

SMALL ASTEROID MAKES CLOSEST EARTH FLYBY EVER NOTICED

Space.com, 6 October 2003

http://www.space.com/scienceastronomy/asteroid_close_031006.html

By Robert Roy Britt and Leonard David

A small asteroid was discovered in late September a few hours after it passed closer to Earth than any previously known space rock. Had it struck Earth's atmosphere, it was too small to pose any serious threat, astronomers said.

The event was a common one, scientists stressed. Hundreds of similar close passes likely occur every year but the objects go undetected.

A cosmic whisker

The asteroid is named 2003 SQ222. It came within 54,700 miles (88,000 kilometers) of Earth, or less than one-fourth the distance to the Moon, on Sept. 27, researchers said late last week. That breaks a near-miss record set in 1994.

However, in both cases, the rocks were probably no larger than a house. That is extremely small compared to other chunks of stone and iron that sometimes pass near Earth.

The discovery was made by Robert Cash of the Minor Planet Research program in Peoria, Arizona. Cash's observations were sent to his group's parent asteroid search program at the Lowell Observatory, as well as to the Minor Planet Center in Cambridge Massachusetts, where asteroid observations worldwide are collected.

"In a good month, we find five to 10 near-Earth asteroids, but usually, the ones we discover are as big as mountains, or at least football stadiums, so this one was unique for us," said Edward Bowell, director of Lowell Observatory's Near-Earth-Object Search (LONEOS).

Further observations by the LONEOS program and other astronomers confirmed the object's rough size, path and time of close approach. It is thought to be less than 33 feet (10 meters) in diameter and to orbit the Sun every 1.85 Earth-years on an elliptical path.

Stephen Ostro, an asteroid specialist at NASA's Jet Propulsion Laboratory, told SPACE.com it was remarkable the tiny object was noticed.

No worries

Some other asteroids on the list of Top 10 close approaches to Earth are disconcerting, for their larger size suggests had they hit the planet they could have caused local or regional damage.

But 2003 SQ222 is not the sort of rock astronomers worry about too much. Had it been on target, "it would have exploded harmlessly in the upper atmosphere, with an energy comparable to that of a small atomic bomb," Bowell said.

Astronomers estimate there are about 500 million undiscovered asteroids as big or larger than 2003 SQ222 that inhabit the general space through which Earth orbits. About 3,000 of them pass closer than the Moon every year but are not detected, according to Alan Harris of the Space Science Institute in Boulder, Colorado. Perhaps 100 of them come closer than 2003 SQ222 each year, Harris estimates.

small	malý
asteroid	planetka, asteroid
make Earth flyby	proletět okolo Země
closest	nejbližší
ever noticed	"z dosud zaznamenaných"
was discovered	byl objeven
late September	koncem září
few hours	několik hodin
after	poté
pass	minout
closer	blíže
any previously known	kterýkoliv dříve známý
space rock	kámen z vesmíru
had it struck	kdyby zasáhl
too small to pose	"příliš malý, než aby představoval"
serious	vážný
threat	hrozba
said	řekl, řekli
event	událost
common one	běžná
scientist	vědec
stress	zdůraznit
hundreds	stovky
similar	podobný
close pass	blízký průlet
likely	pravděpodobně
occur	udát se
every year	každý rok
but	ale
object	objekt, těleso
go undetected	projde nedetekován
cosmic	kosmický
whisker	„věchýtek“
is named	je pojmenován
came	prošel
within xxx miles of	xxx mil od
less than	méně než
one-fourth	jedna čtvrtina
distance	vzdálenost
the Moon	Měsíc
researcher	výzkumník, badatel
late last week	koncem min. týdne
break record	zlomit rekord
near-miss	blízký průlet
set in	vzniknout
however	nicméně
in both cases	v obou případech
probably	pravděpodobně
no larger than	ne větší než
house	dům
extremely	neobyčejně
compared to	ve srovnání s
other	jiný, další
chunk	kus (větší)
iron	železo
sometime	občas, někdy
discovery	objev
observation	pozorování
were sent	byla odeslána
group	skupina
parent	rodičovský
search program	vyhledávací program
as well as	právě tak jako

These rocks go mostly unnoticed because they are too small and too faint in the sky to be detected by the handful of telescopes devoted to asteroid hunting. They sometimes become spectacular fireballs, visible from hundreds of miles around on the ground when they vaporize in Earth's atmosphere.

"These things are completely harmless," Harris said of small asteroids like 2003 SQ222. "They are no more than interplanetary tourist attractions."

Asteroid detections have skyrocketed in recent years, meanwhile, as new electronic cameras increase sensitivity and automated telescopes scan the skies for anything that moves in relation to background stars.

On Sept. 19 this year, another small rock, named 2003 SW130, zoomed by at about 100,000 miles (160,000 kilometers) distance.

Copyright 2003, Space.com

Redakčně zkráceno.

space	prostor
through which	zkrz který
3000 of them	3000 z nich
detect	detekovat
according to	podle
perhaps	snad
each year	každý rok
mostly	většinou
because	protože
too faint	příliš slabý
sky	obloha
handful	hrst
telescope	dalekohled
devote	zasvětit, věnovat
hunt	pátrat po, hledat
become	stát se
spectacular	nápadný, okázalý
fireball	bolid
visible	viditelný
around	okolo
on the ground	na zemi
when	když
vaporize	vypařovat se
completely	naprosto, úplně
like	jako
no more than	nic více než
interplanetary	meziplanetární
tourist	turistická atrakce
attraction	
skyrocket	rychle stoupat
in recent years	v posledních letech
meanwhile	mezitím, zatím
electronic	elektronická
camera	
increase	zvýšit
sensitivity	citlivost
automated	automatický
scan	pečlivě prohlížet
move	hýbat se
in relation to	vzhledem k
background	hvězdy v pozadí
stars	
this year	letos
another	jiný, další
zoom by	prosvištět okolo
distance	vzdálenost

worldwide	z celého světa
collect	shromažďovat
in a good month	"když máme dobrý měsíc"
five to 10	pět až 10
near-Earth	blízkozemní
usually	obvykle
the ones we	ty, které objevíme
discover	
as big as	tak velké jako
mountain	hora
at least	přínejmenším
stadium	stadion
so	tak, a tak
this one	tento
unique	ojedinělý, jedinečný
further	další
confirm	potvrdit
rough size	hrubá (přibližná) velikost
path	dráha
time	čas, okamžik
approach	přiblížení
it is thought	"míní se, že je..."
to be...	
33 feet	33 stop
diameter	průměr
orbit	obíhat, oběžná dráha
the Sun	Slunce
every 1.85 years	"jednou za 1,85 roku"
elliptical	eliptický
told	řekl
remarkable	pozoruhodný
tiny	malinký
notice	všimnout si, upozorovat
no worries	žádné obavy
list of Top 10	seznam "první desítky"
disconcerting	zneklidňující
larger	větší
suggest	naznačit
had they hit	kdyby zasáhly
planet	planeta
could have	mohly by způsobit
caused	
local	místní
regional	oblastní, regionální
damage	škoda
sort	druh
worry about	obávat se
too much	příliš
be on target	"mířit přímo na cíl"
it would	může, musí
explode	vybuchnout
harmlessly	neškodně
upper	vysoká atmosféra
atmosphere	
energy	energie
comparable	srovnatelná
atomic bomb	atomová bomba
estimate	odhadnout
about	asi
undiscovered	neobjevený
inhabit	obývat
general	všeobecný

Připravil Petr Scheirich

Anglický list vychází jako příloha Bílého Trpaslíka, zpravodaje Amatérské prohlídky oblohy.

© APO 2003