoto; under the EU Emissions Trading Scheme; and elsewhere on smaller scales. In every case, its indirect approach to decarbonization has utterly failed to reduce, or even limit, greenhouse gas emissions; in many circumstances it's actually increased carbon emissions through unintended consequences. While this has happened for a variety of reasons in past schemes, the arch-villain in the Waxman-Markey legislation that's currently passed the US House would likely be dubious "carbon offset" allowances that would allow the US to release carbon at "business as usual" rates until 2026, essentially

achieving emissions reductions though accounting tricks rather than anything real.

Aside from the proven fecklessness of cap-and-trade, there's also the argument that in a carbon-trading system, nations would be weakening any economic effort they put towards decarbonization by filtering it through the same financial sector that is responsible for the current economic downturn. After seeing what happened when we put the housing market in their hands, it seems a dubious proposition to create a truly enormous new market—one that would heavily influence energy production, manufacturing, and thus, the entire economy—and put it in the same people's stewardship.

Many in the climate discussion, from James Hansen to Roger Pielke Jr., have argued for a flat carbon tax, as opposed to a cap-and-trade system. James Hansen is the NASA scientist who first spoke to Congress about global warming in the 1980s and a strident predictor of catastrophic global warming to this day; Roger Pielke Jr. is a less-agitated lukewarmer and environmental and political scientist from Colorado University at Boulder. A group of academics including Pielke, prominent climate and social scientists, economists, and others released a "white paper" in July of 2009 with the argument that a small "ring-fenced" carbon tax is preferable to any cap-and-trade scheme (http://sciencepolicy.colorado.edu/admin/publication_files/resource-2731-2009.17.pdf). "Ring-fenced" means that all the revenues would be appropriated to address the issue the taxes were originally collected for. In their proposal, 100% of the revenues would be put towards R&D or deployment of energy efficiency or of decarbonized power generation.

This approach would put a lower price on carbon than under proposed cap-and-trade schemes, but for those who favor stronger action on emissions, it has the benefit of influencing energy efficiency and the carbon intensity of electricity in our economy directly through the use of tax revenues, and without needlessly filtering any of the economic effort through financial traders. It's a flexible approach, allowing for additions such as required technology-sharing with the developing world and subsidies to low-income households. When changes in our understanding of the climate system occur, such as the current trend toward attributing progressively more of the anthropogenic portion of global warming to factors other than greenhouse gases (such as land-use and "black carbon" aerosols), the ring-fenced revenues' appropriation and/or the tax rate can be adjusted to address those changes more quickly and less disruptively than a carbon-trading system, and to more efficacious ends.

Surely, there are arguments against a carbon tax and for and against the different forms it could take, and there are likely other bright approaches to address the issue that don't look like cap-and-trade or a carbon tax at all. Unfortunately, our policymakers won't be able to have a productive discussion that honestly examines the relative merits of different policy proposals unless we can wrest the debate away from the two extreme camps and move the battleground from the realm of politicized-science to the policy sphere.

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Jackson County Master Gardener Association's

2010
Spring Fair

May 1 & 2

Compton Arena, Jackson County Fairgrounds

Saturday 9 to 5

Sunday 10 to 4

Admission \$3.00

Children under 12 admitted free

Free Parking

Free Gardening Classes

Free Well Water Testing

Free Plant & Gardening Clinic

Oregon State University Extension in partnership with Jackson County