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Zastave u Svemiru: Zastave programa Space Shuttle / Flags in Space: Flags of the Space Shuttle Program

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# Zastave u Svemiru

## Zastave programa Space Shuttle

Slijetanje svemirske letjelice *Atlantis* 21. lipnja 2011. označilo je kraj američkog Programa *Space Shuttle* (ponekad prevedeno doslovno kao *svemirski čunak* ili kao *svemirski taksu*). U tri desetljeća (1981. – 2011.) svemirski su *shuttleovi* izveli 135 letova, noseći ljude i teret u nisku zemljinu orbitu. Točnije, *shuttle* je bio dio *Sustava za svemirski transport* (STS), koji se sastojao od višekratno upotrebljivih orbitera *space shuttle*, dva čvrsta raketna pogona (također za višekratnu upotrebu) i jednokratnog vanjskog spremnika goriva. *Space shuttle* je bio prva svemirska letjelica za višekratnu upotrebu, a lansirala se okomito poput rakete, dok je slijetala na pistu, poput zrakoplova. Iako je programom upravljala američka *Nacionalna aeronautička i svemirska administracija* (NASA), *space shuttle* je korišten i za prijevoz astronauta i tereta iz niza drugih zemalja. Osim toga, bio je i ključno prijevozno sredstvo uključeno u izgradnju *Međunarodne svemirske postaje* (ISS).

Posebno zanimanje vexilolozima predstavljaju zastave koje su izrađene tijekom ovog programa. Službeni status tih zastava je različit, kao i način njihove upotrebe. Zastave koje su izrađene tijekom programa označavale su pojedine orbitere (tj. letjelice), pojedine njihove misije i posebne terete koji su njima prevoženi. Cijeli korpus ovih zastava možda nikada neće biti u potpunosti dokumentiran, ali identificirano je dovoljno primjera da bi se razumjelo kako su se ove zastave koristile za predstavljanje programa.

### Zastave orbitera

U početku su izgrađena četiri orbitera tipa *space shuttle*, koja su se koristila u operativnom dijelu programa – *Columbia*, *Challenger*, *Discovery* i *Atlantis*. Kada je orbiter *Challenger* i njegovih 7 članova posade izgubljeno u katastrofi pri lansiranju 28. siječnja 1986., nadomješten je novom letjelicom nazvanom *Endeavour*.

Zastave su izrađene za svaku od letjelica, kao dio NASA-inog *Programa edukacije o letovima s ljudskom posadom*, koji je osnovan da bi se osnažila svijest o značaju svemirskih letova s ljudskom posadom i priznao doprinos onih koji rade na programu. Nije jasno tko je dizajnirao zastave i kada su prvi put upotrijebljene, ali se zna da je to bilo nekako iza nesreće *Challenger*a. Zastave orbitera bile su bijele s plavim trokutom duž gornjeg ruba i crvenim duž donjeg. Smještaj trokuta ostavljao je široku bijelu dijagonalu koja se pružala od gornjeg



# Flags in Space

## Flags of the Space Shuttle Program

When the space shuttle *Atlantis* landed on 21 July 2011 it marked the end of America's Space Shuttle Program. Over a period of three decades (1981-2011) the shuttles flew 135 missions, carrying humans and cargo to low Earth orbit. To be precise, the shuttle was one part of the Space Transportation System (STS) which consisted of the reusable space shuttle orbiter, two solid rocket boosters (also reusable), and a single-use external fuel tank. The space shuttle was the first reusable spacecraft and was unique in that it launched vertically like a rocket, but landed on a runway like an airplane. While the program was administered by the National Aeronautics and Space Administration (NASA), the U.S. space agency, the space shuttle also served as an international vehicle carrying astronauts and payloads from a variety of countries. In addition, it was a key vehicle involved in the assembly of the International Space Station (ISS).

Of particular interest to vexillo-logists are the flags which were created during the Space Shuttle Program. The official status of the flags varied, as did their usage. Flags created during the Space Shuttle Program represented the different space shuttle orbiters, various shuttle missions, and specific payloads that flew aboard the shuttle. The extent of these flag designs may never be fully documented, but enough examples have been identified to understand how flags were used to represent the program.

### Orbiter Flags

Initially there were four space shuttle orbiters used in the operational part of the program – *Columbia*, *Challenger*, *Discovery*, and *Atlantis*. When the space shuttle *Challenger* and her 7 crew members were lost in a catastrophic launch accident on 28 January 1986, it was replaced by a new orbiter called *Endeavour*.

Flags were created to represent each of the shuttle orbiters as part of NASA's Manned Flight Awareness Program, which was established to increase awareness of human space flight and to recognize the contributions of those who worked on the program. It is unclear who designed the flags and when they were first used, but it is known that it was sometime after the *Challenger* accident. The orbiter flags had a white field with a blue triangle running across the top of the flag and a red triangle across the bottom. Orientation of the triangles resulted in a broad diagonal white stripe that angled



Zastave orbitera (10×15 cm). Orbiter Flags (4×6").

kuta uz koplje prema donjem suprotnom kutu. Smješten u središte bijele pruge nalazio se naziv letjelice plavim slovima, sa siluetom *shuttlea* u letu, s otvorenim vratima skladišta. Na zastavama *Atlantisa* i *Endeavoura*, silueta letjelice u potpunosti je nadomještala slovo A, a na zastavama *Columbije* i *Discoveryja* smještena je preko slova O. U gornjem slobodnom uglu zastave bio je smješten logo *Programa edukacije o letovima s ljudskom posadom*. Na kasnijim inačicama zastave logo je zamijenjen logom novog naziva *Program edukacije o svemirskim letovima*. Kasnije je izrađena i zastava za *Challenger* (gdje je silueta zamjenjivala slovo A).

Osim toga, NASA je izradila i zastavu za *Enterprise*, raniju inačicu *shuttlea* korištenu za suborbitalne testove. Na toj zastavi, prikaz letjelice razlikuje se od ostalih zastava orbitera i prikazuje siluetu ispitnog *shuttlea* prilikom slijetanja – na vrhu nosa letjelice nalazi se šiljak, a vrata skladišta su zatvorena, dok se na repu nalazi aerodinamični stožac koji prekriva motore.

Zastave orbitera isticane su na jarbolima instalacija NASA-e tijekom misija *shuttleova*. Tisuće manjih zastavica veličine 4 × 6 inča (10 × 15 cm) redovito je nošeno u letjelicama na sve misije. Po slijetanju, ove zastavice, zajedno s pripadajućim potvrđama, poklanjale su se zaposlenicima svemirskog programa kao znak zahvale za njihov dio posla.

### Zastave misija i tereta

Zastave su se izrađivale i za pojedine misije *space shuttleova*, ali rjeđe i ne za svaku misiju. Čini se da su bile manje službene i nisu široko korištene. U sva tri do sada dokumentirana primjera zastava misija radi se o zastavicama 4 × 6 inča, koje su, kako se čini, podijeljene djelatnicima NASA-e. Zastavice su plave s oznakom misije kao primarnim elementom dizajna. Dodatno, u dizajn su uključene službene oznake misije (npr. STS-115), amblem NASA-e i logo *Programa edukacije o svemirskim letovima*.

Ponekad su izrađivane i zastavice za pojedine terete koji



Zastave misija (10×15 cm). Mission Flags (4×6").

down from the upper hoist to the lower fly. Centered on the white portion of the field was the orbiter name in blue, with a silhouette of a shuttle in flight with its payload doors open. On the flags for *Atlantis* and *Endeavour*, the shuttle silhouette completely substituted for the letter A, while those on the flags for *Columbia* and *Discovery* overlapped with the letter O. At the upper hoist of the flag was the logo of the Manned Flight Awareness Program. Later versions of the flag had an updated logo for the renamed Space Flight Awareness Program. As the Space Shuttle Program came to an end, a flag was also created for *Challenger* (with the silhouette replacing the letter A).

In addition, NASA also created a flag for the *Enterprise*, an early space shuttle designed for suborbital tests. On the flag for *Enterprise*, the shuttle image is different than that on the other orbiter flags and reflects the silhouette of the test shuttle during early approach and landing tests – there is a spike on the nose of the orbiter, the payload bay doors remain closed, and there is an aerodynamic cone covering the location where the main engines would be.

Orbiter flags were flown at NASA facilities during shuttle missions. Thousands of smaller 4 x 6 inch (10 x 15 cm) versions of the flags were regularly carried on shuttle missions. After the shuttle landed, these small flags were attached to certificates and presented to space program employees in

recognition of their work.

### Mission and Payload Flags

Flags were also created for specific space shuttle missions, but these were rare and were not made for every mission. They also seem to have been less official and not widely used. All three documented examples of mission flags were small 4 x 6 inch flags which were apparently distributed to NASA employees. The flags are blue with the mission patch as the primary emblem on the flag. In addition, the design includes the official mission designation (e.g. STS-115), the NASA insignia, and the logo of the Space Flight Awareness Program.

In some cases flags were designed for payloads that were flown aboard the space shuttle. As with



Zastave tereta (10×15 cm). Mission Flags (4×6").

Gore/Top: U.S. Microgravity Payload-1, 1992.; U.S. Microgravity Payload-2, 1994.  
Dolje/Bottom: U.S. Microgravity Laboratory, 1993.; Tethered Satellite System, 1992.



su prevoženi na letjelicama. Kao i zastavice misija, zastavice tereta nisu izrađivane za svaki teret, bile su manje službene i nisu široko korištene. Izgled zastavica tereta bio je prilično raznolik. Tipično bi sadržavale oznaku tereta, ime letjelice kojom je prevožen, i oznaku leta (tj. STS broj). Manja količina ovih zastavica veličine 4 × 6 inča nosila bi se tijekom misije i uz potvrdu o tome, dodjeljivala zaposlenicima koji su radili na programu tereta.

### Zastave Shuttle-Mir

Osim zastava povezanih s Programom Space Shuttle, izrađivane su i zastave Shuttle-Mir. Prije početka izgradnje Međunarodne svemirske postaje, NASA je surađivala s Ruskom svemirskom agencijom u nizu misija tijekom kojih se američki space shuttle spajao s ruskom svemirskom postajom Mir. Ovaj je program službeno nazivan „Faza 1“ Programa ISS. Cilj ovih letova bio je pokazati sposobnost shuttlea da se spoji sa svemirskom postajom u orbiti te da se razvije razina međunarodne suradnje u svemiru koja je potrebna da se izgradi i stavi u funkciju Međunarodna svemirska postaja.

Zastave Shuttle-Mir imale su tri dijagonalne okomite pruge (od koplja prema slobodnom kraju), crvena, bijela i plava. U sredini bijele pruge bila je oznaka Faze 1 koja je prikazivala shuttle spojen s Mirom iznad stiliziranog prikaza planete Zemlje. Oko oznake bili su natpisi NASA Shuttle na engleskom i PKA Mup na ruskom. RKA je kratica ranijeg naziva Ruske federalne svemirske agencije.

### Zaključak

Program Space Shuttle proizveo je više zastava nego bilo koji drugi svemirski program u američkoj povijesti. Među njima, zastave orbitera su se najviše koristile i jedine su proizvedene u značajnijem broju primjeraka. Osnovna funkcija ovih zastava bila je promocija svijesti o NASA-inim programima svemirskih letova s ljudskom posadom. One zastave koje su se vijale u svemiru postale su suveniri misija space shuttlea za one koju su radili na programu. Sada kada je program završen, te zastave se više neće koristiti i mogle bi se prepustiti zaboravu. Ipak, za one koji posjeduju koji primjerak, one će ostati značajan podsjetnik na space shuttle u godinama koje dolaze.

#### Izvori:

Ove informacije su originalno objavljene u članku Platoff, A. M. *Flags in Space: NASA Symbols and Flags in the U.S. Manned Space Program*, *The Flag Bulletin*, nr. 230, September-December 2007, published in December 2010.

Dokumentirane zastave su u osobnoj zbirci autorice ili u zbirkama njezinih prijatelja. Opažanja su autoričinia u NASA-inom Svemiskom središtu Johnson.

*Space Flight Awareness Awards – Team Award*, <http://web.archive.org/web/20061009212930/http://www.hq.nasa.gov/osf/sfa/team.html> [accessed 4 September 2011].

*Space Flight Awareness Awards – Leadership Award*, <http://web.archive.org/web/20061007181513/http://www.hq.nasa.gov/osf/sfa/leadership.html> [accessed 4 September 2011].

the mission flags, payload flags were not created for every payload, were less official, and were not widely used. The designs for payload flags varied widely. They typically included an insignia for the payload, the name of the orbiter on which the payload flew, and the flight designation (STS number) for the flight. Small numbers of these flags in the 4 x 6 inch size were carried on the space shuttle during the mission and then attached to award certificates for employees who worked on the payload program.

### Shuttle-Mir Flag

An additional flag associated with the Space Shuttle Program was the Shuttle-Mir flag. Before the assembly of the International Space Station, NASA cooperated with the Russian space agency on a series of missions during which the American space shuttle docked with the Russian space station Mir. This program was officially designated as “Phase 1” of the ISS Program. The goal of these flights was to demonstrate the capabilities of the shuttle to dock with a space station in orbit, and to develop the level of international cooperation in space that would be necessary to build and operate the International Space Station.

The Shuttle-Mir flag had three diagonal vertical stripes of (from hoist to fly) red, white, and blue. Centered on the white stripe was the Phase 1 emblem which showed the shuttle docked to Mir above a stylized image of the planet Earth. Around the outside of the emblem were the words NASA Shuttle in English and PKA Mup in Russian.

RKA is an abbreviation for a former name of the Russian Federal Space Agency.

### Conclusion

The Space Shuttle Program generated more flags than any other space program in American history. Of these flags, those for the orbiters were the most widely used and the only ones manufactured in large numbers. The primary purpose of the flags was to promote awareness of NASA's human space flight programs. Those that were flown in space became souvenirs of space shuttle missions presented to those who worked in the program. Now that the program has come to an end, these flags will no longer be used and may likely be forgotten. However, for those who own one, they will continue to be an important reminder of the space shuttle for years to come.

#### Sources:

This information was originally reported in my article, *Flags in Space: NASA Symbols and Flags in the U.S. Manned Space Program*, *The Flag Bulletin* (#230, September-December 2007, published in December 2010).

Flags documented are held in the author's private collection or in the collections of her friends. Observations of the author at NASA's Johnson Space Center.



Gore: Zastave orbitera (100×150 cm).  
Dolje: zastava Shuttle-Mir (10×15 cm).  
Top: Mission Flags (40×60").  
Bottom: Shuttle-Mir Flag (4×6").





# Grb i Zastava

Glasnik Hrvatskog grboslovnog i zastavoslovnog društva  
 Broj 10, Godina V. *Bulletin of the Croatian Heraldic & Vexillologic Association*  
 Zagreb, studeni 2011. *Number 10, Volume V, Zagreb, November 2011*

**10 brojeva GiZ - 5 godina HGZD**

**GiZ 10 issues - HGZD 5 years**

Obljetnice su prilika da se prisjetimo što smo raditi i što smo postigli u proteklom periodu. Kao što će se neki od vas sjetiti, osnivačku skupštinu Društva održali smo 4. svibnja 2006. godine u **Hrvatskom povijesnom muzeju**, a „nulti“ broj *Grba i zastave* objavljen je u jesen iste godine. Od inicijalnih dvadesetak članova, laganim rastom taj se broj do danas udvostručio, a Društvo je postiglo određeni ugled u javnosti i stručnoj i znanstvenoj zajednici u zemlji i među kolegama u inozemstvu. Vrlo brzo, a temeljem aktivnosti naših članova, postali smo članovi dvije međunarodne krovne stručne organizacije CIGH i FIAV, a redovito održavamo veze s heraldičkim i veksilološkim društvima u inozemstvu. Dobro surađujemo i s nizom znanstvenih, muzejskih, arhivističkih i drugih institucija u Hrvatskoj, kao i s nizom organizacija civilnog društva. Članovi HGZD

često održavaju gostujuća predavanja na njihovim aktivnostima, a i od samih početaka jedna od naših ključnih aktivnosti je upravo organizacija javnih predavanja, koja je 2010. prerasla u redovitu mjesečnu **Tribinu**. Sudjelovanje sa znanstvenim radovima na međunarodnim kongresima (heraldičkim St. Andrews 2006., Quebec 2008., Stuttgart 2010., veksilološkim Berlin

(nastavak na str. 3)



Na Veksilološkom kongresu u Washingtonu 2011.  
 At the Washington Flag Congress 2011

The anniversaries are opportunity to consider what we have been doing and what we have achieved in the previous period. As some of you shall remember, the establishing assembly was held on 4th May 2006 in the **Croatian History Museum**, and the “zero” number of GiZ was issued in the autumn of the same year. Since the initial dozen and a half members, slowly we have doubled in size, while our Association gained certain respect in the public as well as in the expert and scientific communities in the country and among the colleagues abroad. Soon, based on the activities of our members, we became members of two roof international organizations, CIGH and FIAV, while we also regularly maintain relations with heraldic and vexillologic societies abroad. We have established good cooperation with a series of scientific, museal, archival and other institutions in Croatia, as well as with a number of NGO's. The HGZD members are often giving guest lectures for those institutions and

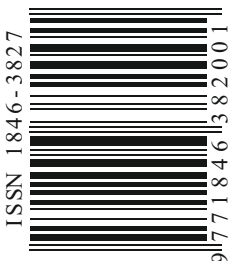
organizations. The organization of public lectures was, after all, since our beginnings, one of our key activities, and this

Predavanje g. Jurečića na 10. tribini HZGD u Slovenskom domu Zagreb, 11. V. 2011.  
 Mr Jurečić lecture at the 10<sup>th</sup> HGZD Tribune in the Slovenian Home Zagreb, 11<sup>th</sup> May 2011.



became eventually our regular monthly **Tribune** since 2010. The participation with papers at the international congresses (heraldic St. Andrews 2006, Quebec 2008, Stuttgart 2010, vexillologic Berlin 2007, Yokohama 2009, Washington 2011) reinforces not only our reputation in the international

(cont. on p. 3)



Hrvatsko grboslovno i zastavoslovno društvo osnovano je 2006. godine. HGZD je član  
 Croatian Heraldic & Vexillologic Association is established in 2006. HGZD is a member of

Fédération Internationale des Associations Vexillologiques

Confédération Internationale de Généalogie et d'Héraldique

